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Perspectives on Language, Learning and Communication in *RESLA 39*(2)

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1. Introduction

The second issue of Volume 39 of the *Revista Española de Lingüística Aplicada/Spanish Journal of Applied Linguistics* (RESLA) brings together eighteen research articles that illustrate the theoretical, methodological and thematic range of contemporary applied linguistics. The contributions address second and additional language acquisition, bilingualism, language processing, grammatical and semantic description, corpus linguistics and discourse analysis. Despite their different theoretical orientations, the studies share an interest in understanding linguistic behaviour through empirical investigation, with particular attention to the circumstances in which languages are learned, interpreted and used. This concern reflects a longstanding principle in second language research: that linguistic development cannot be adequately understood without considering the interaction between learners, linguistic systems and the environments in which acquisition takes place (Ellis, 2008; Ortega, 2009).

Several articles examine the acquisition and learning of additional languages, approaching the subject from perspectives that range from needs analysis and crosslinguistic influence to grammatical processing and classroom instruction. The languages investigated, including Spanish, English, Korean and Chinese, provide an opportunity to consider established theoretical questions across different linguistic systems and educational contexts. Research on crosslinguistic influence has shown that learners' previous linguistic experience may affect acquisition in ways that cannot be reduced to straightforward similarities between languages (Jarvis & Pavlenko, 2008), while Lardiere's (2009) account of feature reassembly draws attention to the difficulties involved in establishing new correspondences between grammatical form and meaning. From an interactionist perspective, Long (1996) similarly emphasises the relationship between linguistic development and the conditions under which learners encounter and process language. These approaches provide a useful background to the contributions in this issue, which examine how linguistic structure, prior knowledge and instructional experience

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may influence learning outcomes. The attention given to vocabulary development also connects with Schmitt's (2010) account of the multiple dimensions of lexical knowledge and the processes involved in its acquisition.

The remaining contributions extend the discussion to corpus construction and annotation, grammatical and semantic interpretation, and the analysis of language in historical, professional and political contexts. Corpus linguistics provides an established methodological foundation for several of these investigations, particularly through its emphasis on the systematic examination of linguistic patterns in naturally occurring data (McEnery & Hardie, 2012). Gries (2009) further demonstrates the value of quantitative approaches for identifying and interpreting distributional tendencies in corpus evidence. Other articles consider how speakers express epistemic commitment, organise interpersonal relationships and construct socially meaningful representations through linguistic choices. Such concerns resonate with research on evaluative and epistemic meanings in discourse (Alonso-Almeida & Álvarez-Gil, 2021), as well as studies of specialised communication and the discursive practices associated with professional and institutional settings (Carrió-Pastor, 2021; Garofalo, 2025). Research on lexical availability and association adds another perspective, examining how educational experience, disciplinary knowledge and social representations may be reflected in speakers' linguistic repertoires. Taken together, the articles offer different but complementary ways of investigating the relationship between linguistic structure, communicative practice and the social contexts in which language operates.

2. Contributions to this issue

The issue opens with a study by Esmeralda Padrón Santana and María Teresa Cáceres Lorenzo that, conceived as a needs analysis, examines the variables associated with oral fluency among beginner learners of Chinese as a foreign language. Their investigation draws on data from 18 Spanish university students at A1+ level and considers how temporal measures of fluency relate to previous language-learning experience, strategy use and affective responses. The study combines an HSKK oral test, temporal measures of fluency obtained through Praat, with Lennon's (1990) notion of narrow fluency as the main point of reference, and Oxford's (1990) Strategy Inventory for Language Learning. This combination of instruments allows the authors to examine fluency as a dimension of spoken performance, in line with Segalowitz's (2010) account of the cognitive processes underlying fluent speech, while also considering the individual learner differences explored in Dörnyei's (2005) work. Their findings reveal correlations between temporal fluency and aspects of learners' linguistic backgrounds, learning strategies and negative affective reactions. The results also raise a question about instructional priorities in beginner Chinese classrooms, where pronunciation and tonal accuracy may receive greater attention than the development of fluent speech. The article thus invites closer consideration of how oral fluency might be addressed from the earliest stages of Chinese language instruction.

Andrea Carcelén Guerrero turns to a methodological problem that has long complicated the collection of spontaneous spoken data: how to obtain naturally occurring conversations while meeting legal and ethical requirements concerning informed consent, privacy and personal data protection. The tension is closely related to what Labov (1972) termed the *observer's paradox*, whereby the presence of a researcher or recording device may affect the linguistic behaviour under investigation. Against this background, Carcelén Guerrero examines the procedures adopted in several Spanish oral corpora, including PRESEEA, COSER and ESLORA, before presenting the three-phase consent model developed for the Ameresco corpus. Participants are informed that they will be recorded at a later, unspecified moment, an arrangement designed to meet consent requirements while limiting the effects of observation on conversational behaviour. The proposal also speaks to the broader methodological concerns discussed by McEnery and Hardie (2012), particularly the relationship between corpus design, data collection and the validity of subsequent linguistic analysis. Carcelén Guerrero's contribution makes clear that the reliability of a spoken corpus cannot be separated from the circumstances in which its data are obtained. The legal and ethical dimensions of corpus compilation are therefore integral to its methodological foundations rather than merely administrative considerations.

Sonja Mujcinovic and Raquel Fernández Fuertes examine the acquisition of sentential subjects in child second-language English, comparing the oral production of children whose first languages are Spanish, Bosnian and Danish with that of an English first-language control group. Their investigation addresses a central question in research on crosslinguistic influence: whether similarities between languages facilitate acquisition, or whether the relationship between the grammatical options available in the first and second languages provides a more satisfactory explanation. As Jarvis and Pavlenko (2008) demonstrate, crosslinguistic influence involves several interacting dimensions and cannot be understood solely in terms of structural resemblance. Mujcinovic and Fernández Fuertes approach this question through an analysis of overt and null subjects, taking account of both grammaticality and pragmatic adequacy. The comparison is particularly revealing because Spanish and Bosnian permit null subjects, whereas English and Danish generally require overt subjects. The findings suggest that typological similarity accounts for some differences between learner groups but does not fully explain their high rates of grammatical and contextually appropriate subject production. The authors instead interpret the results as evidence that lexical specialisation may facilitate the acquisition of English subject properties, even when learners' first languages permit grammatical options unavailable in English. Their analysis contributes to the wider debate on the conditions under which previous linguistic knowledge may support second-language development, a question that research on third language acquisition has also approached in terms of typological proximity (Rothman, 2011).

The relationship between typological similarity and second-language performance is examined from another perspective by Gyu-Ho Shin and Jeong Eun Shin, who investigate the processing of Korean dative constructions among learners with English, Czech and

Japanese as their first languages. The study focuses on two alternating patterns, dative–accusative and accusative–accusative, and combines an acceptability judgement task with a self-paced reading task. Although previous research has established the relevance of first-language knowledge to second-language acquisition (N. C. Ellis, 2006; Jarvis & Pavlenko, 2008), the authors question whether typological proximity necessarily offers an advantage when learners encounter particular grammatical constructions. Their results suggest a more complex picture. Japanese-speaking learners show a comparatively high acceptance of the accusative–accusative pattern, while substantial reading-time differences between the two constructions emerge specifically among the English-speaking learners. These contrasts indicate that performance depends not only on the structural properties of the first language but also on the construction under investigation and the demands of the experimental task. Shin and Shin therefore challenge the assumption that typological similarity should consistently facilitate second-language processing. Their findings suggest that the effects of crosslinguistic influence need to be examined at the level of individual constructions and processing conditions, rather than inferred from general similarities between linguistic systems. In the authors' interpretation, this variability reflects the noisy, less specific character of second-language knowledge.

Jian Jiao, Alejandro Cuza and Julio César López Otero investigate the acquisition of Spanish object clitics among 26 Chinese-speaking learners, focusing on the semantic distinctions of definiteness and specificity that condition their distribution. The study addresses a question central to Lardiere's (2009), Feature Reassembly Hypothesis, whether second-language learners can establish the appropriate connections between semantic features and their morphological expression when these differ from those available in the first language. As Slabakova (2009) has also argued, the acquisition of meaning-related properties may present particular difficulties when learners must interpret unfamiliar form–meaning correspondences. Against this theoretical background, Jiao and colleagues employ three experimental tasks to examine object realisation and clitic use, including contexts involving clitic left dislocation. Although participants appear sensitive to the requirement for overt objects in Spanish, they nevertheless tend to avoid object clitics. Their responses reveal no clear association between clitic use and the relevant semantic features, nor any correlation with overall language proficiency. The authors interpret these findings as evidence that learners have yet to establish the necessary connections between definiteness, specificity and their grammatical realisation in Spanish. The study illustrates how difficulties in second-language acquisition may persist even when learners recognise some of the structural requirements of the target language.

Marco Cancino and Paulina Vasquez examine the effects of project-based learning (PBL) on vocabulary acquisition and retention among young learners of English as a foreign language in Chile. Their quasi-experimental study involved 90 primary school pupils aged nine to ten, divided into a PBL group and a comparison group receiving conventional coursebook instruction. Over seven weeks, the PBL group worked collaboratively on a project centred on designing and presenting a food truck, an activity that required learners to use target vocabulary when preparing menus, discussing food and interacting with an

audience. The instructional approach reflects the emphasis on purposeful, extended tasks associated with project-based learning (Thomas, 2000), while its lexical dimension can be understood in relation to Nation's (2001) account of vocabulary acquisition and the involvement load hypothesis proposed by Laufer and Hulstijn (2001). The researchers assessed knowledge of ten previously unfamiliar lexical items through immediate and delayed tests of productive and receptive vocabulary knowledge, alongside a questionnaire exploring learners' perceptions of the project. The PBL group achieved significantly higher vocabulary scores than the comparison group, and this advantage persisted two weeks after the intervention. Participants also reported favourable perceptions of the approach, particularly regarding motivation, collaboration and the organisation of activities. These findings suggest that carefully structured projects can support vocabulary learning in primary EFL classrooms when learners have meaningful opportunities to retrieve and use unfamiliar words. The study thus provides empirical evidence relevant to the relationship between task engagement, lexical involvement and retention. The findings reported by van Huizen and Michel add a grammatical dimension to this discussion, suggesting that attention to form within communicatively meaningful instruction can support the acquisition of complex structures, although its effects may differ between receptive and productive knowledge.

Esther Álvarez García and Natalia López-Cortés examine the relationship between grammatical structure and semantic interpretation through the distribution of the Spanish copulas *ser* and *estar*. Their investigation revisits two distinctions that have long informed accounts of copular selection: the opposition between individual-level and stage-level predicates, associated with Carlson's (1977) analysis and subsequently developed in Kratzer's (1995) work, and the distinction between eventive and non-eventive nouns in locative constructions. Rather than assuming that these semantic categories determine copular choice in a categorical manner, the authors investigate speakers' responses to both prototypical and less expected combinations. Six experimental studies elicit native speakers' preferences and acceptability judgements, revealing a notable asymmetry. Stage-level adjectives combined with *ser*, and eventive nouns combined with *estar*, receive relatively high acceptability ratings, whereas individual-level adjectives with *estar* and non-eventive nouns with *ser* prove more resistant to reinterpretation. These findings suggest that the relationship between semantic classification and copular distribution is less rigid than some traditional accounts might imply. The study consequently invites reconsideration of how lexical-semantic information is represented and how speakers accommodate combinations that depart from established grammatical preferences.

Elisabet Comelles, Hortènsia Curell, Juan Aparicio Mera and Irene Castellón Massalles investigate how Spanish speakers assess the factuality of events reported in news texts, with particular attention to the extent to which non-expert judgements correspond to those of trained linguists. Factuality concerns the degree to which an event is presented as having occurred, a distinction that has received considerable attention in computational approaches to linguistic annotation (Saurí & Pustejovsky, 2009). Its interpretation is also closely connected to the expression of epistemic commitment, modality and evaluative

meaning, areas examined in different discourse contexts by Alonso-Almeida (2015) and Alonso-Almeida and Álvarez-Gil (2021). The study draws on responses from 90 participants in two age groups, who evaluated 29 sentences extracted and adapted from a corpus of Spanish newspaper articles. The researchers compared these assessments with judgements agreed upon by four experts, combining statistical tests with a qualitative examination of the linguistic features associated with different interpretations. Their findings reveal a strong correlation between expert and non-expert assessments (r = .749), while suggesting that age has little bearing on factuality judgements. Where interpretations diverge, non-experts tend to give greater weight to explicit negation, whereas experts are more sensitive to less conspicuous grammatical cues, including verb tense and modality. These differences are particularly relevant to the challenges of identifying subjective and evaluative meanings in text, as discussed by Wiebe et al. (2005). The findings suggest that non-expert speakers can contribute meaningfully to factuality annotation in Spanish, although the interaction between linguistic markers and contextual knowledge requires careful consideration. The implications extend to corpus annotation and natural language processing systems concerned with identifying degrees of certainty in discourse.

Miguel Lacalle Palacios examines the syntax and semantics of Old English verbs of learning within the framework of Role and Reference Grammar (RRG). Developed in the work of Van Valin and LaPolla (1997) and Van Valin (2005), this approach places particular emphasis on the relationship between semantic representations, argument structure and their syntactic realisation. Lacalle Palacios draws on 715 attestations of seven verbs collected from textual and lexicographical sources, questioning analyses that distinguish arguments from peripheral constituents primarily on the basis of syntactic obligatoriness. Instead, he argues for closer attention to the semantic relationships involved in learning events. A central distinction emerges between the gradual acquisition of knowledge, associated with Accomplishments, and the more immediate acquisition of information, associated with Achievements; both event types may also have causative counterparts. The analysis pays particular attention to the participant responsible for initiating the transfer of knowledge or information, distinguishing between an argumental Effector, which must be human or at least animate, and a peripheral Source, which corresponds to inanimate initiators. Evidence from Old English constructions and deverbal nominalisations supports an account in which these semantic distinctions help explain differences in syntactic realisation. Beyond its contribution to the description of Old English, the article raises broader questions about causativity and the syntax–semantics interface, while proposing a more closely aligned treatment of verbs of learning and teaching within RRG.

Natividad Hernández Muñoz, Carmela Tomé Cornejo, Helena S. Belío-Apaolaza, Álvaro Recio Diego and Sam Davidson address the methodological challenges of grammatical error annotation in learner corpora. Their contribution is situated within a research tradition in which systematically collected learner data provide evidence of second-language development, while also raising questions about the consistency and interpretation of error categories (Granger, 2008). The authors document the design, development and reliability testing of the annotation procedures adopted for COWS-

L2H, a corpus of written Spanish produced by second-language learners and heritage speakers. Reliability tests based on Cohen's kappa yield inter-annotator agreement values above 0.6. They also demonstrate the analytical possibilities of the resource through a pseudolongitudinal examination of five morphosyntactic phenomena of the noun phrase (gender inflection, number inflection, article use, subject pronouns and adjective placement). The study provides evidence concerning the progression of these error types while addressing a persistent difficulty in corpus construction: the considerable human effort required to identify, classify and annotate learner errors consistently. As McEnery and Hardie (2012) emphasise in their discussion of corpus methodology, the analytical value of linguistic resources depends on the principles governing their compilation and annotation. Hernández Muñoz and colleagues make this relationship particularly clear, offering methodological insights that extend beyond COWS-L2H to the study of learner-language development and annotation reliability more generally.

Irene Doval Reixa and María Teresa Sánchez Nieto introduce PaCorES (Parallel Corpora Spanish), a collection of bidirectional parallel corpora centred on Spanish and encompassing four language pairs: German–Spanish, English–Spanish, French–Spanish and Chinese–Spanish. Their contribution addresses questions that have been central to corpus-based translation studies since Baker's (1993) proposal that translated language could be investigated systematically through corpus evidence. The authors provide a detailed account of PaCorES, its compilation procedures and its search facilities, paying particular attention to the decisions that distinguish the resource from other multilingual corpora. The core collections prioritise the quality of source texts and translations, the identification of translation direction and the careful review of sentence alignment, while supplementary collections extend the material available for consultation. This bidirectional organisation allows researchers to compare originals with their translations and to investigate differences between original and translated language within each corpus. Such possibilities depend on the methodological decisions concerning corpus design and comparability discussed by McEnery and Hardie (2012). The article also describes a search interface offering three levels of complexity, intended to accommodate users with different degrees of experience in corpus interrogation. Doval Reixa and Sánchez Nieto demonstrate that corpus compilation is not simply a technical undertaking: decisions concerning textual selection, alignment and accessibility shape the linguistic questions that a resource can meaningfully address.

Laila M. Jreis-Navarro examines the expression of epistemic stance in Classical Arabic texts produced in al-Andalus, focusing on two mental verbs traditionally known as 'verbs of the heart': *ẓanna* ('to think' or 'to believe') and *ḥasiba* ('to think' or 'to suppose'). The investigation contributes to a broader understanding of stance as a linguistic means of expressing speakers' or writers' attitudes towards propositions, a concern developed in corpus-based accounts of grammatical and lexical meaning (Biber & Finegan, 1989; Biber et al., 1999) and in Hyland's (2005) work on interpersonal positioning. Research on epistemic and evaluative meanings, including Alonso-Almeida (2015) and Alonso-Almeida and Álvarez-Gil (2021), also provides a relevant perspective on the relationship between

linguistic choices and degrees of commitment. Jreis-Navarro draws on CORDANA, a diachronic corpus assembled by the author comprising 253 texts by 75 Andalusi writers whose lives span the ninth to fifteenth centuries. After distinguishing genuine authorial statements from first-person forms embedded in quotations and other textual material, she investigates how the two verbs express different degrees of certainty and doubt. Their epistemic force depends not simply on lexical meaning but also on tense, syntactic position and the presence of expressions that strengthen or mitigate uncertainty. Their distribution also varies across periods, genres and domains of knowledge. The article offers an account of how medieval authors positioned themselves in relation to the propositions they advanced, while demonstrating the possibilities of corpus-based analysis for investigating epistemic meaning in historical Arabic discourse.

Julia Sanmartín Sáez turns to a contemporary interactional setting in her analysis of repetition and reformulation in couples therapy. Drawing on two recorded and transcribed sessions from the E(f)FECTS corpus, the study examines the linguistic strategies employed by two therapists working within the Emotionally Focused Therapy model. Sanmartín Sáez approaches the therapeutic encounter as a distinctive triadic discourse genre in which the therapist manages exchanges with each partner while the other remains an indirect recipient. The analysis considers how therapists repeat, retrieve and reformulate their patients' previous contributions, sometimes preserving their original wording and sometimes introducing changes that offer a different perspective on the experiences described. The analysis builds on Spanish research on the forms and functions of repetition and paraphrastic reformulation in oral discourse (Garcés Gómez, 2002, 2007), which allows literal retrieval to be distinguished from reformulations that reorient the meaning of previous turns. Research on institutional communication, including Garofalo (2025), likewise provides a useful context for considering how linguistic choices contribute to the organisation of professional encounters. Sanmartín Sáez shows how repetition and reformulation help manage speaking turns, maintain conversational continuity and construct alternative narratives within the therapeutic exchange. The initial hypothesis is only partly confirmed, since, alongside shared patterns, one therapist reformulates mainly to recast the couple's account in more positive terms, whereas the other retakes previous turns to record and clarify them, mitigating her own reading through verbs of understanding. The findings suggest that reformulation deserves attention not merely as a device for conversational coherence but as a potentially significant resource in the discursive management of interpersonal conflict (Heritage, 1984; Schegloff, 2007).

Ana Belén Cabrejas-Peñuelas examines political discourse through a comparative analysis of televised speeches delivered by Joe Biden and Vladimir Putin on 24 February 2022, following Russia's invasion of Ukraine. The study draws on Systemic Functional Linguistics, particularly the account of transitivity developed by Halliday and Matthiessen (2014), to investigate how grammatical processes and lexical cohesion contribute to ideological representation and political legitimation. This concern also connects with Fairclough's (1995) treatment of the relationship between linguistic choices and ideological meanings, as well as research on legitimation strategies in political discourse, including

van Leeuwen (2007) and Alonso-Almeida and Carrió-Pastor (2019). Cabrejas-Peñuelas identifies contrasting patterns in the two speeches. Biden's use of material processes foregrounds Russia's responsibility for the aggression, whereas Putin's greater reliance on relational and mental constructions supports a narrative in which Russian actions are justified and Russia itself is represented as a victim. Patterns of lexical cohesion reinforce these competing representations. The article demonstrates how grammatical organisation and lexical selection operate together in the construction of political interpretations, making visible the relationship between linguistic form, ideological positioning and the discursive legitimation of political action.

Alicia Delgado-Olmos, Clara Tellez-Perez and Marluis Ugueto Colina explore the influence of academic specialisation on grammatical availability among university students. Whereas traditional lexical availability studies generally elicit vocabulary through semantic categories, their investigation uses grammatical labels, specifically nouns and verbs, as prompts for lexical retrieval. This approach offers a different perspective on the organisation of lexical knowledge, complementing accounts that distinguish the breadth, depth and accessibility of vocabulary knowledge (Nation, 2001; Schmitt, 2010). The authors compare responses from students of Spanish Philology and Medicine at the University of Salamanca, combining quantitative and qualitative analyses to examine differences in the available lexicon. Their findings reveal distinctions between the two groups, particularly in the production of specialised vocabulary and semantically marked items associated with particular disciplinary backgrounds. The study suggests that university education may leave identifiable traces not only in the technical vocabulary students command but also in the lexical associations activated when they retrieve words from broad grammatical categories. In this respect, the article draws attention to the relationship between disciplinary experience and the organisation of lexical knowledge.

M.ª Begoña Gómez-Devís and Cristina V. Herranz-Llácer investigate how initial teacher education is reflected in the lexical knowledge and associative networks of prospective primary school teachers. Their study draws on lexical availability data from 305 university students in the first and fourth years of their degree (210 and 95 students, respectively), focusing on two domains: Education and New Technologies (ICT). The investigation combines lexical availability indices with network analysis using DispoGrafo, allowing the authors to examine both the accessibility of particular words and the relationships established between them. This distinction is relevant to broader accounts of lexical knowledge, which recognise that knowing a word involves more than familiarity with its form or meaning (Nation, 2001; Schmitt, 2010). Research on specialised discourse and language use in professional and educational contexts, including Carrió-Pastor (2022a, 2022b), also provides a useful background for considering how training may influence lexical repertoires. The findings reveal differences between the two domains. In Education, fourth-year students demonstrate a more specialised understanding of their future profession, with lexical associations extending to educational legislation, professional values and institutional responsibilities. In contrast, vocabulary elicited in the ICT domain remains largely centred on familiar devices and everyday technologies, with relatively

few references to educational software or digital teaching resources. Although fourth-year students display some knowledge of specific educational applications, the limited presence of pedagogically oriented terminology raises questions about the place of digital technologies in initial teacher education, although the authors also consider whether the formulation of the stimulus may have constrained the responses. The study illustrates how lexical availability and associative network analysis can provide complementary evidence of differences associated with university training, while identifying areas in which prospective teachers' professional vocabulary may require further development.

Antonio Manuel Ávila-Muñoz examines the social categorisations shared by Spanish students in relation to migration, animal rights and gender-based violence. The study draws on word association tests administered to 600 participants across compulsory secondary, pre-university and university education. Its approach connects with research on the organisation of semantic memory, particularly the associative network model developed by Collins and Loftus (1975), while the interpretation of socially shared categories also recalls Moscovici's (1984) account of social representations. The resulting lexical networks provide access to the conceptual associations through which students represent these three socially contested issues. The findings suggest that ideas associated with equality and respect have gained considerable recognition, although certain distorted perceptions remain and vary according to the social variables examined. The author argues that educational institutions have a responsibility to provide reliable information about these issues. More broadly, the article illustrates how lexical association research can reveal socially shared understandings that may not be immediately apparent in more explicit statements of opinion.

The final contribution, by Mark van Huizen and Marije Michel, examines the effectiveness of a meaning-oriented focus on form in the teaching of the Spanish imperfect subjunctive. Drawing on task-based language teaching and Samuda's (2001) meaning–form–meaning progression, the authors investigate whether explicit attention to grammatical form, introduced in response to a communicative need, can facilitate the acquisition of a complex verbal structure. Their quasi-experimental study compares a meaningful focus-on-form approach with more conventional, form-focused instruction among university students of Spanish as a foreign language. Pre-test and post-test results reveal significant improvements in both receptive and productive knowledge of the imperfect subjunctive within the intervention group, with large effect sizes. However, the meaningful focus-on-form approach produces significantly greater gains than the comparison condition only in receptive knowledge; the difference in productive performance is not statistically significant. The findings suggest that grammatical instruction embedded in communicatively meaningful tasks can support the learning of advanced structures, although the relationship between instructional intervention and productive development warrants further investigation.

3. Highlights of this issue

Altogether, the eighteen contributions reveal several points of convergence, despite their different linguistic settings, research populations and methodological approaches. Five observations seem particularly relevant, not only for the findings reported in this issue but also for the questions they raise about the study of language, its acquisition and its use.

1. Crosslinguistic influence cannot be explained through typological similarity alone. The studies of child L2 English, Korean dative constructions and Spanish object clitics offer different perspectives on a question that has long occupied second-language acquisition research: how previous linguistic knowledge shapes the development of a new language. Although typological proximity has been proposed as a factor influencing transfer, particularly in third language acquisition (Rothman, 2011), the findings presented here suggest that its effects are neither uniform nor necessarily advantageous. The acquisition of particular grammatical options, the relationship between semantic features and their morphological expression, and the demands imposed by individual experimental tasks all contribute to learner performance. These results are consistent with Jarvis and Pavlenko's (2008) account of crosslinguistic influence as a multidimensional phenomenon and lend further relevance to Lardiere's (2009) proposal that learners must sometimes reorganise the relationships between grammatical features and their formal realisation. What emerges is a case for examining transfer at the level of specific constructions and form–meaning correspondences, rather than treating broad typological classifications as sufficient explanations of acquisition or processing.

2. Language learning extends beyond the acquisition of grammatical knowledge. The contributions on oral fluency in Chinese and vocabulary development in English draw attention to the cognitive, affective and instructional dimensions of learning. Segalowitz's (2010) account of fluency provides a useful perspective on the relationship between spoken performance and the processes that support it, while Dörnyei's (2005) work on individual differences helps situate the role of learners' strategies and affective responses. The study of project-based learning adds an instructional dimension to this picture. Its finding that vocabulary gains persisted beyond the immediate teaching period is particularly relevant to Laufer and Hulstijn's (2001) involvement load hypothesis, which relates lexical retention to the degree of cognitive engagement required during learning. Together, these articles suggest that linguistic development needs to be understood in relation to what learners actually do with language, how they respond to learning demands and the opportunities their instructional environments provide.

3. Reliable linguistic resources depend as much on methodological decisions as on technological capabilities. The contributions on spontaneous speech collection, learner error annotation and parallel corpus development demonstrate that the quality of corpus evidence is shaped well before linguistic analysis begins. McEnery and Hardie (2012) emphasise the relationship between corpus design and the questions a resource can support, while Granger's (2008) work on learner corpora illustrates the particular demands involved in compiling and interpreting learner-language data. The studies in this

issue make these concerns concrete. Consent procedures determine the conditions under which spontaneous speech can be collected; annotation protocols affect the consistency with which learner errors are identified; and decisions about text selection and alignment establish the possibilities and limitations of crosslinguistic comparison. The contributions on factuality assessment and historical Arabic further demonstrate the interpretative work required to extract meaningful evidence from linguistic data. In this respect, the quantitative methods discussed by Gries (2009) offer a useful reminder that analytical sophistication must be accompanied by careful attention to the linguistic phenomena being measured. The experimental contributions add a related caution, since the evidence they obtain depends on the task used to elicit it. In the Korean study, acceptability judgements and self-paced reading yield different profiles for the same learner groups, while the clitic study triangulates three tasks and the study of ser and estar distinguishes preference from acceptability. The common lesson is that technological resources cannot compensate for weaknesses in the principles governing data collection, classification and interpretation.

4. Grammatical and lexical choices contribute to the construction of meaning, stance and interpersonal relationships. The studies of Spanish copular constructions and Old English verbs of learning show that syntactic organisation cannot be adequately described without considering the semantic distinctions it expresses. This relationship lies at the centre of Van Valin's (2005) approach to the syntax–semantics interface, while Halliday and Matthiessen (2014) provide a complementary perspective on grammatical choices as resources for meaning-making. Other contributions extend the discussion from grammatical description to discourse. The analysis of epistemic stance in Andalusi Arabic examines how writers express degrees of certainty and commitment, a concern also developed in research on interpersonal meaning and evaluation (Alonso-Almeida & Álvarez-Gil, 2021; Hyland, 2005). The study of reformulation in couples therapy illustrates how linguistic choices can reshape participants' accounts of their experiences, while the comparison of political speeches demonstrates how grammatical and lexical patterns contribute to contrasting representations of events and their legitimation. These latter concerns resonate with research on the discursive construction of legitimacy (Alonso-Almeida & Carrió-Pastor, 2019; van Leeuwen, 2007) and on interpersonal positioning in institutional communication (Garofalo, 2025). Across these different settings, the contributions show that linguistic forms acquire their communicative significance through the interaction of grammatical possibilities, contextual interpretation and the purposes of those who use them.

5. Lexical knowledge reflects educational experience, disciplinary specialisation and socially shared understandings. The studies of grammatical availability, prospective teachers' lexical repertoires and students' associations concerning contemporary social issues approach vocabulary as more than an inventory of words. Schmitt's (2010) account of lexical knowledge provides a basis for understanding the different dimensions of vocabulary competence, while the associative model of semantic memory proposed by Collins and Loftus (1975) helps explain how relationships between concepts may be reflected in lexical

retrieval. The social dimension of these associations is particularly relevant to Moscovici's (1984) account of social representations, which considers how shared understandings are formed and circulated within communities. The contributions in this issue show how these different perspectives can inform the interpretation of lexical data. One finding is especially revealing: prospective primary school teachers display greater professional specialisation in their vocabulary relating to education, yet their associations with digital technologies remain largely centred on everyday devices rather than pedagogical applications. This contrast raises questions about the extent to which professional training is reflected across different areas of students' lexical knowledge. It also connects with broader research on specialised language and professional communication (Carrió-Pastor, 2022a, 2022b). More generally, the studies demonstrate how lexical availability and word association can reveal differences in disciplinary knowledge, educational experience and the social representations that inform speakers' understanding of the world.

4. Concluding remarks

The contributions to RESLA 39(2) underscore the need to examine linguistic phenomena in relation to the evidence on which their description rests and the circumstances in which language is acquired, interpreted and used. Several studies call into question assumptions that might initially seem unproblematic. Typological proximity, for instance, does not necessarily facilitate second-language processing, a finding that invites further reflection on the interaction between linguistic experience and acquisition processes discussed by Ellis (2008). Likewise, grammatical acceptability does not always conform to established semantic classifications, while familiarity with digital technologies does not necessarily translate into a specialised vocabulary for their educational use. Other contributions reveal the significance of linguistic choices whose implications may be less immediately apparent. The selection of a mental verb, the reformulation of a patient's words or the representation of participants in political discourse can all influence how meanings are negotiated and interpreted. Such findings recall Halliday and Matthiessen's (2014) account of grammar as a resource for making meaning, while demonstrating how these resources operate in markedly different communicative settings.

A further consideration concerns the relationship between methodological precision and the interpretation of linguistic evidence. Whether the material consists of experimental judgements, spontaneous interaction, historical texts, learner productions or lexical association networks, the conclusions researchers can draw depend on how the data have been collected, classified and analysed. The methodological principles discussed by McEnery and Hardie (2012) are particularly relevant to the corpus-based contributions, while Gries (2009) provides a complementary perspective on the analytical decisions involved in quantitative linguistic research. The articles in this issue illustrate the strengths of different research traditions without implying that any single approach can account for the full complexity of linguistic behaviour. Their value lies in the questions they pursue,

the evidence they assemble and the interpretations they make possible. Just as importantly, they identify areas in which established explanations require further scrutiny and where new empirical work may prove particularly productive.

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Análisis de necesidades en la enseñanza de chino como lengua extranjera: variables que influyen en el desarrollo de la fluidez oral (A1+)

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Resumen: En las aulas de Chino Lengua Extranjera (ChLE), el desconocimiento sobre qué variables están relacionadas con la fluidez condiciona su desarrollo. La limitada bibliografía disponible fundamentó el diseño de un estudio de caso que se inicia con un análisis de necesidades, cuyo objetivo ha sido contribuir al estudio de la fluidez observando qué variables influyen en el desarrollo de ésta en ChLE. A un grupo de 18 universitarios españoles (A1+), cuyas edades oscilan los 20 años y quienes han estado más de 300 horas en contacto con la lengua, se les aplicó una prueba oral HSKK. Posteriormente, se centró la investigación en la obtención de las medidas temporales a través del programa de análisis fonético Praat, tomando como referente los estudios teóricos sobre *narrow fluency* de Lennon (1990). Finalmente, el estudiantado rellenó el cuestionario *Strategy Inventory for Language Learning* de Oxford (1989). Los resultados de este estudio identifican ciertos antecedentes del alumno en el estudio de lenguas extranjeras, el uso de determinadas estrategias de aprendizaje y algunas reacciones afectivas negativas como variables correlacionadas con la fluidez temporal. Tras este análisis de necesidades, se han detectado áreas de mejora que brindan a la comunidad científica nuevas preguntas que podrían propiciar futuras investigaciones.

Palabras clave: *chino como lengua extranjera, análisis de necesidades, enseñanza, fluidez, oral.*

Needs analysis in teaching Chinese as a foreign language: variables that influence the development of oral fluency (A1+)

Abstract: In Chinese as a foreign language (ChFL) classroom, lack of knowledge about which variables are related to fluency conditions its development. The limited bibliography available reinforced the decision of designing a case study that begins with a needs analysis and whose objective has been to contribute to the research of fluency by observing which variables affect its development in ChFL. An HSKK oral test was administered to a group of 18 Spanish university students (A1+), whose ages range from 20 years and who have been in contact with the language for more than 300 hours. Subsequently, the research focused on obtaining temporal measures of fluency through Praat, a software for speech analysis, taking as a reference the theoretical studies on narrow fluency by Lennon (1990). Eventually, the students filled out the Strategy Inventory for Language Learning questionnaire developed by Oxford (1989). The results of this study identify certain student backgrounds in the study of foreign languages, the use of certain learning strategies and some negative affective reactions as variables correlated with temporal fluency. With this needs analysis, areas of improvement have been detected that provide the academic community with new questions that could lead to future research.

Keywords: *Chinese as a foreign language, needs analysis, teaching, fluency, oral.*

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1. Introducción

En el desarrollo de la destreza oral del aprendiz de lenguas extranjeras, los docentes se ven en la necesidad de aplicar actividades específicas para mejorar la fluidez de sus estudiantes. Esta necesidad ha sido tratada por la bibliografía precedente concluyendo en la importancia de trabajar la fluidez incluso desde los niveles más básicos. Desde la perspectiva del método de enseñanza comunicativo ("Communicative Language Teaching", CLT), Chambers explica que, como profesores, debemos saber cómo se desarrolla la fluidez para crear las condiciones idóneas en las que los estudiantes de una lengua extranjera puedan aumentarla (1997, p. 536). Chambers define la fluidez como la efectividad del uso del lenguaje dentro de las restricciones del conocimiento limitado de la lengua (1997, p. 536). Por su parte, Scarcella y Oxford consideran que es la habilidad de rellenar el tiempo con conversación fácil sin titubeos innecesarios (1992, p. 63). Además, añaden que incluye la habilidad de hablar apropiadamente en un amplio rango de contextos, pero no incluye la habilidad de usar oraciones gramaticalmente correctas (1992, p. 63). Asimismo, Giménez concluye que "la fluidez oral no es algo que solo pueda alcanzarse en estadios superiores de conocimiento de la lengua", ya que, por ejemplo, los resultados de su investigación mostraron datos particularmente positivos en la mejora del nivel de fluidez de los estudiantes de cursos inferiores (2017, p. 74-75). Rebollo, del mismo modo, puntualiza la importancia del desarrollo de la fluidez en el aula y cómo afectan el ritmo y las pausas, variables temporales de la fluidez, a la pronunciación y al flujo del habla (1998, p. 674).

En las aulas de ChLE es esencial que el docente considere las conclusiones a las que han llegado los estudios mencionados e investigaciones similares, a las que recurriremos a lo largo de este manuscrito, que demuestran la importancia de incluir la fluidez, como aspecto individual, en la programación académica. El mandarín es una lengua tonal con características que difieren de las lenguas entonativas, como es el caso del español. Por esta razón, con la intención de ayudar a nuestro alumnado, los docentes tendemos a centrar toda nuestra atención en aquello que consideramos más complejo: el *pinyin* y los tonos. Este planteamiento deja a la fluidez en un segundo plano en el que se intenta desarrollar paralelamente o se pospone. Si, inicialmente, los docentes centramos toda nuestra atención en la adquisición de una perfecta pronunciación, los alumnos podrían desarrollar un cierto grado de ansiedad e inseguridad, frustrando así su predisposición a comunicarse. En este sentido, Wu (2011) explica que, a pesar de que factores como la gramática, el vocabulario, el acento o la pronunciación están estrechamente relacionados con la fluidez, puede darse el caso de alumnos con un nivel de fluidez muy alto que, a su vez, cometan graves errores gramaticales o de pronunciación. Del mismo modo, algunos estudiantes pueden tener una muy buena pronunciación, hacer un uso correcto de las estructuras gramaticales y léxico, pero no hablar de forma fluida (2011, p.9).

De esta manera, frecuentemente nos encontramos aulas de ChLE con alumnos que muestran cierta reticencia a expresarse oralmente y docentes que desconocen las variables que están afectando al desarrollo de la fluidez de sus alumnos. Idealmente, ante este tipo de circunstancias, se debe iniciar un proceso de investigación. En lingüística aplicada a la

enseñanza, el análisis de necesidades y los estudios de caso recolectan datos con la finalidad de desarrollar un proyecto que se adecue a las necesidades de aprendizaje del alumnado (Iwai et al., 1999, p. 6). Sin embargo, a pesar de la dificultad que supone el aprendizaje del chino para alumnos extranjeros, la bibliografía disponible sobre análisis de necesidades en la enseñanza del ChLE es limitada (Huang, 2014, p. 397). Entre este número reducido de publicaciones encontramos, por ejemplo, el estudio de caso sobre las variables y factores que afectan al aprendiz preadolescente en ChLE de Wang y Cáceres-Lorenzo (2019) en el que utilizan el cuestionario *Strategy Inventory for Language Learning* de Oxford (1989) con la finalidad de averiguar qué variables afectan al aprendizaje del chino de estudiantes preadolescentes españoles. Concluyen que "los docentes deberían tener en cuenta que los aprendientes de ChLE deben recibir información y un entrenamiento en el desarrollo de las estrategias de aprendizaje de lenguas (EAL) que faciliten el aprendizaje" (2019, p.170).

En esta investigación consideramos que es fundamental que se realicen estas indagaciones en las aulas de ChLE, ya que solo de esta manera tendremos los datos cuantitativos a partir de los que innovar metodológicamente para ofrecer a los estudiantes una experiencia académica que conduzca al éxito. Nuestro estudio forma parte del proyecto "Creación de recursos para la enseñanza del chino como lengua extranjera en países hispanohablantes" - 22YH07ZW (2022-2024). La pregunta de investigación surgió durante un breve debate que tuvo lugar en la primera clase de ChLE (A1+) con un grupo de 18 alumnos españoles en contexto universitario (Islas Canarias, España) en el que los estudiantes compartieron sus percepciones sobre la destreza que consideraban más compleja en el aprendizaje de ChLE. Aunque los sinogramas son conocidos por su dificultad, los alumnos comentaron que, en su opinión, las destrezas más complejas eran aquellas relacionadas con la comunicación oral: expresión y compresión oral. Por esta razón, además de la limitada bibliografía sobre análisis de necesidades en la enseñanza de ChLE y, en consecuencia, los escasos datos disponibles sobre las dificultades que presenta el alumnado y las variables que intervienen en ellas, se diseñó un estudio de caso que se inicia con un análisis de necesidades cuyo objetivo general ha sido contribuir al estudio de la fluidez observando qué variables influyen en el desarrollo de ésta en ChLE. Esta investigación pretende ser una aportación para otros docentes de ChLE que tengan la necesidad de contar con datos cuantitativos y cualitativos que se obtienen del análisis de necesidades de los sujetos de investigación con sus correspondientes variables.

2. Marco Teórico

Con la finalidad de abordar la temática correctamente, se realizó una revisión de estudios teóricos previos. Descubrir qué entendemos por fluidez, cómo se trabaja en el aula y cómo se evalúa se convirtió en la primera meta de nuestra andadura científica. Estas aportaciones conforman el marco teórico en el que anclamos esta investigación.

2.1 Evaluación de la fluidez

Generalmente, la fluidez se refleja como un indicador más dentro de las herramientas de calificación de la competencia oral junto con la pronunciación, coherencia, gramática y léxico. Aunque existen criterios y estándares que nos guían para evaluar la fluidez, es muy complejo encontrar una herramienta de evaluación o calificación específica. Como podemos observar en la Tabla 1, el Marco Común Europeo de Referencia para las lenguas (2001) indica que la fluidez en los niveles que nos ocupa en esta investigación (A1 y A2) se alcanza cuando el alumno cumple con los siguientes criterios:

Tabla 1. Las competencias del usuario o alumno en fluidez oral (MCER, 2001, p. 126).

A2	Se hace entender en intervenciones breves, aunque resulten muy evidentes las pausas, las dudas iniciales y la reformulación.
	Construye frases sobre temas cotidianos con la facilidad suficiente como para desenvolverse en breves intercambios, a pesar de tener dudas muy evidentes y tropiezos en el comienzo.
A1	Se desenvuelve con enunciados muy breves, aislados y preparados, y con muchas pausas para buscar expresiones, articular palabras menos habituales y salvar la comunicación.

En la Tabla 1 se ofrecen estándares que sirven como guía para los docentes sobre las competencias del alumno en fluidez oral. A partir de estas directrices, el docente diseña una planificación que incluya actividades y tareas para trabajar la fluidez y busca una herramienta de calificación que le ayude a evaluar el progreso del alumnado. Al indagar en los aportes que ha hecho la bibliografía sobre el concepto y el desarrollo de la fluidez, este docente encontraría diversas maneras de evaluar la fluidez.

Dependiendo del enfoque desde el que se aborde, la fluidez puede ser evaluada de forma cualitativa o cuantitativa. En algunas investigaciones (Fillmore, 1979; Brumfit, 1984); Ejzenberg, 2000; Koponen y Riggenbach, 2000; Kormos, 2006; Tavakoli y Hunter, 2018; Lintunen et al., 2019), se da cierta relevancia a variables cualitativas como la percepción del evaluador, la creatividad, la inteligibilidad, la coherencia, la precisión o, incluso, determinados factores fisiológicos del estudiante. Por otra parte, otras investigaciones (Lennon, 1990; Riggenbach, 1991; Kormos y Dénes, 2004; Derwing et al., 2006; Segalowitz, 2010; Zhai y Feng, 2014; Hsiao, 2015; Liu et al., 2017; Lei, 2021), abordan su evaluación desde un enfoque cuantitativo que analiza los discursos a través de parámetros acústicos. Aquellos que se aproximan a la fluidez desde una perspectiva cualitativa afirman que, al tratarse de una destreza oral, no es conveniente valorarla únicamente a través de parámetros matemáticos que cuantifiquen las pausas, número de palabras y velocidad de articulación, entre otros. Insisten en la importancia de la naturalidad y de la expresión del alumno que solo puede ser valorada de forma más flexible comprendiendo la comunicación como un acto discontinuo y que, por tanto, no puede estar encasillada en valores numéricos ni métricas. A continuación, mencionamos los estudios de los principales autores de ambas tendencias en cuyas teorías fundamentamos esta investigación.

Los estudios teóricos de Lennon (1990) fueron pioneros en la investigación de la fluidez y han servido de fundamentación teórica para los avances de la comunidad científica. Lennon (1990) define la fluidez como una impresión por parte del oyente de que los procesos psicolingüísticos de planificación y producción del habla funcionan fácil y eficientemente (1990, p. 391). De acuerdo con Lennon es posible entender la fluidez desde dos perspectivas: *broad fluency* y *narrow fluency*. *Broad fluency* define el concepto desde un enfoque general que es percibido por un oyente y que se evalúa de forma cualitativa. En este sentido, la fluidez es entendida como el dominio general que se tiene de la lengua meta. Por otra parte, Lennon explica que el concepto de fluidez, *narrow fluency*, también se puede reducir y segmentar en parámetros que cuantifiquen la velocidad y la desenvoltura del hablante en la producción oral (2000, p. 25). Estos valores cuantitativos se conocen como medidas temporales y se refieren a la velocidad del discurso, las pausas y sus posiciones. Estos parámetros nos permiten reducir la fluidez de un aspecto general a una habilidad con factores que se pueden tratar de forma individual. Tal y como afirma Giménez (2017):

En esta distinción entre las dos connotaciones del término fluidez puede encontrarse la respuesta a la pregunta de si realmente podemos trabajar esta faceta de la lengua de manera específica en el aula. Mientras en un sentido general, la fluidez oral es la consecuencia final del desarrollo de las distintas competencias lingüísticas, en un ámbito más reducido, quedaría definida por parámetros concretos que pueden ser tratados de manera particular en la clase (Giménez, 2017, p. 65).

Por su parte, Segalowitz (2010) también hace una distinción entre las cuestiones cualitativas y cuantitativas que definen la fluidez y propone un enfoque cognitivo que diferencia la fluidez entre fluidez cognitiva, fluidez temporal, y fluidez percibida. La fluidez cognitiva se corresponde con los procesos de eficiencia y automaticidad en la producción oral. La fluidez temporal, que se asemeja a la *narrow fluency* propuesta por Lennon, cuantifica la velocidad de habla, las pausas y reparaciones. Ambas, la fluidez cognitiva y la fluidez temporal, se evalúan desde un punto de vista cuantitativo, sin embargo, la fluidez percibida implica la percepción por parte de un evaluador y, por tanto, requiere una valoración cualitativa. Los evaluadores no centran su atención en la velocidad de habla y en las pausas, sino en la diversidad léxica, la corrección gramatical, la entonación o el acento (2010, p. 46).

Para De Jong (2023) tanto la fluidez temporal como la percibida son constructos estáticos, no obstante, la fluidez cognitiva es un constructo dinámico. Esto se debe a que traducir pensamientos a sonidos será más o menos agotador, dependiendo de la dificultad de conceptualización y formulación del mensaje que se planifica. Por tanto, se trata de un proceso dinámico en el que la dificultad no será constante durante todo el discurso (2023, p. 181). De acuerdo con Lintunen et al. (2019), en general, la fluidez percibida está frecuentemente conectada con la inteligibilidad e, incluso, con lo agradable de la expresión. Estas autoras explican que los discursos que son fáciles de entender se consideran fluidos (2019, p. 16).

La manera en la que el docente se aproxime a la evaluación de la fluidez se reduce a los principios de Lennon sobre qué entendemos por fluidez. Aquellos que la identifican como un dominio general y un indicador competencial, probablemente optarán por una evaluación cualitativa en la que el peso recae sobre la percepción del evaluador. Sin embargo, otros interpretan la fluidez como una suma de parámetros temporales que pueden ser cuantificados. Por ejemplo, Freed (1995) realizó un estudio sobre la evaluación de la fluidez e identificó a seis hablantes nativos que, en su valoración, justificaban haber tenido en cuenta características temporales, diversidad léxica, el acento y la autoconfianza (1995, p. 123-148). Por otra parte, en el estudio de Tavakoli y Hunter (2018) se demuestra que, de un total de 84 respuestas de profesores, solamente el 13.4% se aproximaban a la fluidez desde una perspectiva cuantitativa (*narrow fluency)*, mientras que la mayoría la evaluaba desde un acercamiento cualitativo (*broad fluency).*

En general, las posturas sobre ambos enfoques son diversas. El enfoque cuantitativo ha sido cuestionado por su supuesta tendencia a asumir que la fluidez del alumnado debe ser similar a la del nativo. En esta cuestión, Brumfit explica que la fluidez debe ser percibida como el uso natural del lenguaje independientemente de que la comprensión o producción lingüística sea similar a la de un nativo (1984, p. 56). Por otra parte, aunque Fillmore también considera la fluidez, *narrow fluency,* como la habilidad de hablar largo y tendido con pocas pausas y, a su vez, la habilidad de rellenar el tiempo con palabras, también precisa la importancia de que la fluidez sea valorada como la habilidad de ser creativo e imaginativo en el uso de la lengua (1979, p. 51), criterio que, en nuestra opinión, no responde a valores cuantificables. De este modo, Hsiao advierte que "definir esta dimensión lingüística en función de las medidas temporales es limitado, puesto que la fluidez oral también implica la percepción de un oyente" (2015, p.49). De forma similar, Kormos (2006) observa cierta inconsistencia en sus investigaciones cuando se define la fluidez oral mediante medidas temporales sin tener en cuenta las características fisiológicas.

En esta investigación, nuestro enfoque es cuantitativo (*narrow fluency*) debido a que nuestro objetivo es hacer un análisis de datos cuantitativos acerca de la fluidez del estudiantado. A través del análisis de los parámetros acústicos de la fluidez tratamos de descubrir las relaciones entre la fluidez del estudiante de ChLE, el uso de estrategias de aprendizaje y las variables de tipo afectivo. En las siguientes fases de investigación se aplicará un método de investigación cualitativo para complementar los resultados cuantitativos de esta primera fase.

2.2 La fluidez en la enseñanza del ChLE: variables que afectan al aprendizaje.

Sobre los estudios acerca de la fluidez en el aula de ChLE, Lei (2021) afirma que son pocos los investigadores que han examinado la fluidez en la expresión oral de aprendientes de ChLE, entre los que se cita a Chen (2015), Jin y Mak (2013), Shih y Wu (2011) y Zhai (2011). Por ejemplo, en sus investigaciones, Zhai y Feng (2014) compararon las respuestas orales a la misma tarea de narración de imágenes producida por 12 estudiantes L2 en una clase de

chino básico durante dos meses y en sus resultados encontraron alumnos que mejoraron de forma significativa en velocidad de discurso y redujeron la longitud de sus pausas silenciosas (Lei, 2021, p. 287). Por su parte, Shih y Wu (2011) se centraron en fragmentos de conversaciones de 48 alumnos de nivel avanzado. Para evaluarlos, pidieron a 43 nativos con chino como L1 que calificaran su fluidez. Descubrieron que la velocidad de habla y el número de vocales/sílabas producidas eran indicadores de fluidez percibida recurrentes para los evaluadores nativos (Lei, 2021, p. 287). Liu et al. (2017) también pidieron a 6 alumnos de nivel avanzado y a 3 hablantes nativos que completaran unos monólogos para que fueran, posteriormente, calificados por 60 nativos (Lei, 2021, p.287). Entre sus resultados identificaron una fuerte correlación entre la velocidad de habla, la longitud media de los enunciados, las pausas silenciosas y las calificaciones de la fluidez. No obstante, el número de pausas llenas y las disfluencias mostraron una débil correlación. (Lei, 2021, p. 287).

En su investigación, Lei (2021) realiza una prueba narrativa oral a 38 alumnos de ChLE y, al igual que se ha decidido en esta investigación, utiliza el programa de análisis fonético Praat (Boersma y Weenink, 2022) para llevar a cabo las transcripciones. Entre sus resultados, Lei (2021) muestra la necesidad de que se trabaje la fluidez incluso desde los niveles más básicos en los que no se suele priorizar. Sus acertadas conclusiones y la limitada bibliografía sobre la fluidez en el aula de ChLE reafirmó la necesidad de llevar a cabo nuestra investigación.

Tras la obtención de las medidas temporales de fluidez en ChLE, cabe preguntarnos cuáles son las variables que benefician el desarrollo de la fluidez o las que alteran la articulación y ritmo de habla. En su análisis de necesidades, Wang y Cáceres-Lorenzo (2019) evidencian la relación entre el uso de estrategias de aprendizaje y el progreso en el aprendizaje de ChLE. Para ello utilizan el cuestionario *Strategy Inventory for Language Learning* (1990), desarrollado por Oxford, en el que se enumeran una serie de estrategias para el aprendizaje de lenguas extranjeras divididas en estrategias de memorización, cognitivas, compensatorias, metacognitivas, afectivas y sociales. Con la aplicación de este cuestionario, el docente puede intuir las variables que afectan al aprendizaje de sus alumnos.

De entre todos los condicionantes que pueden afectar al aprendizaje de lenguas extranjeras, las variables afectivas han atraído la atención de la comunidad investigadora. En 1986, Horwitz et al., propusieron el término *Foreign Language Anxiety* que describe las reacciones afectivas negativas que tiene un alumno hacia el aprendizaje de una lengua extranjera. Se define como las autopercepciones, creencias, sentimientos y comportamientos relacionados con el aprendizaje en una clase de idiomas que surge por la singularidad del proceso de aprendizaje de una lengua extranjera (Horwitz et al., 1986, p.128).

De acuerdo con Yao, Zhang y Shen (2022), la primera publicación china sobre la ansiedad en el aprendizaje del ChLE fue en 1999 (Qian, 1999), mientras que la primera publicación en inglés fue en 2005 (Jiang y Ramsay, 2005). Tal y como exponen Yao, Zhang y Shen (2022), estudios previos sobre la ansiedad del aprendizaje de una lengua extranjera

han revelado que la tasa de abandono es notablemente superior entre los estudiantes con mayores niveles de ansiedad (2022, p. 2). Estos investigadores categorizan las variables asociadas a la ansiedad en el aprendizaje del ChLE en variables de antecedentes y variables cuantitativas. Los antecedentes están relacionados con el género, edad, nivel en la lengua meta, el estatus de aprendizaje heredado, origen étnico y el tiempo de residencia en el país donde la lengua meta se habla (Yao et al., 2022, p.6). Por otra parte, las variables cuantitativas dependen de la edad, la motivación, las aptitudes, la autopercepción sobre la habilidad en el aprendizaje de la lengua, los logros en el idioma, la autopercepción de los logros, y el nivel de dificultad de la lengua meta (Yao et al., 2022, p.6).

En los resultados de estos autores se observan distintas correlaciones entre el nivel de fluidez de los alumnos y otras variables como la ansiedad. De acuerdo con Phillips (1984), las personas evitan comunicarse porque piensan que perderán más hablando que si se mantienen en silencio (1984, p. 52). Esto nos lleva a preguntarnos si nuestros alumnos tienen predisposición a comunicarse en chino, si reacciones afectivas negativas les incapacitan y si esto reduce su nivel de fluidez.

En esta investigación se ha elaborado un cuestionario con el fin de observar si existe alguna relación entre el grado de fluidez de los estudiantes de ChLE, antecedentes en el estudio de ChLE y variables de tipo afectivo como la percepción del nivel de dificultad de la lengua meta, los logros en el idioma (Yao et al., 2022) o las autopercepciones, creencias, sentimientos y comportamientos relacionados con el aprendizaje (Horwitz et al., 1986).

2.3 Estándares aplicados a la fluidez temporal

La bibliografía sobre la evaluación de la fluidez ha aportado una serie de estándares, valores cuantitativos, para evaluar la fluidez temporal, en adelante referidas como medidas temporales, divididos frecuentemente de forma unánime en velocidad de habla en palabras en un tiempo concreto, número y duración de pausas silenciosas y llenas, velocidad de articulación y longitud de los enunciados en palabras. Por ejemplo, en su estudio, Lei mide la velocidad de habla, los períodos de pausas, y las modificaciones en los enunciados de un grupo de 38 estudiantes de chino en una universidad estadounidense (Lei, 2021, p.287).

Para llevar a cabo nuestra investigación hemos decidido tomar como modelo las medidas temporales y fórmulas utilizadas por Hsiao (2015) en su investigación con un grupo de alumnos taiwaneses de español como lengua extranjera (Tabla 2). Se ha elegido utilizar estos parámetros propuestos por Hsiao (2015) debido a que en su investigación el autor ofrece una sólida revisión sistemática de la bibliografía existente sobre las medidas temporales de la fluidez. A raíz de esta revisión, esquematiza de forma muy clara las fórmulas siguiendo los criterios adoptados por Derwing et al. (2004; 2006), Kormos y Dénes (2004) y Riggenbach (1991)" (2015, p. 108). Asimismo, nuestro análisis de necesidades forma parte de una investigación más amplia en la que se aplicará una metodología similar a la que propone Hsiao (2015) con la finalidad de contrastar los resultados. En esta investigación, para la obtención de las medidas temporales de fluidez, también se tuvo en cuenta el

análisis propuesto por Lei (2021) quién también hace una sólida revisión sistemática de la bibliografía disponible. No obstante, Lei (2021) contabiliza las reformulaciones y repeticiones que produce el hablante, mientras que, en esta investigación, dichas autocorrecciones y vacilaciones se han analizado como pausas llenas.

A continuación, se presenta una tabla (Tabla 2), propuesta por Hsiao (2015) en su investigación, que contiene las fórmulas matemáticas, denominación y definición sobre los valores temporales asociados a la fluidez que utiliza el autor en su investigación y que se han tomado como referente para llevar a cabo nuestro análisis de necesidades.

Tabla 2. Medidas temporales y fórmulas propuestas por Hsiao (2015, p. 108).

Denominación en la literatura	Denominación en la presente investigación	Definición	Cálculo matemático (fórmula)
Velocidad de habla por minuto	Velocidad de habla en palabras por minuto (MT1)	Es la rapidez con la que el participante expresa las palabras a lo largo de su discurso narrativo, incluyendo las pausas silenciosas, llenas, autocorrecciones.	Se aplica una regla de 3 con los siguientes datos: Número total palabras – Duración total narrativa en minutos X (número palabras en un minuto a calcular) – 1 minuto.
Media de pausas silenciosas	Duración media de pausas silenciosas superiores a 400ms (MT2)	Interrupción silenciosa superior a 0,4 segundos que se produce en un discurso narrativo.	Se calcula con los siguientes datos: División de la duración total de las pausas entre el número de veces.
Velocidad de articulación	Velocidad de articulación en palabras por minuto (MT3)	Es la rapidez con la que el participante expresa sus palabras en un discurso narrativo excluyendo las pausas silenciosas y las repeticiones.	Se calcula con los siguientes datos: División del total de palabras entre el tiempo en segundos que articulan y multiplicado por 60.
Longitud media de enunciados	Longitud media de enunciados en palabras (MT3)	Es la media de palabras de los enunciados emitidos (se producen por encima de los 0,4 segundos) por el participante en su discurso narrativo.	Se calcula con los siguientes datos: División del total de palabras entre el número total de enunciados.

3. Pregunta de investigación

Tras haber consultado la bibliografía mencionada y con el propósito de alcanzar el objetivo general marcado, se planteó la siguiente pregunta de investigación: ¿Existe alguna relación entre la fluidez del estudiante de ChLE, el uso de estrategias de aprendizaje, los antecedentes en el estudio de lenguas extranjeras y la influencia de variables de tipo afectivo en el proceso de aprendizaje de la lengua china?

4. Metodología

Una vez establecida la pregunta de investigación, se diseña el siguiente procedimiento.

4.1 Sujetos

Los sujetos de este estudio de caso son un grupo de 18 alumnos de nivel A1+ de los cuales 7 son hombres y 11 mujeres. Todos los participantes son españoles cuya lengua materna también es el español y están cursando estudios de grado universitario en las Islas Canarias, España. Además, todos ellos han cursado chino durante más de un año. La edad media grupal es de 20 años, todos ellos han estado más de 300 horas en contacto con la lengua china y todos han certificado o están cursando, al menos, otra lengua extranjera, mayoritariamente, el inglés.

4.2 Herramientas y fases

En la Figura 1 se observa el procedimiento que se diseñó para llevar a cabo esta investigación. Este estudio está dividido en dos fases. La primera fase se dedicó a la recogida de datos y se estructuró en dos pasos: aplicación del cuestionario y realización de la prueba HSKK (localizada en la página web oficial *Chinese Test*). La segunda fase del estudio se centró en el análisis de los datos obtenidos y se estructuró en tres pasos: análisis de las medidas temporales de fluidez (obtenidas a través de Praat), realización del coeficiente de correlación de Pearson e interpretación final de los datos.

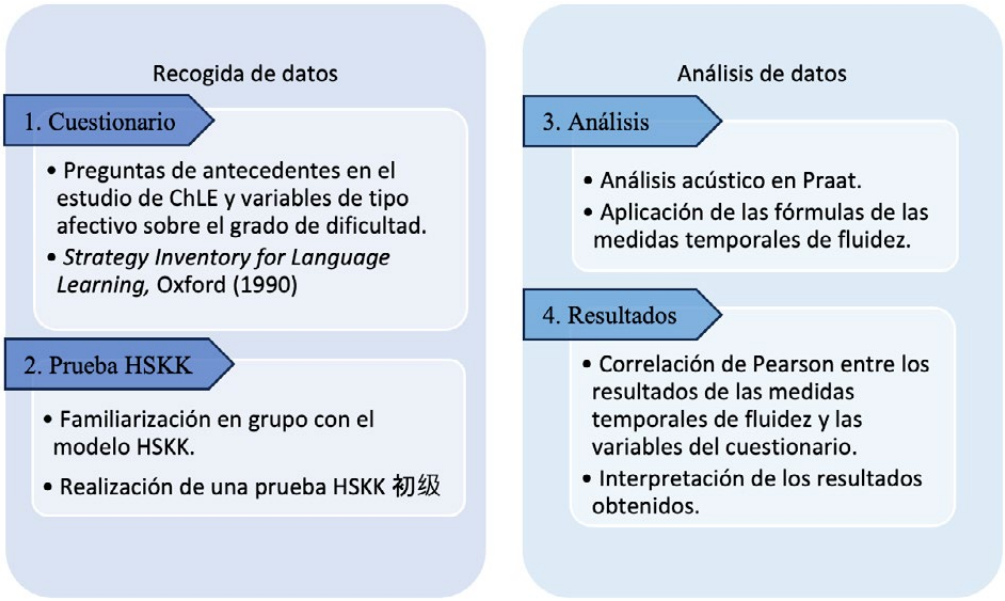


Figura 1. Fases del estudio de caso.

4.3 *Strategy Inventory for Language Learning*, Oxford (1990)

Nuestra investigación comenzó con la creación de un cuestionario online a través de *Google Forms* llamado "Autoevaluación: mis áreas de mejora". En este cuestionario se introdujeron algunas preguntas sobre información personal y académica del estudiantado, su experiencia en el estudio de la lengua china, y el cuestionario de Oxford sobre las estrategias de aprendizaje *Strategy Inventory for Language Learning* (1990). En una sesión de clase se les dio a los alumnos 15 minutos para completar el cuestionario de forma individual.

El cuestionario de Oxford (1989) ha sido ampliamente utilizado por la comunidad investigadora para detectar al buen aprendiente de lenguas (Wang y Cáceres-Lorenzo, 2019). La elección de este cuestionario no ha sido arbitraria, por el contrario, pretende complementar los resultados obtenidos por Wang y Cáceres-Lorenzo (2019). En su investigación, Wang y Cáceres-Lorenzo (2019) analizan los factores y estrategias del aprendiz preadolescente de chino. Este estudio se realizó en la misma ciudad que nuestra investigación. En nuestro caso, pretendemos ofrecer datos sobre las variables que afectan a la fluidez del aprendiz universitario. De esta manera, conseguiremos obtener una visión panorámica del aprendiz de chino de nuestra comunidad.

Este cuestionario está dividido en seis secciones: estrategias de memorización, estrategias cognitivas, estrategias compensatorias, estrategias metacognitivas, estrategias afectivas y estrategias sociales. Este modelo incluye un total de 50 enunciados que el informante debe puntuar del 1 al 5, siendo 1 "nunca o casi nunca" y 5 "siempre o casi siempre".

4.4 Modelo de prueba oral HSKK (汉语水平口语考试)

En la siguiente sesión, se llevó a cabo, por primera vez para todos los participantes, un examen HSKK (*Hanyu Shuiping Kouyu Kaoshi*). La prueba se realizó a través de una metodología cooperativa en la que, en grupos, tratamos de familiarizarnos con ella.

Posteriormente, se citó a los alumnos de forma individualizada para realizar el examen HSKK 初级 en condiciones que simulaban las del examen oficial. A cada alumno se le asignó una franja horaria. La prueba se realizó en el aula y el audio fue grabado y guardado en la plataforma iDoceo de iOS.

Frecuentemente, para analizar el nivel de fluidez de los alumnos, los investigadores utilizan pruebas como monólogos (Liu et al., 2017), tareas narrativas (Zhai y Feng, 2014; Lei, 2021), entrevistas o diálogos (Shih y Wu, 2011). En nuestro caso, hemos utilizado la última pregunta de desarrollo del examen HSKK como monólogo descriptivo. En la tercera parte del examen HSKK 初级, el alumno debe responder a dos preguntas durante un minuto y medio cada una. Cuenta con 7 minutos de preparación en los que puede escribir en la hoja de examen. En nuestro caso, debido al limitado tiempo con el que contábamos para realizar

el examen, éste se aplicó en un formato reducido. Con 3 minutos y medio de preparación previa, los alumnos debían producir un texto descriptivo oral con una duración mínima de 1 minuto y medio en el que presentaban a un buen amigo (“请介绍一下你的一个好朋友”).

4.5 Aplicación de Praat para la obtención de los valores temporales

Para la realización del análisis acústico y la obtención de los valores cuantitativos de la fluidez temporal, al igual que otros investigadores (De Jong, Pascilly y Heeren, 2021; Lei, 2021), hemos decidido utilizar el programa de análisis fonético Praat (Boersma y Weenink, 2022).

Praat es un programa ampliamente utilizado en la realización de investigaciones o estudios fonológicos. Entre otros ámbitos, en chino ha sido utilizado para valorar la producción de los tonos observando la variación del tono *(pitch)* en el espectrograma (Chen, 2022). Sin embargo, como hemos visto anteriormente, este programa es también una herramienta ideal para hacer un seguimiento del progreso de nuestros alumnos en el aspecto de la fluidez. Praat permite estructurar y fragmentar un audio, además de señalar las medidas temporales en las que estamos interesados: velocidad de habla en palabras por minuto, media de la duración de las pausas, velocidad de articulación en palabras por minuto y longitud media de los enunciados en palabras por minuto. Con este programa podemos realizar análisis, por ejemplo, para valorar el éxito de una nueva metodología o para comparar el progreso del alumno al inicio y al término del curso.

De los archivos de audio de los exámenes HSKK decidimos analizar los primeros 30 segundos de la última pregunta del examen “请介绍一下你的一个好朋友” (“Por favor, presenta a uno de tus mejores amigos”). Esta decisión se adoptó debido a que, al ser una pregunta de desarrollo para la que los alumnos disponían de tiempo previo para organizar sus ideas, los discursos suelen comenzar siendo bastante fluidos porque los alumnos ya han pensado previamente qué quieren decir y, a medida que avanza el discurso y se ven obligados a improvisar, el texto oral va fragmentándose. Por ello, para que las muestras del grupo fuesen homogéneas y poder contar con suficiente material para analizar, se decidió escoger los primeros 30 segundos de las grabaciones. Una vez introducido el audio en el programa, se presionó “*to textgrid (silences)*”. Esta opción permite obtener las pausas y segmentos de articulación de forma casi automática, aunque, en ocasiones, requiere que se modifiquen algunas imprecisiones.

A continuación, como podemos observar en la Figura 2, añadimos cuatro intervalos, cada uno de ellos para indicar un aspecto concreto. Por una parte, la transcripción fonética del audio en *pinyin* y su equivalente en sinogramas. Por otra parte, se fragmentó el discurso en segmentos de articulación *(sounding)* y pausas silenciosas *(silences)* y se anotaron los segmentos que correspondían a palabras y los que se trataban de titubeos o vacilaciones *(hesitation)*. Por último, a cada período de pausa y articulación se le asignó un número y se anotó su duración.

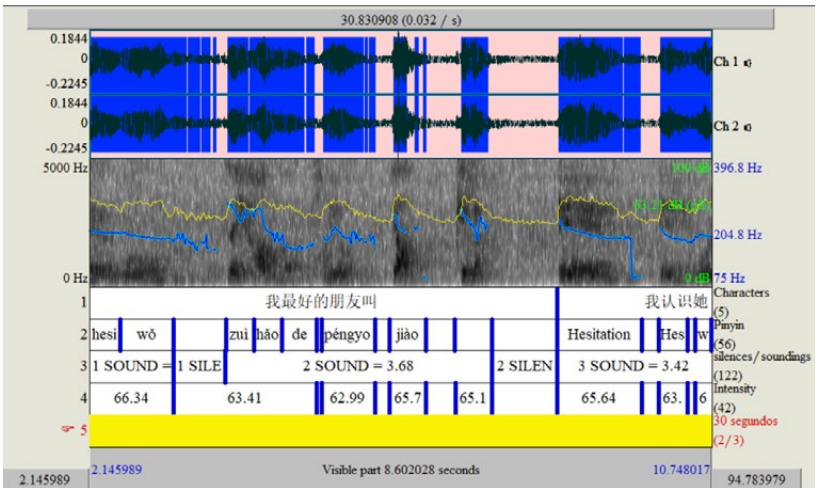


Figura 2. Ejemplo de análisis acústico en Praat de un sujeto del estudio de caso.

Una vez realizado el análisis y obtenidos los resultados del número de palabras emitidas, número de pausas, duración total de las pausas y los segmentos articulados (enunciados emitidos), se aplicaron las fórmulas propuestas por Hsiao (2015), mencionadas en la Tabla 2, con la finalidad de obtener la media de cada una de las medidas temporales.

4.6 Aplicación de la prueba de correlación de Pearson

Tras obtener los resultados del cuestionario y de las medidas temporales, se realizó la prueba de correlación de Pearson con XLSTAT entre las variables del cuestionario y los resultados de cada una de las medidas temporales. Este cálculo nos permite conocer si existen correlaciones entre dos o más variables y nos muestra similitudes y disimilitudes en un rango de -1 a 1, siendo 0 la inexistencia de correlación.

5. Resultados y discusión

Los resultados de las medidas temporales de fluidez obtenidas a través de Praat y los resultados del cuestionario se presentan en la Tabla 3. En dicha tabla únicamente están reflejadas las variables que finalmente resultaron de interés analítico en el proceso de interpretación de los datos. Cada letra hace referencia a una variable o medida temporal. La A, B y C, respuestas obtenidas del cuestionario "Autoevaluación: mis áreas de mejora", se refieren al número de lenguas certificadas, la percepción del grado de dificultad del chino (1 muy difícil – 5 muy fácil) y la percepción sobre la destreza más compleja en ChLE: 1) comprensión oral, 2) expresión oral, 3) comprensión escrita y 4) expresión escrita.

Por otra parte, los ítems D1, D2, D3, y D4 representan, en el orden dado, la velocidad media de habla en palabras, la media de pausas silenciosas, la velocidad de articulación en palabras y la longitud media de enunciados en palabras. Todos estos valores mencionados corresponden a la calificación media del grupo.

Por último, la letra E alude a las respuestas indicadas por los alumnos sobre el uso de diversas estrategias de aprendizaje del cuestionario *Strategy Inventory for Language Learning* (1990) (E2: estrategias cognitivas; E23: uso de las redes sociales con fines didácticos; E3: estrategias de compensación; E: media total de las estrategias; E432: frecuencia de uso del idioma; E441: miedo al expresarse en chino; E442: automotivación).

Tabla 3. Variables del cuestionario y resultados de las medidas temporales de fluidez.

Suj.	A	B	C	D1	D2	D3	D4	E2	E23	E3	E	E432	E441	E442
A	1	3	1	80	1,2	138	3,07	2,37	2	2	2,3	2	2	3
B	0	2	1	76	0,68	116	2,37	2,43	3	2,5	2,54	3	4	3
C	2	3	3	78	0,88	102,6	3,9	3,68	3	3,33	3,52	4	4	3
D	1	3	2	116	1,15	216	5,2	3,68	4	3,33	3,19	2	5	3
E	1	3	1	102	1,25	164,4	5,1	3,12	2	2,66	2,93	4	4	3
F	2	2	4	110	1,28	168	6,1	2,81	4	2,83	2,93	3	4	3
G	3	3	1	88	0,71	114,6	3,5	2,81	3	3,16	3,19	5	4	4
H	2	3	2	52	1,11	74,4	2,6	3,25	2	3,16	3,64	4	3	5
I	3	3	1	88	1,11	86	2,9	2,56	2	3,33	2,96	4	3	4
J	1	2	2	90	1,58	152,4	6,4	3,12	3	3,5	3,41	4	3	3
K	0	2	4	62	0,85	83,4	2,75	3,06	1	1,6	3,11	3	5	5
L	0	1	4	20	8,4	135	5	2,31	3	1,6	2,3	2	3	1
M	1	3	2	104	0,96	168,6	4,3	3,06	5	3,66	3,3	3	2	2
N	1	1	1	114	0,71	156	5,1	3,06	3	2,66	2,93	3	1	1
Ñ	2	3	2	110	0,61	159	3,4	3,56	2	2,83	3,18	3	2	3
O	2	2	1	82	0,79	119,4	2,9	2,68	3	2,33	2,97	3	3	4
P	2	2	2	68	4,21	239,71	11,3	2,43	3	2,33	2,75	2	5	2
Q	4	1	4	134	0,8	167,4	7,4	1,68	1	1,66	1,83	2	2	1

Nota. Elaboración propia. A: Número de lenguas certificadas; B: Percepción del grado de dificultad del chino: (1) muy difícil, (2) difícil, (3) asequible, (4) fácil o (5) muy fácil; C: Percepción de la destreza más compleja en chino: (1) comprensión oral, (2) expresión oral, (3) comprensión escrita o (4) expresión escrita; D1: velocidad de habla en palabras; D2: media de pausas silenciosas; D3: velocidad de articulación en palabras; D4: longitud media de enunciados en palabras; E2: estrategias cognitivas; E23: uso de las redes sociales con fines didácticos; E3: estrategias de compensación; E: media total de las estrategias; E432: frecuencia de uso del idioma; E441: miedo al expresarse en chino; E442: automotivación.

Para responder a la pregunta de investigación, ¿existe alguna relación entre la fluidez del estudiante de ChLE, el uso de estrategias de aprendizaje, los antecedentes en el estudio de lenguas extranjeras y la influencia de variables de tipo afectivo en el proceso de aprendizaje de la lengua china?, fue necesario hacer una prueba de correlación entre los resultados de las medidas temporales de fluidez y los del cuestionario. Por consiguiente, a los datos de la Tabla 3 se les aplicó una prueba de correlación de Pearson, cuya matriz resultante se

puede observar en la Tabla 4. Para favorecer la visualización de los datos se han marcado las correlaciones que han captado nuestro interés. En respuesta a nuestra cuestión, se observan correlaciones entre los antecedentes del alumno en el estudio de ChLE, el uso de estrategias de aprendizaje y los valores obtenidos en la fluidez temporal. Este es el caso de la correlación, con un valor de 0,441, entre el número de lenguas certificadas y la velocidad media de habla en palabras. Con un valor de 0,214 se intuye una relación entre el número de lenguas certificadas y la longitud media de enunciados en palabras. Por otra parte, con un valor de 0,368, se muestra cierta correlación entre la percepción de la destreza más compleja en ChLE y la media de pausas silenciosas. Asimismo, se observa otra correlación entre la percepción de la destreza más compleja y la longitud media de enunciados en palabras (0,275). Del mismo modo, el uso de las redes sociales con fines didácticos muestra una correlación con la velocidad media de habla en palabras (0,407). Finalmente, el uso de las estrategias de compensación también se correlaciona con la velocidad media de habla en palabras (0,292).

En la matriz (Tabla 4) se pueden observar cuatro correlaciones que dan respuesta a nuestra pregunta de investigación, se esquematizan a continuación (Tabla 5) y, posteriormente, se interpretan de forma individual.

Tabla 4. Matriz resultante tras aplicar la prueba de correlación de Pearson.

V	A	B	C	D1	D2	D3	D4	E2	E23	E3	E	E432	E441	E442
A	1,000	0,117	-0,005	0,441	-0,305	0,011	0,214	-0,237	-0,223	0,173	-0,070	0,232	-0,172	0,025
B	0,117	1,000	-0,432	0,072	-0,422	-0,154	-0,392	0,558	0,126	0,621	0,579	0,454	0,217	0,591
C	-0,005	-0,432	1,000	-0,138	0,368	0,035	0,275	-0,130	-0,119	-0,398	-0,199	-0,344	0,188	-0,201
D1	0,441	0,072	0,138	1,000	-0,659	0,431	0,184	0,101	0,101	0,292	-0,052	-0,017	-0,273	-0,243
D2	-0,305	-0,422	0,368	-0,659	1,000	0,208	0,377	-0,320	0,111	-0,397	-0,341	-0,401	0,116	-0,435
D3	0,011	-0,154	0,035	0,431	0,208	1,000	0,796	-0,039	0,407	0,014	-0,236	-0,553	0,099	-0,605
D4	0,214	-0,392	0,275	0,184	0,377	0,796	1,000	-0,271	0,148	-0,122	-0,269	-0,394	0,180	-0,571
E2	-0,237	0,558	-0,130	0,101	-0,320	-0,039	-0,271	1,000	0,289	0,630	0,861	0,391	0,195	0,366
E23	-0,223	0,126	-0,119	0,101	0,111	0,407	0,148	0,289	1,000	0,560	0,318	-0,029	0,068	-0,252
E3	0,173	0,621	-0,398	0,292	-0,397	0,014	-0,122	0,630	0,560	1,000	0,762	0,589	0,005	0,234
E	-0,070	0,579	-0,199	-0,052	-0,341	-0,236	-0,269	0,861	0,318	0,762	1,000	0,647	0,218	0,566
E432	0,232	0,454	-0,344	-0,017	-0,401	-0,553	-0,394	0,391	-0,029	0,589	0,647	1,000	0,080	0,545
E441	-0,172	0,217	0,188	-0,273	0,116	0,099	0,180	0,195	0,068	0,005	0,218	0,080	1,000	0,424
E442	0,025	0,591	-0,201	-0,243	-0,435	-0,605	-0,571	0,366	-0,252	0,234	0,566	0,545	0,424	1,000

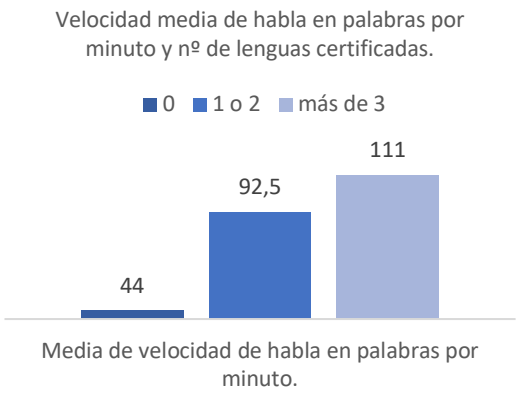
Nota. Elaboración propia.

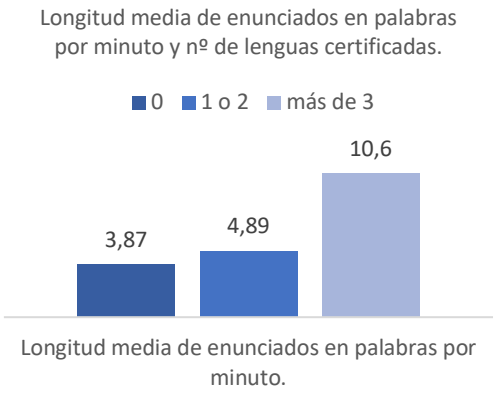
Tabla 5. Esquematización de las correlaciones que se interpretan.

Referencia de los valores que se correlacionan	Denominación de los valores que se correlacionan	Resultados de la prueba de correlación	Subsección en la que se interpretan las correlaciones
A	A. Número de lenguas certificadas	A y D1: 0,441 A y D4: 0,214 A y E432: 0,232	5.1
D1	D1. Velocidad de habla		
D4	D4. Longitud media de enunciados		
E432	E432. Frecuencia de uso del idioma		
C	C. Percepción de la destreza más compleja en chino	C y D2: 0,368 C y D4: 0,275	5.2
D2	D2. Media de duración de las pausas durante el discurso		
D4	D4. Longitud media de los enunciados		
E23	E23. Uso de las redes sociales con fines didácticos	E23 y D3: 0,407	5.3
D3	D3. Velocidad de articulación		
E3	E3. Estrategias de compensación	E3 y D1: 0,292	5.4
D1	D1. Velocidad de habla		

5.1 Correlación entre el número de lenguas certificadas (A), la velocidad de habla (D1) y la longitud media de enunciados (D4)

En las Figuras 3 y 4 se muestra cierta correlación entre el número de lenguas que han certificado los alumnos, su velocidad media de habla y la longitud media de sus enunciados. Se observa que aquellos alumnos que tienen un mayor número de lenguas certificadas también han obtenido una velocidad de habla superior y han producido enunciados más largos. Por tanto, podríamos concluir que el conocimiento de otras lenguas influye en el





Figuras 3 y 4. Resultados de las correlaciones entre la velocidad media de habla en palabras por minuto, la longitud media de enunciados en palabras por minuto, y el número de lenguas certificadas.

nivel de fluidez de los alumnos. Esto puede deberse a las competencias que adquieren los alumnos al estudiar una nueva lengua, procesos cognitivos que se dan de forma similar en todas las lenguas.

Asimismo, la matriz muestra una ligera correlación (0.232) entre A (número de lenguas certificadas) y E432 (frecuencia de uso del idioma). En la Figura 5, se advierte que los alumnos que tienen lenguas certificadas tienden también a preocuparse más por "buscar todas las maneras posibles para poner en práctica [su] chino."

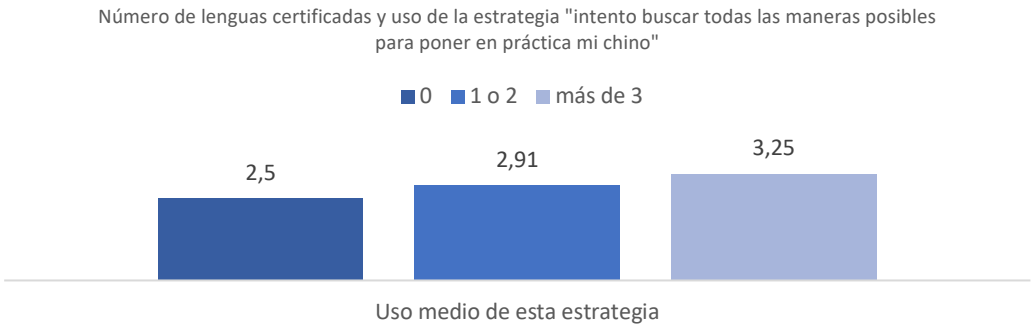


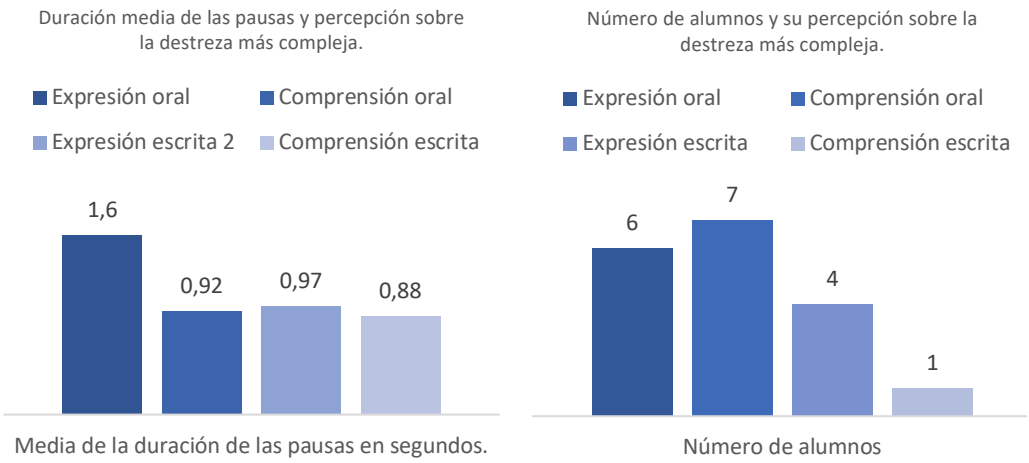
Figura 5. Resultados de la correlación entre el número de lenguas certificadas y el uso de la estrategia "intento buscar todas las maneras posibles de poner en práctica mi chino".

Observamos que los alumnos plurilingües tienden a tener mayor facilidad en el aprendizaje del ChLE. En el libro *Language Learner Strategies*, Grenfell y Harris (2015) citan los resultados de varias investigaciones para mostrar la clara ventaja que presentan los alumnos bilingües frente a los monolingües en el aprendizaje de una lengua extranjera. Explican que el alumno plurilingüe no sólo está acostumbrado a los procesos en el aprendizaje de la lengua extranjera, sino que, además, ha desarrollado una serie de competencias que le ayudan a adquirir la nueva lengua de forma más rápida.

5.2 Correlación entre la percepción de la destreza más compleja (C) y la media de duración de las pausas durante el discurso (D2) y la longitud media de los enunciados (D4)

En la Figura 6 se observa la relación existente entre la destreza que los alumnos consideran más compleja y el número de pausas que se producen durante el discurso. El valor medio de pausas de los alumnos que escogieron la expresión oral es de 1.6 segundos. Si, además, como se observa en la Figura 7, tenemos en cuenta que 6 de los participantes escogieron la expresión oral, 7 la comprensión oral, 1 la compresión escrita y 4 la expresión escrita, se intuye que, realmente, existe cierta relación entre la percepción que tienen los alumnos sobre la complejidad de la destreza oral y la longitud media de pausas.

Como se puede observar, esos 6 alumnos que indicaron que la expresión oral les parecía compleja, a su vez, reúnen la media de duración de pausas más larga. Estos datos revelan que aquellos alumnos que mayor temor tienen a la expresión oral son los que hacen pausas más largas durante sus discursos lo que, innegablemente, condiciona su fluidez. Esta correlación puede deberse a causas de origen afectivo como los nervios, la



Figuras 6 y 7. Resultados de las correlaciones entre la duración media de las pausas, el número de alumnos y la percepción sobre la destreza más compleja.

ansiedad y la inseguridad en la lengua meta. Con los datos obtenidos a través del análisis de Praat y los resultados del cuestionario, hemos sido capaces de intuir posibles problemas de tipo afectivo que condicionan el nivel de fluidez de los alumnos. Este resultado nos ofrece una nueva área de mejora en la que poder investigar e innovar. Futuras investigaciones podrían buscar métodos para aliviar la tensión del alumnado y ayudarles a que consigan expresarse en chino con soltura y autoconfianza, favoreciendo el desarrollo de su fluidez y, por consiguiente, su expresión oral. Sin embargo, debido a las limitaciones del presente estudio, no es posible identificar una relación causal que evidencie que debido a dichas percepciones se producen un mayor número de pausas silenciosas. No obstante, es una variable que presenta correlación y que merece la atención de futuras investigaciones.

Como se evidencia en la Figura 8, cuando correlacionamos estos datos con la longitud media de palabras por enunciado descubrimos que esos mismos alumnos que consideran la destreza oral la más compleja y que, a su vez, realizan una media de pausas más largas, son capaces de producir enunciados más largos.

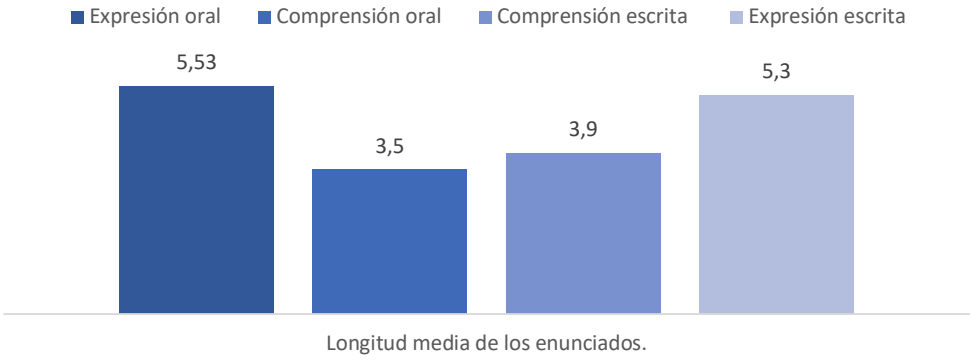


Figure 8. Resultados de la correlación entre la longitud media de los enunciados y la percepción de la destreza más compleja.

Al comparar ambas correlaciones descubrimos que, en algunos casos, los alumnos que realizan una duración media de pausas más largas, a su vez, son capaces de emitir enunciados más largos. Esto quiere decir que, durante sus enunciados, período de articulación en los que no se incluyen segmentos de pausa, el flujo de habla contiene oraciones más extensas. En un estudio sobre el acceso al léxico, Levelt et al. (1999) ofrecen una secuenciación sobre los procesos cognitivos que subyacen en producción del lenguaje (selección léxica, codificación morfológica, codificación fonológica y silabificación, codificación fonética y, finalmente, articulación). De acuerdo con Levelt et al. (1999) y en palabras de Lintunen et al. (2019), "cuanto más rápidamente los usuarios de un idioma puedan acceder y producir las palabras que desean usar, más fluido es su discurso". Las aportaciones que ha hecho la comunidad científica, como la mencionada anteriormente, invitan a iniciar futuras investigaciones sobre las causas que subyacen en la correlación existente entre la variable sobre la percepción de la destreza más compleja y la longitud media de los enunciados.

Como futura línea de investigación sería interesante observar si el origen de estas percepciones sobre el grado de dificultad de la expresión oral y los datos obtenidos en la fluidez temporal tienen relación con reacciones afectivas negativas. En esta línea, Liu (2018), en su investigación sobre la ansiedad y la predisposición a la comunicación en el aprendizaje del ChLE, identifica algunas posibles causas que generan inseguridades en los alumnos. De los 15 sujetos a los que entrevista en su investigación, 10 de ellos "se sentían nerviosos al hablar en chino con otros en clase debido a varias razones como la presión de grupo, el miedo a la burla, su carente nivel en la lengua y el miedo a ser el centro de atención" (Liu, 2018, p. 64).

5.3 Correlación entre el uso de las redes sociales con fines didácticos (E23) y la velocidad de articulación (D3)

Aunque con las respuestas al cuestionario debemos ser preferiblemente cautos, ya que el hecho de que los participantes informen de que utilizan las estrategias de aprendizaje quizás no se corresponde con que realmente lo hagan, la prueba de correlación también ha revelado una relación significativa que se observa en la Figura 9. Los alumnos que han indicado que utilizan las redes sociales con fines didácticos obtuvieron una media superior en la velocidad de articulación. Esta correlación está situada en un valor positivo casi moderado (0,407). Esto quiere decir que la correlación no se da en todos los casos, pero sí en una mayoría. Los alumnos que han indicado que nunca o casi nunca hacen uso de las redes sociales con fines académicos, obtuvieron una media de 145,68 palabras en la velocidad media de articulación por minuto. En el caso de los alumnos que han indicado que las utilizan "a veces" sus resultados fueron de 141,96 palabras. Por último, los alumnos que han indicado que las utilizan muy a menudo o siempre articulan una media de 162,2 palabras por minuto.

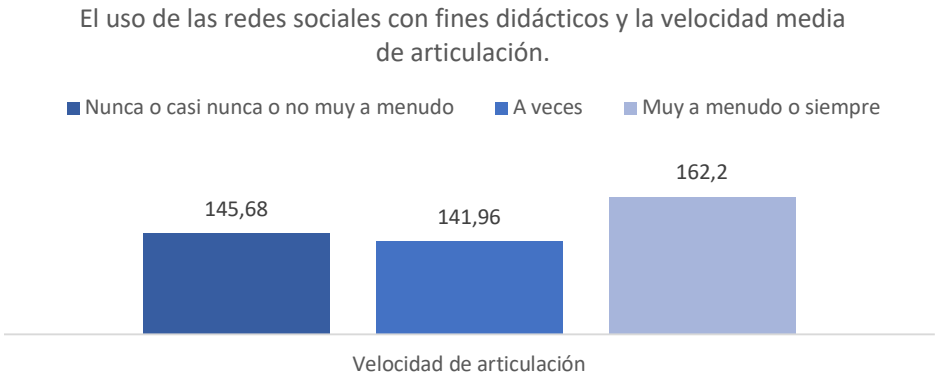


Figura 9. FResultados de la correlación entre el uso de las redes sociales con fines didácticos y la velocidad de articulación.

Esta correlación entre el uso de las redes sociales y los valores obtenidos en la media de articulación en palabras sugiere una nueva variable y, por tanto, da respuesta nuevamente a nuestra pregunta de investigación. De esta manera, se revela que el uso de las redes sociales está relacionado con la velocidad media de articulación de los sujetos de nuestra investigación. El uso de las redes sociales en la enseñanza del ChLE es un área que merece nuestra atención en futuras investigaciones. Por ejemplo, en las investigaciones de Wang, Zhou y Li (2022) también se ha observado una correlación entre el uso de las redes sociales y el aprendizaje de ChLE. En este caso se llevó a cabo un experimento en algunas universidades de Vietnam con alumnos de ChLE, a los que se dividió en dos grupos, uno experimental y otro de control. Los profesores del grupo experimental utilizaron recursos de Youtube, mientras que el grupo de control continuó utilizando el libro de texto *Standard Course HSK4*. Más adelante se les realizó una prueba a ambos grupos y los resultados mostraron que el valor medio del grupo experimental fue de 74,87 mientras que la del grupo de control fue de 65,83. Estos resultados muestran que los alumnos que utilizaron Youtube hicieron mayores progresos en el aprendizaje del ChLE.

5.4 Correlación entre las estrategias de compensación y la velocidad de habla

Por último, la prueba de correlación revela una posible relación entre el uso las estrategias de compensación y la velocidad media de habla. De acuerdo con Wang y Cáceres-Lorenzo (2019) las estrategias compensatorias son "las acciones de las que se vale [el estudiante] para subsanar el conocimiento inadecuado," en otras palabras, el estudiante "es capaz de superar lo que no sabe y sus posibles carencias, a través de claves lingüísticas y extralingüísticas" (2019, p. 169).

Como se refleja en la Figura 10, aquellos alumnos que indican que utilizan estas estrategias a menudo tienen una media de velocidad de habla superior a aquellos que indican que no las utilizan. Nuevamente se da respuesta a nuestra pregunta de investigación, observando cómo el uso de las estrategias de aprendizaje afecta directamente al nivel de fluidez de los estudiantes.

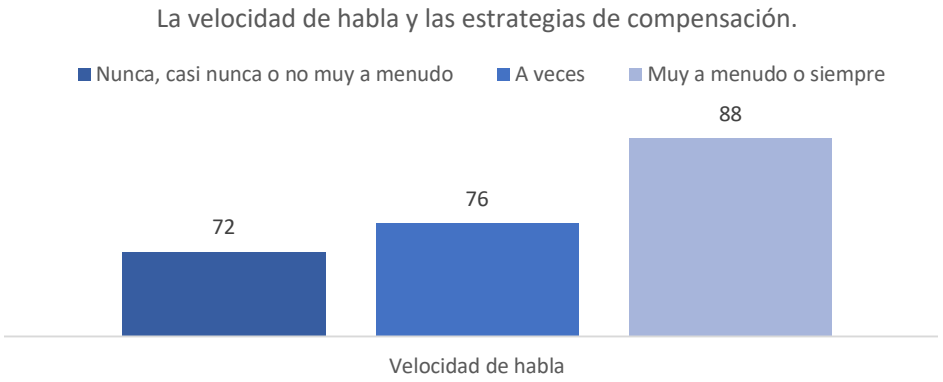


Figura 10. Resultados de la correlación entre las estrategias de compensación (E3) y la velocidad de habla (D1).

6. Conclusiones

Esta investigación ha revelado la existencia de relaciones entre algunos parámetros acústicos de la fluidez, el uso de ciertas estrategias de aprendizaje, determinados antecedentes en el estudio de lenguas extranjeras y la variable afectiva de percepción del grado de dificultad de la lengua china.

El nivel de dificultad de la lengua meta, las autopercepciones, creencias y sentimientos en el proceso de aprendizaje son variables cuantitativas de la ansiedad en el aprendizaje de lenguas extrajeras. (Horwitz et al., 1986; Yao et al., 2022). Esta fundamentación teórica sobre las reacciones afectivas negativas y los resultados obtenidos en este estudio nos lleva a la conclusión de que la correlación entre el grado de dificultad de la lengua china y las medidas temporales de fluidez evidencia una posible relación de causalidad entre la ansiedad y la fluidez. De esta manera, se han revelado determinadas variables que presentan relación con la fluidez de nuestro estudiantado, exponiendo así áreas de mejora sobre las que futuras investigaciones puedan versar y cumpliendo con el objetivo propuesto de contribuir al estudio de la fluidez observando qué variables pueden influir en el desarrollo de ésta en ChLE.

Los resultados de esta investigación nos han permitido identificar el número de lenguas certificadas, la percepción de la destreza más compleja en el aprendizaje de ChLE, el uso de las redes sociales y el uso de las estrategias de compensación, como variables que se correlacionan con los estándares aplicados a la fluidez temporal (velocidad media de habla en palabras, media de pausas silenciosas en segundos, velocidad media de articulación en palabras y longitud media de enunciados en palabras). Los estudiantes han indicado que las destrezas de comprensión y expresión oral son las más complejas en el aprendizaje de ChLE. Asimismo, se ha observado que aquellos estudiantes que indican que la expresión oral les resulta más compleja, presentan mayores alteraciones en el flujo de habla.

No obstante, nuestros resultados únicamente nos han permitido detectar relaciones entre algunas variables y los datos cuantitativos de las medidas temporales de la fluidez de este estudio de caso concreto. Es preciso que, en adelante, la comunidad investigadora inicie nuevos estudios en la misma línea para que, paulatinamente, detectemos las principales variables que afectan a la fluidez del aprendiz de ChLE, profundicemos en las causas subyacentes y desarrollemos metodologías específicas para ayudar al alumnado de ChLE a mejorar su fluidez oral.

Esperamos que los resultados de esta investigación sean útiles para otros docentes de ChLE y que contribuyan en el camino hacia la innovación en el campo de la lingüística aplicada a la enseñanza del chino como lengua extranjera.

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Formal Analysis / *Análisis formal:* Padrón Santana & Cáceres Lorenzo.
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Writing / *Redacción:* Padrón Santana & Cáceres Lorenzo.
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¿Es posible elaborar corpus orales espontáneos y cumplir la legislación? El modelo en tres fases del corpus Ameresco

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Resumen: Hoy día, la construcción de corpus orales presenta un marco propicio para su desarrollo, ya que cuenta con herramientas informáticas que permiten recoger y procesar muestras de habla fácilmente. Sin embargo, la recogida de corpus orales de conversación espontánea plantea dos retos: por un lado, el cumplimiento de las diferentes legislaciones que velan por el derecho a la intimidad y la privacidad de las personas, así como de las políticas de protección de datos; estas implican la obligatoriedad de obtener el consentimiento informado previo de los hablantes y la aplicación de un sistema de anonimización de datos personales. Por otro, evitar la paradoja del observador laboviana para obtener conversaciones en las que los hablantes no alteren su comportamiento lingüístico. Con el objetivo de establecer un modelo de buenas prácticas en materia de protección y tratamiento de los datos, en este trabajo repasaremos las prácticas de tratamiento de datos de corpus orales españoles (PRESEEA, COSER y ESLORA); analizaremos la legislación que aplica a la construcción de corpus y presentaremos el modelo de consentimiento en tres pasos empleado en el corpus Ameresco. Este garantiza, por un lado, una recogida legal, puesto que se informa al hablante de que va a ser grabado próximamente sin especificar cuándo y, por otro, la naturalidad de la recogida, ya que el hablante será grabado en un momento posterior.

Palabras clave: *lingüística de corpus, corpus orales, protección de datos, anonimización, español coloquial.*

Is it possible to produce spontaneous oral corpora and comply with legislation? The three-phase model of the Ameresco corpus

Abstract: Nowadays, the construction of oral corpora presents a favorable framework for its development, since there are computers tools that allow to collect and process speech samples easily. However, the collection of oral corpora of spontaneous conversation poses two challenges: on the one hand, compliance with the different legislations that ensure the right to privacy and privacy of individuals, as well as data protection policies, these imply the obligation to obtain the prior informed consent of the speakers and the implementation of a system of anonymization of personal data. On the other hand, to avoid the Labovian observer paradox in order to obtain conversations in which the speakers do not alter their linguistic behavior. With the aim of establishing a model of good practices in data protection and data processing, in this paper we will review the data processing practices of Spanish oral corpora (PRESEEA, COSER and ESLORA). We will analyze the legislation that applies to corpus construction and we will present the three-step consent model used in the Ameresco corpus. This guarantees a legal collection, since the speaker is informed that he/she is going to be recorded soon without specifying when, as well as the naturalness of the collection, since the speaker will be recorded at a later time.

Keywords: *Corpus linguistics, oral corpora, data protection, anonymization, colloquial Spanish.*

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1. Introducción

En el presente trabajo abordaremos las obligaciones que se desprenden de las normativas vigentes en cuestión de protección de datos personales y privacidad a la hora de recoger corpus orales, concretamente, para el caso de corpus de conversación coloquial espontánea. Se pretende, por tanto, 1) ofrecer la base legal que afecta a la construcción de corpus orales, y 2) establecer un modelo de buenas prácticas en materia de protección y tratamiento de los datos extrapolable a la construcción de otros corpus de estas características, a raíz de la revisión de la metodología de otros corpus orales del español y de lo establecido para el corpus Ameresco.

La particularidad de los corpus de conversación coloquial espontánea reside en que, para poder realizar una investigación lingüística lo más rigurosa y objetiva posible, los hablantes no deberían saber que están siendo grabados. De ser así, se produciría la *paradoja del observador* laboviana (Labov, 1983, p. 66), según la cual el investigador debe encontrar la manera de ver cómo habla una persona cuando no está siendo observada de manera sistemática. Sin embargo, para acceder a estos datos la observación sistemática es necesaria. Lo ideal sería poder recoger estos materiales en un contexto de grabación que diera lugar a muestras de habla naturales sin que los hablantes fueran conscientes de que están siendo grabados; sin embargo, desde un punto de vista ético plantearía problemas legales, puesto que parecería entrar en conflicto con el obligado cumplimiento de la legislación sobre el derecho a la intimidad y a la propia imagen, así como a la protección de los datos personales y los derechos digitales.[1]

La conversación coloquial se caracteriza, justamente, por la presencia de rasgos situacionales como la relación de igualdad entre los interlocutores, su desarrollo dentro de un marco discursivo familiar en el que hay un saber y unas experiencias compartidas entre los hablantes, y por una temática no es especializada (Briz, 1995, 2001). Estas características, además, se manifiestan en una serie de rasgos primarios como son la ausencia de planificación de la conversación, es decir, la toma de turnos no está preestablecida, en la presencia de un fin comunicativo socializador y en el tono informal predominante (Briz, 1995, 2001).

La base de un estudio de la variedad coloquial del español debería garantizar que no se alteren estos rasgos puesto que, si se diera un cambio en la familiaridad del marco interactivo del hablante al saberse grabado, el grado de informalidad se vería reducido y, por consiguiente, el grado de prototipicidad de la conversación sería menor (Briz, 1995, 2001). Por ello, antes de plantear cualquier investigación que implique el uso de grabaciones de conversación coloquial espontánea debe instaurarse una metodología que establezca

[1] La legislación que opera, en este sentido, sería la siguiente: Ley Orgánica 1/1982, de 5 de mayo, de Protección civil al derecho al honor, la intimidad personal y familiar y a la propia imagen, la Ley Orgánica 3/2018, de 5 de diciembre, de Protección de datos personales y garantía de los derechos digitales y el Reglamento (UE) 2016/679 del Parlamento Europeo y del Consejo de 27 de abril de 2016 relativo a la protección de las personas físicas en lo que respecta al tratamiento de datos personales y a la libre circulación de estos datos y por el que se deroga la Directiva 95/46/CE Reglamento General de Protección de Datos.

cómo van a ser las tareas de recopilación y cómo va a realizarse la anonimización de los datos para evitar la identificación de los hablantes. Así mismo, debe plantearse un modelo de consentimiento informado que estos deberán firmar.

Para lograr un grado de naturalidad óptimo existen dos posibilidades. Una de ellas, como señala Schneider (2018, p. 53), consiste en que los participantes sepan que están siendo grabados, ya que

> in some studies, it is, however, reported that participants tend to forget about being recorded and behave increasingly naturally the longer the recording takes and the speech event lasts, feeling particularly at ease in familiar situations and among friends.

No obstante, no hay estudios sistemáticos al respecto que justifiquen esa impresión de manera objetiva: se cree que los hablantes acaban olvidando la presencia de mecanismos de grabación, pero no se ha comprobado con corpus de grabación secreta para ratificar si, en efecto, es así, y si lo es en todas las etapas de la grabación, solo en las partes centrales, etc.

La segunda posibilidad, sugerida en este artículo, consiste en utilizar un modelo de consentimiento informado que proponga una manera de lograr la naturalidad de la muestra lingüística respetando a su vez la normativa legal. En este sentido, se presenta la metodología que se ha utilizado en el corpus Ameresco, donde se emplea un modelo de consentimiento en tres fases en el que los informantes (1) consienten ser grabados previamente a la recogida de la muestra, pero sin especificar en qué momento exacto se realizará esta; (2) ratifican su consentimiento en el momento posterior a la grabación, y, (3) junto a estas dos autorizaciones, recoge, a su vez, el consentimiento para el tratamiento de los datos personales.

La estructura de este trabajo es la siguiente: en primer lugar, haremos un repaso a las particularidades de la recogida de corpus orales (sección 2); en segundo lugar, describiremos los principios éticos y legales que operan en la recopilación de corpus orales grabados secretamente (sección 3); a continuación, examinaremos el modo de proceder de diferentes corpus orales del español a este respecto (sección 4), y, por último, detallaremos la metodología de trabajo seguida en la construcción del corpus Ameresco (sección 5) en cuanto a la recogida del consentimiento informado de los hablantes (sección 5.1.), así como del proceso de anonimización de datos personales que se ha establecido (sección 5.2.).

2. La recogida de corpus: la particularidad de los corpus orales

Cuando se aborda la planificación de un corpus, el primer principio fundamental se relaciona con el propósito de investigación, es decir, cuál es el objetivo de su creación, qué tipo de análisis lingüístico se busca realizar y cuáles son las preguntas de investigación que guían su recopilación. En segundo lugar, es necesario establecer de qué manera el corpus será representativo, definiendo los criterios de selección para obtener una muestra que refleje la diversidad en términos de variación diatópica, diastrática y/o diafásica. La reflexión sobre el tamaño del corpus, considerando su objetivo y las características de representatividad elegidas, también es crucial. Por ejemplo, la construcción de un corpus

para una investigación específica, como una tesis doctoral con recursos limitados y una persona a cargo de todo el proceso, difiere significativamente de la construcción de un corpus respaldado por un grupo de investigación o una institución con mayores recursos técnicos, humanos y económicos.

Otro aspecto fundamental se refiere a los materiales que se recopilarán y las implicaciones asociadas a estos. En el caso de corpus escritos, es necesario considerar cuestiones relacionadas con los derechos de autor de los archivos que conformarán la muestra. Para los corpus orales, especialmente aquellos que incluyen grabaciones de individuos particulares, surge una complejidad adicional en términos de conocimiento y cumplimiento de la legislación sobre privacidad y protección de datos, como veremos más adelante. En ambos casos, los investigadores deben asegurar el cumplimiento de los principios éticos que garanticen una conducta responsable en el tratamientos de estos datos durante la recogida de corpus (Schneider, 2018, McEnery & Hardie, 2011, Adolphs & Knight, 2010, Childs et al., 2001).

Finalmente, se deben abordar aspectos relacionados con la conservación y almacenamiento de los datos, así como la decisión sobre cómo se accederá y distribuirá el corpus. Esto implica establecer cómo el público podrá acceder al corpus y en qué condiciones, determinando si los materiales recopilados estarán disponibles de manera abierta o si se restringirá el acceso según sea necesario.

Al centrarnos específicamente en los corpus orales, surge una consideración adicional. A diferencia de la recopilación de materiales escritos, la incorporación de materiales a un corpus oral implica una fase adicional de transcripción y etiquetado del material antes de llegar al paso final de su inclusión en la página electrónica, si así se ha dispuesto. Por lo tanto, es necesario plantearse cómo representar lingüísticamente el habla a través de la escritura, la exhaustividad de la transcripción y codificación, así como la recopilación de metadatos e información contextual sobre las circunstancias de la grabación y los participantes, incluyendo los permisos y consentimientos informados de las personas involucradas en las grabaciones.

La tarea detallada es ardua, pero en la actualidad, la lingüística de corpus cuenta con un contexto más propicio para su desarrollo y ejecución, del que carecía hace apenas unos años. Recopilar un corpus es una tarea que se puede emprender con cierta facilidad, ya que los avances en tecnología y las nuevas herramientas informáticas ponen al alcance de los investigadores una gran cantidad de datos que puede servirles como base para construir su propio corpus lingüístico. Esta es una labor relativamente sencilla si el género discursivo objeto de la investigación es textual y no oral. Si es oral, el proceso es más productivo cuando las grabaciones proceden de medios públicos (televisión, radio, redes sociales) o cuando el trabajo se basa en géneros discursivos con mayor grado de planificación, como entrevistas o conversaciones semidirigidas.

En el caso que nos ocupa en este trabajo, el de los corpus orales de conversación coloquial espontánea grabados secretamente, el panorama se complica porque no es posible planificar de antemano las condiciones de la grabación y, además, porque el hecho de grabar secretamente conlleva la adopción de un protocolo para obtener el consentimiento informado que es diferente al de otros géneros discursivos, ya que, como veremos más adelante (sección 3), grabar a otra persona sin que esta lo sepa y difundir el contenido de la grabación, aunque sea con fines de investigación, puede acarrear problemas legales que deriven en sanciones penales.

Si bien en cualquier campo de investigación o práctica profesional existen métodos de anonimización válidos, en el campo de la lingüística no parece existir ningún estándar. A esta conclusión llega Rock (2001, p. 2) tras recopilar los puntos de vista de distintos investigadores, creadores y usuarios de corpus del panorama científico internacional para recabar las diferentes actitudes y prácticas existentes en la actualidad respecto a cuestiones éticas sobre tratamiento de datos, anonimización, etc.

McEnery & Hardie (2011, p. 60), por su parte, aluden a que mientras que sí existe información sobre cuestiones jurídicas relacionadas con la construcción de corpus, no se ha prestado suficiente atención a las cuestiones éticas que implican estos trabajos. Esto último se comprueba en los primeros corpus orales, creados cuando aún no estaban vigentes los requisitos legales actuales, donde no se planteaban cuestiones como que se pudiera estar atentando contra la intimidad de los participantes. En estos corpus, por ejemplo, sí que se pedía el consentimiento de los hablantes. En el caso del corpus PRESEEA, que recoge entrevistas semidirigidas, la petición de autorización previa a la grabación no presenta ningún inconveniente. Sin embargo, en el corpus de conversación coloquial Val.Es.Co. (2002), la petición de autorización previa podía condicionar las circunstancias de producción y afectar a los rasgos primarios y, por ende, a la prototipicidad de la conversación. Por esta razón, se solicitaba únicamente una autorización posterior, tras haberse realizado la grabación. Por lo tanto, si bien se tuvieron en cuenta algunas cuestiones éticas para la recogida y el tratamiento de la información y se tomaron medidas concretas (entre ellas, la anonimización de nombres propios), estas se aplicaron sin que hubiera una metarreflexión sobre la motivación que hay detrás de las decisiones tomadas. McEnery & Hardie (2011, p. 68), sin embargo, concluyen que buena parte de los errores cometidos en el pasado a este respecto en la lingüística de corpus se ha reparado hoy día.

Actualmente, en cambio, hay unanimidad en la literatura a la hora de aceptar que la metodología de recogida de corpus orales conlleva necesariamente la autorización y firma del consentimiento informado por parte de los hablantes, así como la obligatoriedad de proteger a estos participantes y los datos que proporcionen a la investigación por medio de un sistema de anonimización más o menos complejo, dependiendo de las características del corpus y la investigación. Así, se deberán contemplar diferentes estándares dependiendo del tipo de datos recogidos, sean solo auditivos, con contenido multimedia, etc. (Rock, 2001, Childs et al., 2011, Schneider, 2018, D'Arcy & Bender, 2023, McEnery & Hardie, 2011, Adolphs & Knight, 2010).

En las líneas que siguen se resumirá la parte de la legislación vigente en materia de protección y tratamiento de datos que afecta a la recogida de muestras de habla, anonimización y política de protección de datos en la investigación lingüística de corpus; seguidamente, se propondrá una metodología que trata de buscar un compromiso entre la naturalidad de la muestra y el cumplimiento de la legalidad, a través del modelo de autorización en tres fases propuesto en el corpus Ameresco (Albelda & Estellés, en línea, Carcelén & Uclés, 2019, Briz et al., 2020, Carcelén, 2024b).

3. El tratamiento de datos personales según la legislación española y europea

Para manejar cualquier tipo de datos personales, es necesario conocer las obligaciones que se desprenden de las legislaciones reguladoras sobre protección de datos y el derecho al honor y la intimidad. La metodología de trabajo de corpus no es una excepción, y debe asentarse sobre pilares éticos y de buenas prácticas en la investigación.

En particular, para el territorio español operan la Ley Orgánica 1/1982, de 5 de mayo, de Protección civil y derecho al honor, la intimidad personal y a la propia imagen, el Reglamento (UE) 2016/679 del Parlamento Europeo y del Consejo de 27 de abril de 2016 relativo a la protección de las personas físicas en lo que respecta al tratamiento de datos personales y a la libre circulación de estos datos, y por el que se deroga la Directiva 95/46/CE y su aplicación en España a través de la Ley Orgánica 3/2018, de 5 de diciembre, de Protección de datos personales y garantía de los derechos digitales.

El primer texto, la Ley Orgánica 1/1982, de 5 de mayo, establece en su artículo 1 el derecho al honor, la intimidad personal y familiar y la propia imagen como derechos fundamentales recogidos por la Constitución. Por tanto, cualquier intromisión ilegítima en este ámbito que no esté autorizada expresamente por ley o para la que no se haya otorgado un consentimiento expreso por parte del afectado sería penalizable (art. 2.2). Según el artículo 7 de esta ley, por intromisión ilegítima se entiende:

1. El emplazamiento en cualquier lugar de aparatos de escucha, de filmación, de dispositivos ópticos o de cualquier otro medio apto para grabar o reproducir la vida íntima de las personas.
2. La utilización de aparatos de escucha, dispositivos ópticos, o de cualquier otro medio para el conocimiento de la vida íntima de las personas o de manifestaciones o cartas privadas no destinadas a quien haga uso de tales medios, así como su grabación, registro o reproducción. [...].

Nótese que la recogida de muestras de conversaciones coloquiales espontáneas, que preferentemente han de obtenerse de manera secreta para que no se vea alterado el comportamiento lingüístico de los participantes, requiere precisamente de la utilización de aparatos de grabación en contextos físicos que, de acuerdo con lo estipulado arriba, podría atentar contra la intimidad de las personas. Cabe señalar, además, que la grabación de una conversación sin haber obtenido el permiso de las personas afectadas puede constituir

un delito grave contra la intimidad según el Código Penal (artículo 197). Parece ser lícita la grabación sin consentimiento si se da una casuística como la siguiente: la persona que graba participa activamente de la conversación y esta podría ser utilizada como prueba judicial. Sin embargo, en cualquier otro caso, como la grabación de conversaciones ajenas o conversaciones en las que dicha persona apenas participe, con el agravante de que el contenido no solo se grabe, sino que también se difunda a terceros, sí se tipifica como delito grave contra la intimidad. Si lo trasladamos a la metodología de recogida de conversaciones del corpus Ameresco, en la que se recomienda que

> la persona responsable de la grabación intervenga lo mínimo imprescindible para que su silencio no resulte sospechoso y, si fuera posible, se sugiere que deje la grabación en marcha y salga o se retire de la escena (Carcelén & Uclés, 2019, p. 23)

se estaría atentando contra las disposiciones del Código Penal señaladas más arriba y, por tanto, de no contar con el consentimiento previo, la recogida del corpus contravendría los principios éticos y legales que se deben cumplir.

Por otro lado, la recogida de estas grabaciones lleva consigo la recolección de datos personales que indefectiblemente van a aparecer en las conversaciones. La conversación coloquial, como hemos detallado en el apartado 1, sucede en un marco de interacción familiar, entre íntimos y conocidos, con una temática cotidiana (Briz, 1995) y, por tanto la aparición de datos sensibles o que pudieran dar lugar a la identificación de los hablantes es esperable.

El segundo texto mencionado arriba, el Reglamento Europeo 2016/679 y su aplicación en España mediante la Ley Orgánica 3/2018 da cuenta de cómo debe gestionarse el tratamiento de datos personales. Según ambas directrices, los principios de la protección de datos deben aplicarse a toda información relativa a una persona física identificada o identificable, ya estén los datos seudonimizados o anonimizados (véase apartado 4.2.).[2] Por tanto, la clave está en adoptar medidas para que no se pueda llegar a saber de qué persona se trata.

> Los datos personales seudonimizados, que cabría atribuir a una persona física mediante la utilización de información adicional, deben considerarse *información sobre una persona física identificable*. Para determinar si una persona física es identificable, deben tenerse en cuenta todos los medios, como la singularización, que *razonablemente* pueda utilizar el responsable del tratamiento o cualquier otra persona para identificar directa o indirectamente a la persona física. *Para determinar si existe una probabilidad razonable de que se utilicen medios*

[2] En este punto debe tenerse en cuenta que el significado de *datos anonimizados* y *datos seudonimizados* en el ámbito legal difiere en parte del concepto de *anonimización* en lingüística. En lingüística de corpus se utiliza *anonimización de datos* para referirse al proceso por el cual o bien se elimina o bien se sustituye por un término ficticio o por una codificación todo dato que pudiera permitir la identificación del hablante (Rock, 2001, McEnery & Hardie, 2011, Schneider, 2018, Adolphs & Knight, 2010, Childs et al., 2001). Mientras que, legalmente, *anonimizar* implica la eliminación total de datos personales e impide cualquier tipo de reidentificación, y *seudonimizar* conlleva el uso de un sistema de encriptación en base a ficheros que permitiría, en casos particulares recogidos por la Ley 3/2018, realizar la reidentificación del usuario. Piénsese, por ejemplo, en una investigación en la que se persigue la cura de una enfermedad y que tras realizar los ensayos pertinentes los resultados podrían mejorar la calidad de vida del paciente sometido al estudio.

> *para identificar a una persona física, deben tenerse en cuenta todos los factores objetivos, como los costes y el tiempo necesarios para la identificación, teniendo en cuenta tanto la tecnología disponible en el momento del tratamiento como los avances tecnológicos.* Por lo tanto, los principios de protección de datos no deben aplicarse a la información anónima, es decir información que no guarda relación con una persona física identificada o identificable, ni a los datos convertidos en anónimos de forma que el interesado no sea identificable, o deje de serlo. En consecuencia, el presente Reglamento no afecta al tratamiento de dicha información anónima, inclusive con fines estadísticos o de investigación. (Reglamento UE 2016/679, apartado 26; énfasis nuestro).

Respecto de los datos anonimizados, se entiende que

> son *anonimizados si se han eliminado todos los elementos identificativos de un conjunto de datos personales*. No puede dejarse en la información elementos que podrían, *ejerciendo un esfuerzo razonable*, servir para volver a identificar a la(s) persona(s) de que se trate. (Agencia de los Derechos Fundamentales de la Unión Europea, 2014, p. 48; énfasis nuestro).

Si bien el Reglamento señala que los datos que hayan sido anonimizados con éxito ya no se consideran datos personales y, por tanto, los principios de protección de datos no deben aplicarse (esto es, podrían hacerse públicos), en el caso de los corpus orales se hace necesaria la adopción de las medidas más restrictivas posibles para evitar problemas legales, al no existir una anonimización completa. Si el corpus se concibe para ser abierto, se tendrá acceso al audio de la grabación y, por tanto, a la voz, que es un rasgo identificador directo de cada persona. Junto a esta premisa, cabe prestar atención a la parte destacada en cursiva, según la cual "deben tenerse en cuenta todos los factores objetivos [...] teniendo en cuenta tanto la tecnología disponible en el momento del tratamiento como los avances tecnológicos." Es decir, dado que el desarrollo de herramientas informáticas de tratamiento de sonido y voz es cada vez más rápido y más accesible a equipos caseros, la precaución en este sentido debe extremarse con vistas al futuro.

Por otro lado, volviendo al concepto de *consentimiento informado*, se señala la necesidad de que los usuarios, en este caso, los informantes, concedan su autorización para el uso de los datos recogidos de manera libre, informada e inequívoca, incluyendo las especificidades de aquellos casos en los que aparezcan menores de edad (Reglamento 2016/679 apartados 32 y 42 y Ley 3/2018 artículos 6 y 7; véase también, más abajo, el apartado 4.1). Para la elaboración de este consentimiento, la normativa plantea el *principio de transparencia* (Reglamento 2016/679, 39, Ley 3/2018 art. 11), por el cual se establece que debe informarse al usuario de forma inteligible, de fácil acceso y en un lenguaje claro y sencillo de los fines explícitos y legítimos para los que se utilizarán estos datos. Además, nombra a un responsable del tratamiento de los datos que "estará obligado a informar al afectado sobre los medios a su disposición para ejercer los derechos que le corresponden. Los medios deberán ser fácilmente accesibles para el afectado." (Ley 3/2018, artículo 12).

Esto es, la persona afectada debe saber que puede retirar su consentimiento en cualquier momento y saber también a quién o a qué institución debe dirigirse para ejercer su derecho a retirarlo.

La normativa anterior se aplica a todos los casos en que se manejan datos personales, desde grabaciones de cámaras de seguridad hasta ficheros comerciales; sin embargo, cabe preguntarse si la ley contempla alguna especificidad para el caso de fines de investigación científica.

Volviendo al Reglamento Europeo 2016/679, en su apartado 159 se señala que su ámbito de aplicación concierne también al tratamiento de datos personales que se realice con fines de investigación científica entendida de manera amplia; esto es, comprendería el desarrollo tecnológico y la demostración, la investigación fundamental, la investigación aplicada y la investigación financiada por el sector privado. Además, se hace una mención especial a las investigaciones en el ámbito de la salud y, especialmente, en el ámbito biomédico; de hecho, hay disposiciones adicionales en la Ley 3/2018, que desarrollan específicamente las características del tratamiento de datos para la investigación sanitaria (disposiciones adicionales sexta y decimoséptima).

De todo lo anterior, se derivan dos aspectos: primero, existe poca legislación específica que regule las condiciones de la recogida de datos en investigación en general, probablemente por la multiplicidad de fines que puede tener esta, y se centra fundamentalmente en el ámbito de las ciencias de la salud, que implica datos altamente sensibles de los pacientes y requiere un proceso de anonimización y almacenamiento de los datos que se hace innecesario en el caso de los corpus orales espontáneos.[3] Segundo, se deriva que debe quedar meridianamente clara en el consentimiento que firman los sujetos cuál es la finalidad de la recogida, de modo que cabe detallar qué interesa especialmente al grupo de investigación.

Sin embargo, volvemos en este punto a una paradoja: explicitar el objeto de investigación, que en nuestro caso es lingüístico, puede llevar al sujeto a modificar significativamente su forma de expresión, puesto que se le hace consciente de que es la manera en la que habla lo que centra el interés de la investigación y, por tanto, su propio discurso pasa a ser su centro de atención. En este sentido, el protocolo que presentaremos en la sección 5 trata de minimizar el impacto de esta medida introduciendo un lapso de tiempo entre el consentimiento y la grabación efectiva que permita al sujeto olvidar la grabación y, con ella, quitar el foco de la forma de habla.

En resumen, a la hora de trabajar con datos personales, bien sea en el ámbito de la investigación científica o en cualquier otro ámbito (comercial, administrativo, financiero, publicitario, etc.), se hace necesario, por un lado, (a) obtener el *consentimiento* informado previo por escrito de los usuarios, los informantes o hablantes en el caso de la recogida de corpus orales y (b) someter estos datos a un proceso de *anonimización* que impida su

[3] No obstante, véase Carcelén (2024a) para analizar las especificidades de un corpus de conflicto entre íntimos y parejas, cuyo tratamiento se asemeja al del ámbito sanitario por la sensibilidad del contenido.

reidentificación. En la siguiente sección trataremos sobre las diferentes metodologías de anonimización encontradas en los principales corpus orales del español afectados por la legislación española y europea.[4]

4. Prácticas de tratamiento de datos en corpus orales del español: el consentimiento informado y la anonimización

De acuerdo con los preceptos contenidos en la legislación española y europea presentados arriba, queda claro que para una buena praxis en la investigación se necesita obtener el consentimiento informado de los participantes y adoptar un sistema de anonimización de datos. Así mismo, los corpus orales que se recogen en la actualidad deben incluir en su metodología de trabajo los objetivos relacionados con sus intereses de investigación. Su construcción requiere de un trabajo previo de reflexión y concreción de las medidas que se van a tomar para hacer frente a posibles implicaciones éticas y legales. Además, se debe de garantizar la protección de los participantes de la manera más estricta posible.

4.1 El consentimiento informado

Conseguir el consentimiento informado es un proceso fundamental en la investigación científica. En nuestro caso, los hablantes deben conceder al investigador de manera voluntaria y libre su permiso para usar las grabaciones que conforman el corpus.

Como se ha mencionado en el apartado 2, las especificidades de este consentimiento variarán dependiendo del género discursivo que se desee analizar en base a muestras de habla reales.

La recogida del consentimiento informado es una práctica habitual en la investigación lingüística actual. Aplicados al ámbito de la investigación, los requisitos implican que el interesado debe, en la línea de lo señalado por D'Arcy & Bender (2023, pp. 53-54) comprender qué se les está pidiendo, cómo se recopilarán sus datos, qué ocurrirá con ellos una vez obtenidos, tanto a corto como a largo plazo, cómo se protegerán estos datos y quién tendrá acceso a ellos, así como los derechos de los participantes a retirarse. No obstante, en el caso de la recogida de corpus orales existen consideraciones adicionales derivadas de la situación de grabación, en la que pueden verse involucradas terceras personas, bien por mención explícita, bien por participación accidental.

McEnery & Hardie (2011) plantean que hay cuatro áreas relacionadas con la ética en lingüística de corpus: la que afecta a los informantes, a los investigadores que construyen un corpus, a los distribuidores y a los usuarios, y mencionan la necesidad de que haya un consentimiento informado, apelando además al derecho de terceros, esto es, personas de las que se habla en la grabación y cuyo consentimiento no es posible obtener. Ambos autores se plantean qué ocurre cuando en la conversación se relatan acciones, nombres,

[4] En este artículo se ha trabajado con corpus orales del español dirigidos desde diferentes universidades españolas en los que, por tanto, operan la legislación española y europea. No se han tenido en cuentra otros corpus de español elaborados fuera de estas fronteras por tener estos que responder a otras legislaciones. No podemos, a su vez, hablar de corpus de español de España, ya que PRESEEA y Ameresco son corpus de carácter panhispánico.

etc. que pueden vulnerar su intimidad, e incluso ayudar a identificar al propio sujeto por correlación con estos. Sin embargo, no ofrecen una respuesta a esta inquietud. Ante esta situación, Adolphs & Knight (2010, pp. 42-43) afirman que hay que asegurar el consentimiento formal por escrito de *todos* los participantes implicados antes de llevar a cabo la grabación y, aunque esta práctica es ideal y deseable, no resuelve situaciones sobrevenidas en los entornos no preparados, como el hecho de encontrar grabaciones en espacios públicos en los que el sujeto conversa paralelamente con camareros, viandantes, etc., o en las que queda registrada una conversación ajena durante un silencio.

A modo de resumen, los mínimos que parecen imperar en la recogida de corpus lingüísticos orales, según lo visto anteriormente, pasan por solicitar el consentimiento de manera previa a la realización de la grabación (puesto que el sujeto debe saber que va a ser grabado y para qué), por redactar dicho consentimiento en un lenguaje claro y sencillo, que garantice la inteligibilidad y por incluir, al menos, los siguientes bloques de información:

- Consentimiento claro y explícito del informante (previo a la grabación –y posterior en el caso de los corpus que así lo requieran–).
- Naturaleza y objetivos concretos de la investigación.
- Propósito o finalidad de la recogida de estos datos.
- Tratamiento que se le dará a los datos para garantizar su privacidad (por ejemplo, la anonimización).
- Derechos que amparan al informante frente a la cesión de datos (derecho al desestimiento, así como los datos de contacto para que pueda ejercerlo).

4.2 La anonimización

De acuerdo con la opinión general en la bibliografía, no existe un estándar en lingüística para realizar la anonimización (Rock, 2001, Childs et al., 2011).

Recordemos que, según lo comentado en el apartado 3, en la recogida de corpus orales podrían considerarse datos personales todas aquellas informaciones relativas a una persona identificada o identificable según el Reglamento Europeo 2016/679 y la Ley Orgánica 3/2018. Por tanto, en el diseño del sistema de anonimización han de tenerse en cuenta todas las posibles variables que pudieran verse afectadas, desde los identificadores directos (nombres propios, apodos, direcciones) de las personas que aparecen en la grabación, es decir, todas aquellas características que por sí mismas permiten la identificación de una persona; hasta los identificadores indirectos (datos de historias que se relatan, fechas) que, si bien no permiten la reidentificación *per se*, si se cruzaran diferentes variables, podrían permitirla. Para evitar esta identificación o reidentificación, la legislación contempla los procedimientos de anonimización y seudonimización: los primeros ya no incluyen

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identificadores, mientras que, en los segundos, estos identificadores están encriptados de alguna manera, con diferentes grados de sofisticación dependiendo de las características de la investigación (ver sección 3).

En el caso de la recogida de datos que incluya registro de voz o de imagen, como el de los corpus orales, la Agencia Española de Protección de Datos (2016, p. 20) de manera genérica propone la posibilidad de realizar una transcripción previa con su respectiva eliminación de identificadores, así como la reproducción de las transcripciones mediante dispositivos sintetizadores de voz en el caso necesario. Sin embargo, en investigaciones lingüísticas este procedimiento afectaría a posibles análisis fónicos o prosódicos (Adolphs & Knight, 2010, p. 43), del mismo modo que el pixelado de imágenes para corpus con vídeo afectaría, por ejemplo, a estudios sobre kinésica.

4.3 El tratamiento de datos en corpus orales del español

Si nos centramos en el panorama actual de corpus orales del español en el territorio nacional, la recogida de muestras de habla naturales se ha hecho respetando las prácticas mencionadas anteriormente, es decir, se han recogido los consentimientos informados pertinentes y se ha aplicado un protocolo de anonimización en los casos en los que se ha planteado necesario. Para ejemplificar dicho panorama se han seleccionado los corpus orales PRESEEA, COSER y ESLORA. Todos ellos son de acceso público y están en formato digital, han sido informatizados, son sincrónicos y están en activo. Además, permiten el acceso directo a textos con su contextos, tanto a la transcripción escrita como al fragmento de audio correspondiente a la búsqueda realizada. Esta última característica es destacable no solo por su importancia a la hora de realizar estudios prosódicos, sino también porque la consulta del audio es imprescindible a la hora de desambiguar algunas cuestiones lingüísticas y referenciales, para entender la estructura de la información, la sintaxis y posibles significados pragmáticos adicionales que de otro modo se perderían.

PRESEEA, el corpus del Proyecto para el Estudio Sociolingüístico del Español de España y América,[5] constituye uno de los corpus más extensos para el estudio sociolingüístico del español. Recopila entrevistas semidirigidas de más de 40 países y, tal y como se recoge en su protocolo de trabajo (Moreno Fernández, 2021a, p. 13) no hay marca específica para señalar la anonimización, a excepción de la indicación de uso de mayúscula en la inicial de nombres propios. Al realizar consultas en el corpus, a través de su página general, puede observarse la sustitución de nombres propios por la inicial correspondiente (Figura 1) cuando se trata de nombres propios o nombres de lugares que, por su relación con el informante, se ha considerado que debían anonimizarse. Sin embargo, no todos los nombres de lugares se anonimizan, ya que hay casos en los que no existe dicha relación y por tanto no pueden considerarse identificadores indirectos. En este último caso, se percibe de manera general cierta subjetividad en la decisión de anonimizar o no estos

[5] Acceso en línea en: http://preseea.linguas.net/Inicio.aspx

identificadores, ya que queda a criterio de la persona encargada de la transcripción la pertinencia de realizarla o no. En el audio, aquellos fragmentos que se han anonimizado se han borrado y sustituido por un indicador sonoro.

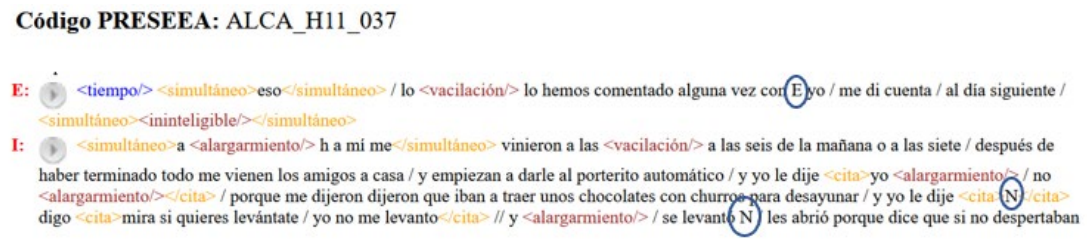


Figura 1. Captura de pantalla del corpus PRESEEA.

El Corpus Sonoro del Español Rural (COSER),[6] desde el ámbito de la dialectología, se centra en recoger muestras de lengua en enclaves rurales también por medio de entrevistas semidirigidas y dispone de 1744 horas de grabación. En este corpus, la anonimización se realiza por medio de la marca Nombre propio [NP] a nivel textual (Figura 2). Esta convención oculta el nombre propio de los informantes, para evitar su divulgación en la publicación de los materiales. Respecto a la anonimización del audio, se ha optado por la sustitución del nombre en cuestión por un indicador sonoro. Su etiquetado se engloba dentro de la sección *marcas de la conversación* y viene recogido en su página web.

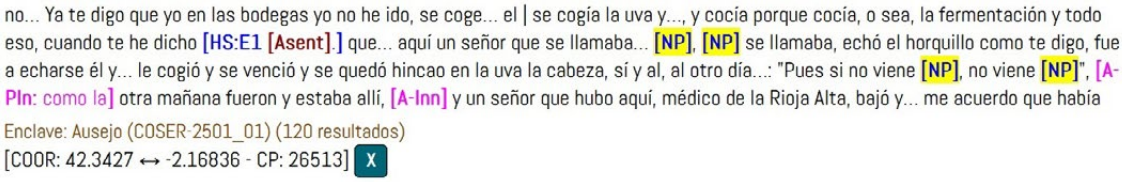


Figura 2. Captura del corpus COSER.

Esta marca presenta cierta problemática, ya que, aún teniendo acceso al audio, el hecho de tipificar todas las anonimizaciones como [NP] produce la pérdida de referencias, es decir, cuando dice 'si no viene [NP], no viene [NP]' no podemos saber muy bien si se está refiriendo a una sola persona, como una repetición ("si no viene Pepe, no viene Pepe), o si que no venga una persona implica que tampoco venga otra, como una consecuencia ('si no viene Lola, no viene Pepe'). Esto podría solucionarse si apareciera un nombre ficticio o una numeración correlativa junto a la marca.

Por último, el corpus ESLORA[7] contiene 60 horas de entrevistas semidirigidas (integradas en PRESEEA) y 20 horas de conversaciones de hablantes de español de Galicia. En su versión actual, 2.1, de junio de 2022, el corpus consta de 83 documentos que incluyen 768 023 palabras ortográficas, de las cuales están accesibles para búsqueda

[6] Acceso en línea en http://www.corpusrural.es/index.php
[7] Acceso en línea en http://eslora.usc.es/

751 970. Quedan excluidas de las consultas las formas gráficas de fragmentos en lenguas distintas del español, las palabras cortadas y los nombres ficticios (3041), necesarios para garantizar el anonimato de los hablantes.

Barcala et al. (2018) ofrecen información explícita sobre la obtención del consentimiento y la metodología de anonimización, así como una metarreflexión sobre el tratamiento de datos y la privacidad de los hablantes. En concreto, se detalla que las conversaciones espontáneas recogidas implican un doble permiso, previo y posterior a la grabación. Además, manifiestan el compromiso por parte del equipo investigador de restringir el uso de las grabaciones y transcripciones a los ámbitos de la investigación y la docencia, y preservar el anonimato de los hablantes.

Respecto a la metodología de anonimización que han implantado para este corpus, en las transcripciones se han sustituido las menciones de los nombres y localizaciones que pudieran revelar la identidad de los informantes y de otras personas aludidas por denominaciones métrica y socialmente equivalentes (Sampson, 2000). Es un proceso laborioso pues, como indican estos autores, la versión anonimizada debe mantener la coherencia interna que permita el seguimiento de la continuidad referencial del discurso (algo que resulta más dificultoso en sistemas como el mostrado en la Figura 2) y, además, ha de resultar verosímil en lo que se refiere a la información geográfica y demás indicaciones contextualizadoras. En el audio, las referencias personales se eliminan y se sustituyen por un ruido.

En la Figura 3 puede observarse la aparición de nombres propios, en este caso ficticios, sin ninguna marca identificadora de haber sido sustituidos, pero al reproducir el fragmento de audio correspondiente a la búsqueda se comprueba que el original ha sido borrado y sustituido por un sonido.



Figura 3. Captura del corpus ESLORA.

De esta breve caracterización del tratamiento de datos en corpus orales del español se pueden extraer múltiples buenas prácticas desde el punto de vista ético y legal. Algunas de estas han sido incorporadas a la metodología del corpus Ameresco, junto con otras implementaciones, dando como resultado un consentimiento informado en tres pasos que, como se verá a continuación, busca lograr un compromiso entre la naturalidad del producto y el seguimiento de la legislación en materia de privacidad y protección de datos.

5. El corpus Ameresco

El corpus Ameresco (Albelda & Estellés, en línea) nace con el objetivo de recoger muestras de habla reales para el estudio y la caracterización del español coloquial en sus distintas variedades dialectales (Briz 1995, 2001, 2016). Se centra en conversaciones coloquiales grabadas secretamente en las principales ciudades de Hispanoamérica y España, y se encuentra todavía en construcción, ya que actualmente aparecen representados 9 países, con un total de 14 ciudades, y cerca de 750 000 palabras.

Su metodología de trabajo parte de los principios establecidos por PRESEEA (Moreno Fernández, 2005, 2016, 2021a, 2021b) y por Val.Es.Co. (Briz et al., 1995, 2002) en cuanto a la representatividad sociolingüística y el sistema de transcripción y procesado informático. El corpus se encuentra anotado y etiquetado en XML, así como alineado audio-texto por medio del programa de anotación ELAN (Carcelén & Uclés, 2019, Briz et al., 2020, Carcelén, 2024b). El corpus es de acceso abierto y cuenta con un motor de búsqueda que permite diferentes métodos de consulta, y tanto las conversaciones como los documentos de trabajo pueden consultarse en línea.[8]

5.1 El consentimiento informado en Ameresco

Como hemos visto el apartado 3, la legislación actual no permite realizar grabaciones si no se cuenta con la autorización previa de los participantes, pero la base de un estudio de la variedad coloquial del español debería garantizar que no se alteren los rasgos primarios (Briz, 1995, 2001) puesto que, si se diera un cambio en la familiaridad del marco interactivo del hablante al saberse grabado, el grado de informalidad se vería reducido y, por consiguiente, el grado de prototipicidad de la conversación sería menor. Por ello, para el desarrollo del corpus Ameresco se diseñó un modelo de consentimiento informado en tres pasos que garantiza una recogida de datos conforme a la legalidad y pretende no alterar, o modificar en el menor grado posible, el comportamiento lingüístico de los hablantes.

A continuación se detalla la triple estructura del consentimiento informado en el corpus Ameresco, que consiste en (1) una primera autorización previa a la grabación en la que el sujeto otorga su consentimiento a ser grabado en algún momento dentro del espacio de uno o dos meses; (2) una autorización posterior en la que el sujeto confirma que se le ha ofrecido escuchar la grabación y se le da a elegir entre retirarla o cederla con fines de investigación, y (3) una firma de consentimiento para tratar sus datos personales.

En el primer apartado, autorización previa a la grabación, los participantes rellenarán sus datos personales (nombre completo y número de identidad – DNI, cédula o el correspondiente según el país de recogida–). Es aquí donde se introduce una de las principales innovaciones del protocolo de recogida de Ameresco: los hablantes son informados de que van a ser grabados en un futuro próximo, normalmente en la horquilla de cuatro a ocho semanas. Sin embargo, no se especifica en qué momento exacto

[8] Acceso en línea en www.corpusameresco.com

se realizará. Así mismo, se les informa de que, una vez realizada la grabación, podrán escuchar su contenido y retirar el consentimiento inicial en caso de no estar de acuerdo con la cesión del material.

En el segundo apartado, autorización posterior a la grabación, tras finalizar la grabación los hablantes corroboran su voluntad de cederla, afirmando que han sido informados de que acaban de ser grabados, que se les ha ofrecido la posibilidad de escuchar el audio y que pueden retirar su autorización si no están de acuerdo, en cuyo caso se destruiría de inmediato la grabación. Así mismo, autorizan el uso de la grabación con fines estrictamente de investigación, con la particularidad de que el archivo será previamente anonimizado tanto en audio como en el texto transcrito.

Por último, en el tercer apartado, información sobre el tratamiento de los datos personales, los hablantes deben leer y firmar una última sección sobre cómo se va a proceder al tratamiento de los datos personales. Esta práctica hoy día, como hemos visto en el epígrafe 3, es habitual en cualquier ámbito de la sociedad, especialmente desde la entrada en vigor de la Ley de protección de datos personales y garantía de los derechos digitales (Ley Orgánica 3/2018, de 5 de diciembre) que obliga a informar sobre el uso que se le va a dar esos datos, quién es el responsable de su tratamiento y cómo se puede ejercer el derecho de oposición. Según la Agencia Español de Protección de Datos,[9] ante cualquier intercambio de datos personales, en el ámbito comercial, en el ámbito de administración y servicios, etc., los usuarios deben poder ejercer el derecho de rectificación, oposición y supresión de los datos personales que deseen ante el responsable del tratamiento de esos datos.

En primer lugar, se ofrece la información pertinente sobre la entidad, empresa o servicio que va a custodiar los datos, a saber, el equipo de investigación y el proyecto concreto que va a trabajar con estas grabaciones. En este caso se trata de la Universitat de València a través del Proyecto MINECO Es.VaG.Atenuación, dirigido por Estellés y Albelda, quienes trabajan en la construcción del corpus oral del español coloquial Ameresco con el objetivo de analizar muestras de habla obtenidas en situaciones de familiaridad y cotidianidad para su posterior análisis lingüístico.

En segundo lugar, ya que hay un registro de audio, aparece un segundo apartado en el que se garantiza que el uso y difusión de este será exclusivamente para fines de investigación y nunca con ánimo de lucro.

En tercer lugar, se ofrece información sobre las posibilidades de realizar publicaciones de carácter científico en las que se utilicen estos datos, debidamente anonimizados: el proyecto se compromete a anonimizar cualquier dato sensible utilizado en su investigación (publicaciones, congresos, etc.) garantizando que los informantes no podrán ser identificados ni identificables.

[9] Disponible en línea: www.aepd.es/es/derechos-y-deberes/conoce-tus-derechos

Por último, se ofrecen los datos necesarios para que el hablante pueda retirar su consentimiento si en algún momento decide que esta grabación deje de formar parte del corpus. Se solicita la firma del participante, así como la firma de la madre, padre o tutor/a en el caso de que en la grabación aparezcan menores de edad o personas con incapacidad legal.

Con este modelo de consentimiento informado el corpus Ameresco cumple por partida triple con la normativa comentada en la sección 3: obtención del consentimiento previo, del consentimiento posterior a la grabación y del permiso para el tratamiento de datos. La innovación más importante, que aplica a la recolección de corpus orales de conversación coloquial, la constituye la petición del consentimiento previo no inmediato, que se constituye como una medida esencial para, por un lado, cumplir con los preceptos legales comentados anteriormente y, por otro, para garantizar la naturalidad del comportamiento lingüístico de los participantes. Estos son informados de que van a ser grabados, aunque no sabrán en qué momento exacto. Este lapso de tiempo permite que el hablante olvide que va a ser grabado y, por tanto, su comportamiento lingüístico no debe de verse afectado. Se salva así el obstáculo de la paradoja del observador, además de garantizar un comportamiento ético en la recogida de datos.

Este protocolo se instauró tras la entrada en vigor de la nueva política de protección de datos (Ley 3/2018) y fue aprobado por el Comité de Ética y por el gabinete de Servicios Jurídicos de la Universitat de València. Se lleva utilizando en la recogida de grabaciones del corpus Ameresco desde ese momento (ver Apéndice 1). Previamente a la promulgación de la ley, en la recogida de los primeros materiales del corpus Ameresco ya se solicitaba la autorización previa y posterior en los términos que se han comentado arriba, esto es, se pedía el permiso previo para grabar sin especificar el momento exacto en el que se realizaría la grabación. Tras la aparición de la Ley 3/2018 se incorpora, además, el apartado específico sobre la política de protección de datos.

5.2 Anonimización

En el corpus Ameresco se ha desarrollado un proceso de anonimizazión en dos capas: a nivel textual (transcripciones) y a nivel oral (audio).

1. Nivel textual

   Para la anonimización de las transcripciones se ha optado por el reemplazo del identificador directo por otro ficticio.[10] En la medida de lo posible se ha intentado que la sustitución respete el patrón fónico del término original (Sampson, 2000, Vázquez Rozas, 2014, Barcala et al., 2018). Además, debe de atenderse al contenido completo de la grabación, ya que si un nombre de pila se usa en unos momentos completo y en otros acortado (por ejemplo, Alberto > Alber, Carolina > Caro), el término ficticio debería poder ser adaptado a esta característica. Otro factor a

[10] Para la realización de esta tarea, ha sido útil el empleo de páginas web como https://www.nombres.top/ y https://www.apellidos.top/, que ofrecen sustituciones por ítems como nombres que empiezan por la misma letra, que terminan igual o que son parecidos.

tener en cuenta es el relativo a cuestiones sociales y culturales, es decir, el término sustituto debe respetar y adecuarse al contexto social, dialectal o histórico del término sustituido. Esto es, si nos encontramos ante una conversación procedente de Colombia y el término a sustituir es un nombre propio de una mujer de menos de 30 años, no cabría la opción de que el término sustituto fuera un nombre propio característico de una zona catalanoparlante o un nombre actualmente típico de mujeres mayores de 60 años.

Los identificadores directos que han sido anonimizados se marcan con la etiqueta XML<anónimo></anónimo>.[11] En el caso de los identificadores indirectos, en algunos casos se ha optado por el empleo de esta etiqueta; en otros, ha sido necesaria la eliminación del fragmento con la indicación en línea de observaciones de que se ha producido un corte en la grabación. En la Figura 4 puede verse un extracto del corpus en el que se ejemplifica la anonimización realizada por medio de la etiqueta XML mencionada anteriormente.

Conversación	Ciudad	Edad	Intervención	Nivel	Sexo	Audio	Contexto
MEX_001_03_19	Ciudad de México	Más de 56	B: pues di- tenía una tienda en el centro/ vivía en el centro y tenía una tienda/ y que ese día fue<alargamiento/>// fue su hermano de <anonimo>Miguel</anonimo>/ o sea de <anonimo>Rubén</anonimo> [también son- var-] son cuatro hombres	Medio	Mujer	Escuchar	Ver contexto

Figura 4. Captura del corpus Ameresco

En algunos casos, no se ha encontrado una equivalencia válida que respete el contexto discursivo, por tanto, se ha optado no por buscar un término similar, sino por usar una observación con un título general. Por ejemplo, ante la imposibilidad de encontrar un nombre sustituto ficticio de una empresa, se ha optado por la siguiente codificación: <anónimo><obs t="Empresa1"/></anónimo>.[12]

En esta capa de anonimización, el proceso es completamente manual, es decir, la persona encargada de realizar el borrado de audio y texto de estos identificadores debe señalarlos uno por uno en el archivo para después proceder al silenciado automático. De momento, no se ha logrado automatizar esta primera capa, ya que podría haber problemas de reconocimiento de entidades, por ejemplo, *Puerta* puede ser apellido, pero también un sustantivo común; el uso de herramientas automáticas implicaría inevitablemente la revisión y desambiguación manual por parte de un humano, si bien habría opciones como la búsqueda automatizada que distinguiera mayúsculas y minúsculas para discriminar en qué casos aparece como apellido y en cuáles como sustantivo común. En el caso de los identificadores indirectos aún se hace más complejo y la opción automatizada

[11] El sistema de transcripción y etiquetado completo puede consultarse en línea https://esvaratenuacion.es/protocolo-de-trabajo

[12] En el caso de que esta codificación aparezca varias veces, es decir, haya que anonimizar nombres de varias empresas, la observación incluirá numeración consecutiva para evitar que haya ambigüedad referencial: <anónimo><obs t="Empresa 1"/></anónimo>, <anónimo><obs t="Empresa 2"/></anónimo>.

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no es viable. La persona encargada de realizar la transcripción deberá valorar cada identificador de este tipo y decidir la pertinencia o no de su anonimización. Por ejemplo, conlleva diferentes implicaciones decir que se pidió la cena a una cadena de hamburgueserías que decir que se trabaja en esa cadena. Solo en el segundo caso podría considerarse un identificador indirecto. Como se ha señalado en el apartado 4, queda en mano del transcriptor evaluar la necesidad de anonimización en cada caso particular.

2. Nivel oral

Se ha aplicado un sistema semiautomático de anonimización del audio. Para borrar los segmentos de audio que debían ser anonimizados se han utilizado los programas ELAN y Audacity. Para la eliminación de estos fragmentos se ha optado por silenciar el audio, en lugar de añadir un indicador sonoro.

El programa ELAN permite acotar los fragmentos que posteriormente se van a silenciar. En este caso, se crea una línea llamada *anónimo* donde se marcarán las secciones de tiempo seleccionadas. Una vez marcados en todo el audio, este *software* permite exportar únicamente la línea como texto tabulado, seleccionando las opciones *excluir los nombres de las líneas del output* y *excluir los nombres de los participantes en el output*.

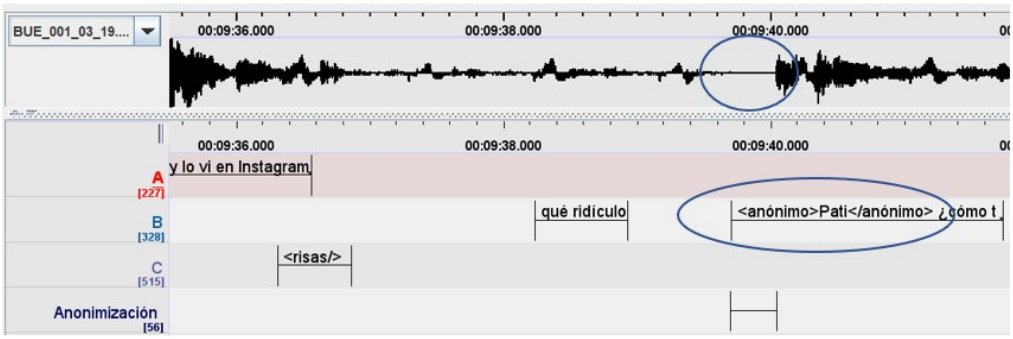


Figura 5. Captura de pantalla *software* ELAN.

Una vez realizada la exportación, el archivo resultante se carga en el *software* de edición de audio Audacity. Al realizar la importación se selecciona la opción *etiquetas*. Con esta configuración, el programa reconoce los segmentos marcados en la fase anterior como un audio etiquetado y puede silenciar en una única operación todos los segmentos seleccionados. Bastará con vincular este nuevo audio anonimizado de nuevo al programa ELAN para poder trabajar con texto y audio alineados y completamente anonimizados (en la capa 1 de texto y en la capa 2 de audio).

En la Figura 5 podemos ver en primer lugar el borrado del segmento en el oscilograma de sonido (capa de audio), la sustitución que se ha hecho del nombre original por un nombre ficticio, Pati, marcado con la etiqueta correspondiente (capa de texto). Una vez finalizada la anonimización del audio, la grabación original se elimina definitivamente.

Con este proceso se ha intentado garantizar al máximo la no reidentificación de los participantes. No obstante, es muy difícil lograr un compromiso entre la comodidad del proceso de anonimización semiautomático y la necesidad de una vigilancia externa, ya que, como se mencionaba más arriba, un mismo nombre, en distintos contextos, puede ser susceptible de proporcionar datos personales. Por tanto, la mano humana sigue siendo imprescindible.

6. Conclusiones

En este trabajo se han analizado en profundidad los retos que supone la recopilación de corpus orales del español. Concretamente, se abordan la fase de recogida de grabaciones, de transcripción y difusión, que conllevan la obtención del consentimiento de los participantes previamente a la recogida de la muestra de habla y la anonimización en la fase de tratamiento de datos personales para garantizar la privacidad y el derecho a la intimidad de los hablantes.

Si bien existen preceptos claros en la legislación actual sobre las implicaciones que conlleva la salvaguarda del derecho a la intimidad y la privacidad y al tratamiento de datos personales, su aplicación particular en el ámbito de la investigación lingüística cuenta con menos desarrollo. Es por esto por lo que, como investigadores, debemos ser cautos a la hora de recopilar corpus orales espontáneos planteando desde el principio un sistema de anonimización y tratamiento de datos personales lo más estricto posible para garantizar buenas prácticas en la investigación.

La legislación establece la necesidad de la recogida de los consentimientos informados, la claridad y el derecho a ejercer la retirada, así como someter audio y transcripción a un proceso de anonimización. Estos mínimos se mantienen en los corpus españoles actuales con algunas diferencias, pero no existe en general un estándar que sea aplicable a todos ellos.

El mantenimiento de la legalidad parece contradictorio con la garantía de la naturalidad. En este sentido, el modelo de Ameresco presenta un sistema en tres pasos que tiene como principal novedad el hecho de que la petición de autorización previa se realiza bajo la premisa de que la grabación tendrá lugar en el lapso de un tiempo determinado, entre cuatro y ocho semanas aproximadamente, pero sin especificar cuándo exactamente. Por lo tanto, se garantiza que el hablante se haya olvidado de que va a ser grabado y que no se produce la paradoja laboviana. De esta manera se obtienen muestras de habla reales y naturales, pero también se respeta la legislación vigente con la firma de la autorización previa, posterior y de la política de tratamiento de datos.

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Los retos son cada vez mayores porque la multimodalidad de los corpus, que recogen audio e imagen, gana presencia en la investigación lingüística. El rápido desarrollo de la tecnología y de las herramientas informáticas podrían, a su vez, facilitar el reconocimiento de las hablantes, por tanto los trabajos de identificación y anonimización de los datos personales presentes en el corpus deben asegurar de manera escrupulosa la privacidad y estos deben aún realizarse bajo la supervisión humana.

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Legislación

Reglamento (EU) 2016/679 del Parlamento Europeo y del Consejo de 27 de abril de 2016 relativo a la protección de las personas físicas en lo que respecta al tratamiento de datos personales y a la libre circulación de estos datos y por el que se deroga la Directiva 95/46/CE (Reglamento General de Protección de Datos).

Ley Orgánica 1/1982, de 5 de mayo, de Protección civil y derecho al honor, la intimidad personal y a la propia imagen.

Ley Orgánica 3/2018, de 5 de diciembre, de Protección de datos personales y garantía de los derechos digitales.

Ley Orgánica 10/1995, de 23 de noviembre, del Código Penal.

Apéndice 1

Modelo de autorización en tres pasos del corpus Ameresco

AUTORIZACIÓN PARA EMPLEAR LA GRABACIÓN Y LA TRANSCRIPCIÓN DEL MATERIAL CON FINES INVESTIGADORES EN LINGÜÍSTICA

(Proyecto MINECO FFI2016-75249P)

A. Autorización previa a la grabación

Dña./D. _____ con documento de identificación o pasaporte número _____

DECLARO

1. que se me ha informado de que voy a ser grabado/a de forma secreta en las próximas semanas;
2. que, posteriormente a la grabación, podré escuchar el contenido de mi grabación;
3. que, en caso de no estar de acuerdo, puedo ejercer mi derecho a retirar la grabación.

A los efectos oportunos, firmo la presente autorización en _____ _____ a _____de 20____.

Fdo. _____

B. Autorización posterior a la grabación

Dña./D. _____ con documento de identificación o pasaporte número _____

DECLARO

1. que se me ha informado de que he sido grabado/a secretamente y he escuchado el contenido de mi grabación;
2. que se me ha informado de que puedo ejercer mi derecho a retirar la grabación.

Y, por tanto, AUTORIZO al uso de la grabación de su contenido, previamente anonimizados texto y audio, para fines estrictamente de investigación.

A los efectos oportunos, firmo la presente autorización, en _____ a _____de 20____.

Fdo._____

1. Datos personales

Los datos personales obtenidos mediante el presente formulario se incorporarán a los sistemas de información de la Universitat de València – Estudi General (links.uv.es/lopd/dpo) en el marco del Proyecto Es.Vag.Atenuación. La atenuación pragmática en su variación genérica: géneros discursivos escritos y orales en el español de América y de España (Proyecto MINECO FFI2016-75249P), dirigido por las doctoras Marta Albelda Marco y Maria Estellés Arguedas.

La información objeto de tratamiento será utilizada para el desarrollo de funciones docentes y académicas propias de la Universitat de València como la investigación, la creación, desarrollo, transmisión y crítica de la ciencia, de la técnica y de la cultura y la difusión, la valorización y la transferencia del conocimiento.

En concreto, estas grabaciones formarán parte del corpus oral del español coloquial Ameresco. Dicho corpus está compuesto por un conjunto de subcorpus de conversaciones coloquiales obtenidas en las distintas ciudades que se integran en el proyecto. Con el objetivo de analizar estas muestras de habla, en este proyecto se recogen conversaciones informales espontáneas (coloquiales) reales grabadas en lugares cotidianos para los hablantes, en una situación de familiaridad o amistad para su posterior análisis lingüístico.

La Universitat de València se compromete a que cualquier divulgación pública de los resultados obtenidos con motivo de la investigación se realizará anonimizando debidamente los datos utilizados, de modo que los sujetos de la investigación no resultarán identificados o identificables.

La base jurídica del tratamiento es el consentimiento del afectado/a y se prevé la conservación de los datos personales durante cinco años. Transcurrido ese periodo, los datos se conservarán debidamente disociados para garantizar el anonimato.

2. Registro de imagen o sonido

En el marco del desarrollo de la actividad se obtendrán registros de audio. Ud. Autoriza a la Universitat de València al uso, edición, difusión y explotación de estos registros exclusivamente para fines de investigación. En caso de utilización, se asegurará que el afectado/a nunca sea identificado por su nombre ni mediante información alguna que le haga identificable.

Todo ello con la única salvedad y limitación de aquellas utilizaciones o aplicaciones que pudieran atentar a los derechos garantizados en la Ley Orgánica 1/1982, de 5 de mayo, de Protección Civil al Derecho al Honor, la Intimidad Personal y familiar y a la Propia Imagen, así como del pleno respeto de las previsiones específicas del art. 4 de la Ley Orgánica 1/1996, de 15 de enero, de protección jurídica del menor.

3. Publicación

Los resultados del proyecto son susceptibles de publicación. En caso de tal utilización, se asegurará que Ud. nunca sea identificado/a por su nombre apellidos, ni mediante información alguna que le haga identificable.

4. Ejercicio de derechos

Las autorizaciones concedidas en este documento podrán ser revocadas mediante la presentación del oportuno escrito. La revocación comportará la retirada de la información de los sistemas de la Universitat de València en un plazo prudencial de tiempo en función de la disponibilidad de recursos.

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Y en prueba de conformidad, firmo el presente documento en el lugar y la fecha indicados en el encabezamiento.

Nombre y apellidos Firma	Nombre y apellidos Firma PADRE / MADRE / TUTOR *Rellenar solo en caso de menores o personas con incapacidad legal.*

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Crosslinguistic influence and language similarity: the oral production of sentential subjects in child L2 English

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Abstract: This study seeks to examine crosslinguistic influence in the L2 English of different child participant groups (L1 Spanish, L1 Bosnian and L1 Danish) when compared to L1 English controls. The focus is placed on the L2 English sentential subjects orally produced by these children in a semi-guided individual interview. The subjects were classified following three criteria: type (overt/null), grammaticality (grammatical/ungrammatical) and adequacy (adequate/non-adequate). Two formal proposals are put to the test taking into account the difference between [+/-null subject] languages: typological similarity between the L1 and the L2 (in the case of the L1 Danish group) and lexical transparency where the properties of the superset L1 influences those of the subset L2 and thus, facilitates L2 acquisition (in the case of the L1 Spanish and L1 Bosnian groups). Our results show that typological similarity can to a certain point explain the differences between the [+null subject] and the [-null subject] language groups, but it does not justify the high production of both grammatical and adequate subjects. These high rates can be interpreted in terms of lexical specialization in that there is facilitative crosslinguistic influence effects from the superset language (i.e., Spanish and Bosnian) to the subset language (i.e., English).

Keywords: *language similarity, sentential subjects, crosslinguistic influence, L2 English, lexical specialization.*

Influencia interlingüística y similitud lingüística: la producción oral de sujetos oracionales de niños bilingües de inglés como L2

Resumen: Este estudio examina la influencia interlingüística en el inglés como L2 de diferentes grupos de niños participantes (español L1, bosnio L1 y danés L1) en comparación con el grupo de control de inglés L1. La atención se centra en los sujetos oracionales en el inglés L2 producidos oralmente por estos niños en una entrevista individual semi-guiada. Los sujetos se clasificaron siguiendo tres criterios: tipo (explícito/nulo), gramaticalidad (gramatical/agramatical) y adecuación (adecuado/no-adecuado). Se ponen a prueba dos propuestas formales teniendo en cuenta la diferencia entre las lenguas [+/sujeto nulo]: la similitud tipológica entre la L1 y la L2 (para el grupo danés L1) y la especialización léxica en la que las propiedades de la L1 *superset* influyen en las de la L2 *subset* y, por tanto, facilitan la adquisición de la L2 (para los grupos español L1 y bosnio L1). Los resultados muestran que la similitud tipológica puede explicar hasta cierto punto las diferencias entre los grupos lingüísticos [+sujeto nulo] y [-sujeto nulo], pero no justifica la elevada producción de sujetos gramaticales y adecuados, algo que puede interpretarse en términos de especialización léxica: existe influencia interlingüística facilitadora desde la lengua *superset* (el español y el bosnio) hacia la lengua *subset* (el inglés).

Palabras clave: *similitud lingüística, sujetos oracionales, influencia interlingüística, L2 inglés, especialización léxica.*

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1. Introduction

Within the framework of generative grammar, sentential subjects have been extensively discussed from the point of view of formal linguistics as well as in acquisition studies. In the case of the former, the null subject parameter was proposed and used to address the differences that emerge across languages in terms of the availability of null subjects (e.g., Perlmutter, 1971; Chomsky & Lasnik, 1977; Chomsky, 1981; Rizzi, 1982; Phinney, 1987; Platzack, 1987; Liceras, 1988, 1989; Jaeggli & Safir, 1989; Belletti, 2001, 2004; Sheehan, 2006; Camacho, 2006, 2013, 2016; Holmberg, 2010).

In the case of the latter, analyses have been conducted on monolingual acquisition (e.g., Bloom, 1990; Hyams & Wexler, 1993; Hyams, 2011; Hoff, 2017; Orfitelli & Hyams, 2008, 2012), and on bilingual acquisition, including both simultaneous bilinguals (e.g., Montrul, 2004; Liceras et al., 2008; Cuza, 2013; Cuza & Camacho, 2017; Liceras & Fernández Fuertes, 2019) and sequential bilinguals (e.g., Lozano, 2002; Park, 2004; Montrul & Rodríguez-Louro, 2006; Rothman, 2008, 2009; Montrul et al., 2009; Pladevall-Ballester, 2012, 2016; Cuza et al., 2013; Quesada, 2014; Mitkovska & Bužarovska, 2018; Pladevall-Ballester et al., 2022). When considering bilinguals, most of these studies mainly compare bilinguals whose two languages exhibit a different configuration with respect to the null subject parameter. Much less frequently have previous studies dealt with the analysis of bilinguals whose two languages share the same value of the null subject parameter. Few studies have been conducted on the contact between two [+null subject] languages (e.g., Bini, 1993; Margaza & Bel, 2006; Sorace & Filiaci, 2006; Bel et al., 2016; Lozano, 2018) and even fewer on that of two [-null subject] languages (e.g., White, 1985; Liceras, 1989; Liceras & Alba de la Fuente, 2015; Mujcinovic, 2015, 2020). In all cases the focus of attention has been placed in analyzing potential crosslinguistic influence effects between the two languages of the bilingual.

The present study takes as a point of departure previous formal and empirical works on the null subject parameter to offer a characterization of the English as a second language (L2) of three groups of child participants that differ in their first language (L1): Spanish, Bosnian and Danish. While previous works on L2 acquisition have mainly addressed adult grammars, we focus on the oral semi-spontaneous production of L2 English children which we analyze in terms of grammaticality and pragmatic adequacy in the case of three subject forms (i.e., full DPs, overt personal pronominal subjects, and null subjects; see examples 1-3 and discussion below). Furthermore, the language combination that we include allows us to offer a comparison between languages that have been more studied (i.e., Spanish) and others that have been less so (i.e., Bosnian and Danish) and to address the role played by language similarity. Given that L1 crosslinguistic influence characterizes and shapes (at least) the initial stages of L2 acquisition (e.g., Hawkins 2001, Herschensohn, 2000; Montrul, 2016), attention has been placed on how and in which respect the L1 and the L2 differ. Being crosslinguistic influence an overt manifestation of the L1 (Gass, 1996, p. 385), the similarities between the languages in contact have some bearing on the type of crosslinguistic influence that might appear. In the case of typological similarity,

the focus of this investigation, it has often been put together with typological proximity. However, these are two different concepts and, while typological proximity has centered the attention of L2 acquisition research, typological similarity has received much less attention (e.g., Rothman, 2010, 2011; Rothman & Cabrelli Amaro, 2010; Montrul et al., 2011; Liceras & Alba de la Fuente, 2015; Westergaard et al., 2017; Cuza et al., 2018). Typological proximity applies to languages that belong to the same family and share the same origin; an example is Spanish and French, both derived from Latin and considered Romance languages. However, typological similarity refers to languages that share the same option at a micro-parametric level so that "a typological or formal universal is equally realized in these two typologically close languages" (Liceras & Alba de la Fuente, 2015, p. 333). In other words, Spanish and Bosnian are not typologically proximate as they do not belong to the same family since Spanish is a Romance language while Bosnian is a Slavic language. However, they are typologically similar languages with respect to subject realization as both are [+null subject] languages. Danish and English are both typologically proximate (i.e., Germanic languages) and typologically similar (i.e., [-null subject] languages). In the same vein, Spanish and Bosnian are neither typologically similar nor typologically proximate to English.

Therefore, the analysis of the contact between English, on the one hand, and Danish, Spanish, or Bosnian, on the other, allows us to explore more in depth how language typological similarity works in child L2 acquisition.

This paper is organized as follows. In section 2, we offer a formal description of sentential subjects with a focus on the four languages under consideration in this study (i.e., English as the target language and as the L2 of our participants and Danish, Spanish and Bosnian as their L1s). In section 3, we provide an overview of different acquisition works that have analyzed sentential subjects and the crosslinguistic influence effects that have been reported in this case. In section 4, we present the research questions that we have formulated. Section 5 provides information about the participants that took part in this study, the task used to elicit the data and the data collection and classification procedures. We present the data analyses and the discussion in section 6 and finish with the conclusions that we have obtained and that appear in section 7.

2. On the nature of sentential subjects: typological similarities and differences

The availability of null subjects across languages divides languages into two groups: [+null subject] languages and [-null subject] languages (e.g., Perlmutter, 1971; Chomsky & Lasnik, 1977; Chomsky, 1981; Rizzi, 1982; Phinney, 1987; Platzack, 1987; Liceras, 1988, 1989; Jaeggli & Safir, 1989; Belletti, 2001, 2004; Sheehan, 2006; Camacho, 2006, 2013, 2016; Holmberg, 2010). The examples below illustrate these two groups by referring to three possible subject forms: full Determiner Phrases (full DPs) in 1, overt personal pronouns in 2 and null subject pronouns in 3.

(1) full DP subject

a.	*the man*	ate	two bananas	[English]
b.	*manden*	spiste	to bananer	[Danish]
	"man-the	ate	two bananas"	
c.	*el hombre*	comió	dos bananas	[Spanish]
	"the man	ate	two bananas	
d.	*čovjek*	je[1] pojeo	dvije banana	[Bosnian]
	"man	was ate	two bananas"	

(2) overt personal pronominal subject

a.	*he*	ate	two bananas	[English]
b.	*han*	spiste	to bananer	[Danish]
	"he	ate	two bananas"	
c.	*él*	comió	dos bananas	[Spanish]
	"he	ate	two bananas"	
d.	*on*	je pojeo	dvije banane	[Bosnian]
	"he	was ate	two bananas"	

(3) null subject

a.	**pro*	ate	two bananas	[English]
	"(he)	ate	two bananas"	
b.	**pro*	*spiste*	*to bananer*	[Danish]
	"(he)	ate	two bananas"	
c.	*pro*	comió	dos bananas	[Spanish]
	"(he)	ate	two bananas"	
d.	*pro*	pojeo je	dvije banane	[Bosnian]
	"(he)	ate was	two bananas"	

All four languages allow for full DPs (1) and overt pronouns (2) to occupy subject position. They differ, however, in the possibility of having null subjects (3). In this respect, the fact that both Spanish and Bosnian allow their subjects to be null (3c and 3d) makes them

[1] *je* is the 3rd person singular auxiliary of the verb "to be."

[+null subject] languages. On the contrary, since English and Danish only permit overt subjects (1a and b and 2a and 2b) and do not generally allow their subjects to be null (3a and 3b), they are classified as [-null subject] languages.

Different theories have been put forward to explain the availability of null subjects in a language. Derived from the Principles and Parameters Theory within Universal Grammar, the Extended Projection Principle (EPP) dictates that all sentences must have a syntactic subject (Chomsky, 1981). In the case of [+null subject] languages (i.e., Spanish and Bosnian), since these languages have a rich verbal agreement morphology that licenses and identifies null subjects, the EPP is satisfied (Rizzi, 1986). In the case of [-null subject] languages (i.e., English and Danish), the EPP is satisfied via overt pronouns, because these languages have a poor verbal agreement morphology that lacks pronominal features and, therefore, cannot satisfy the EPP (Camacho, 2013).

In the last decades, reformulations of the null subject parameter in terms of phonological overtness have been proposed (e.g., Holmberg, 2005, 2010; Sheehan, 2006; Martínez-Sanz, 2011 and Liceras & Fernández Fuertes, 2019). Overt pronouns in both [+null subject] languages and [-null subject] languages are said to occupy the same position (i.e., SpecIP) and are, therefore, equally interpreted and have the same value. Since overt pronouns are spelled out, they have a phonological form. Null pronouns, on the contrary, are not spelled out (i.e., they have no phonological form). That is, [-null subject] languages have one subject type available (i.e., overt), whereas [+null subject] languages have two subject types (i.e., overt and null). This makes the [+null subject] the superset option and the [-null subject] the subset one (e.g., White, 1989; Ayoun, 2003; Holmberg, 2005; Sheehan, 2006; and Liceras & Fernández Fuertes, 2019). A [+null subject] language is considered the superset language when compared to a [-null subject] language, because [+null subject] languages have two possible realizations of the subject (i.e., the phonologically realized option and the phonologically null option) whereas [-null subject] languages have one (i.e., the phonologically realized option) (Holmberg, 2005; Sheehan, 2006).

3. On the acquisition of sentential subjects

In the case of L1 acquisition, different studies have shown that all children go through a stage where they omit subjects regardless of whether the child's L1 is a [+null subject] or a [-null subject] language. In the case of the acquisition of [+null subject] languages, children start producing both overt and null subjects at a very early stage, both subject types generally conforming to adult grammars (e.g., Bloom, 1990; Grinstead, 1998; Hyams & Wexler, 1993; Juan-Garau & Pérez-Vidal, 2000; Liceras et al., 2006, 2008; Montrul, 2004; Serratrice, 2002, 2005; Paradis & Navarro, 2003; Valian, 1991; Valian & Eisenberg, 1996). Whereas, for children acquiring [-null subject] languages, these initial null subjects do not conform to adult grammar requirements and gradually disappear.

In the case of bilingual grammars in general and of L2 bilingual grammars in particular, the main issue is whether differences across the two languages of the bilingual (i.e., the L1 and the L2) may lead to crosslinguistic influence effects (Cook, 2016).

Crosslinguistic influence appears when L2 bilinguals seek to find an equivalence between the patterns in their L1 and those in their L2. Depending on the degree of similarity between the languages in contact, two types of crosslinguistic influence can be identified: facilitative (or positive) and interfering (or non-facilitative or negative). Facilitative crosslinguistic influence is said to occur when equivalent structures are available and have the same distribution in both languages resulting in a successful acquisition of L2 properties. Interfering crosslinguistic influence is the result of overlapping structures when these are wrongly perceived as formally and functionally similar in the L1 and the L2, resulting in ungrammatical or inadequate structures. Crosslinguistic influence has been said to be shaped by two main issues: the degree of L2 proficiency that the speakers have and the amount of similarity the L2 bilinguals can identify between their two languages (Cenoz, 2001, 2003 and Gass & Selinker, 2008). Thus, the more proficient the L2 speakers are the less interference appears (Gathercole, 2016:123). Therefore, it is plausible to believe that crosslinguistic influence is more likely to occur in the beginning and in the intermediate stages of L2 acquisition and is expected to diminish but not necessarily disappear in more advanced stages. This is said to be true for the syntactic or morphological domain, but previous studies have shown that the syntax-pragmatics interface continues to be vulnerable even in very proficient stages (e.g., Park, 2004; Tsimpli & Sorace, 2006; Rothman, 2009; Slabakova & Ivanov, 2011; Pladevall-Ballester, 2012, 2016; Lozano, 2018; Mitkovska & Bužarovska, 2018).

In the case of L2 acquisition, numerous studies have analyzed how differences between the L1 and the L2 shape the participants' L2 production (for example, subject omission and overproduction of overt subjects), based on typological proximity and similarity and crosslinguistic influence.

Under the Facilitation Hypothesis (Gundel & Tarone, 1992), when languages are typologically similar, the L1 can facilitate the acquisition of the L2. In the same line, if linguistic differences are found between the L1 and the L2, a potential effect of crosslinguistic influence would be a lower L2 learnability given the interference effect of the L1 in the learning of the L2 (Schepens et al., 2016). Therefore, relatedness between the L1 and the L2 seems to play a crucial role so that, if languages in contact are similar, acquisition would be facilitated, while if languages in contact are different or distant, this difference or distance will interfere with acquisition. For instance, in the case of subjects, when the speakers' L1 is a [-null subject] language and the L2 a [+null subject] language, different studies have reported an overproduction of overt subjects in the data of speakers with different proficiency levels (e.g., Rothman, 2008, 2009; Lozano, 2002; Montrul & Rodríguez-Louro, 2006; Montrul et al., 2009; Quesada, 2014). However, studies conducted on speakers of a [+null subject] L1 learning a [-null subject] L2 have reported that a non-native-like rate of subject omission is not that frequent in the L2 (e.g., Park, 2004; Pladevall-Ballester, 2012, 2016; Mitkovska & Bužarovska, 2018). These different patterns may suggest that, overall, learning the superset language is more costly than learning the subset.

In the case of two [-null subject] languages in contact, the scarce amount of research conducted to date shows that there is a facilitation effect in that results obtained are native-like (White, 1985; Liceras, 1989; Liceras & Alba de la Fuente, 2015 and Mujcinovic, 2015, 2020). It seems felicitous to assume that typological similarity seems to play a crucial role.

In the case of two [+null subject] languages in contact, the amount of research is also scarce and most of the studies deal with adult speakers (e.g., Bini, 1993; Margaza & Bel, 2006; Sorace & Filiaci, 2006; Bel et al., 2016; Lozano, 2018). The results from these studies show an overproduction of overt subjects which is interpreted as related to interface vulnerability and not to typological proximity or typological similarity.

In the case of 2L1 acquisition research (i.e., simultaneous bilingualism), a proposal has been put forward to account for the presence as well as for the directionality and effect of crosslinguistic influence that we would like to adapt to L2 contexts: the lexical specialization approach (Liceras & Fernández Fuertes, 2019). In language contact situations between a superset and a subset language, these authors argue that crosslinguistic influence will go from the superset language to the subset language (and not the other way around) and it will have a facilitation effect. Liceras & Fernández Fuertes (2019) analyzed the sentential subjects that appear in the spontaneous production of English-Spanish simultaneous bilingual children. In this case and given that Spanish is the superset language, no interference from English into Spanish would occur and, in fact, no overproduction of overt pronouns appears in the Spanish data. Rather, the superset language is the one causing crosslinguistic influence (i.e., interference from Spanish into English) and with a specific effect: acceleration in the development of the overt subject requirement in 2L1 bilingual English when compared to L1 monolingual English. These authors explain these results in terms of lexical specialization as follows: the availability of two subject types in Spanish (i.e., null and overt pronouns) makes this language lexically specialized when it comes to person features. These are always reflected in the verbal agreement markers but can also appear realized as overt pronouns (e.g., *(yo) com-**o***, 'I eat'). This type of lexical specialization does not appear in the case of English as overt pronouns are the only available option and do not alternate with null subject pronouns. As a result, Spanish is the superset language because it incorporates both subject types, whereas English is the subset language because it requires its subjects to be overt.

4. Research questions

The aim of our study is to account for possible crosslinguistic effects in the oral production of sentential subjects by child L2 bilinguals. To do so and to analyze the data produced, two different approaches are considered: typological similarity and lexical specialization. Thus, to provide a more fine-grained approach to crosslinguistic influence, the following two research questions were formulated:

1. What role, if any, does typological similarity play in the oral production of sentential subjects by L2 English bilingual children?

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2. What role, if any, does lexical specialization play in the oral production of sentential subjects by L2 English bilingual children?

Previous studies point towards the saliency of language typology. For instance, Liceras & Alba de la Fuente (2015) claim that the closer the languages in contact are typologically speaking, the lower rates of ungrammaticality (i.e., interfering crosslinguistic influence) are expected. If typological similarity plays a role, then the results from our study should show that the L1 Danish group outperforms the L1 Spanish and L1 Bosnian groups, because of the facilitative crosslinguistic influence effects that derive from both English (L2) and Danish (L1) being typologically similar. If languages in contact are not typologically similar and differences are found between the L1 (Spanish and Bosnian, in this case) and the L2 (English), lower L2 learnability can arise (i.e., more crosslinguistic influence which can delay the learning of the L2) (Schepens et al., 2016). If this is so, we expect to find interfering crosslinguistic influence in both the L1 Spanish and the L1 Bosnian groups. In other words, the less typologically similar the languages are, the more crosslinguistic influence is expected. This would be reflected in a higher rate of ungrammatical subjects.

On a different note, if Liceras & Fernández Fuertes's (2019) proposal on lexical specialization is adapted to the L2 acquisition of sentential subjects, the following prediction could be made in the case of L2 English in contact with L1 Spanish, L1 Bosnian and L1 Danish: crosslinguistic influence is expected from the L1 if the L1 is a superset language (i.e., Spanish and Bosnian) into the L2 (i.e., English) and the effect should not be interfering, because the L2 bilinguals are expected to rely on one of the options available in Spanish or Bosnian (i.e., the overt subject) as a reinforcement for the only available option in their L2 English. Thus, these bilinguals' output is expected to be mostly grammatical and no crosslinguistic influence from the [+null subject] L1 into L2 English would take place (e.g., Park, 2004; Pladevall-Ballester, 2012, 2016 and Pladevall-Ballester et al., 2022). In the case of the L1 Danish group and given that both Danish and English are subset languages, no such learnability rule could be established, although a low error rate is to be expected if language similarity has an effect.

5. Methodology

The data that we analyze were extracted from the soraUVALAL corpus (Mujcinovic & Fernández Fuertes 2021) available in the SLABank of the TalkBank system (MacWhinney, 2019). General information about the participants and tasks is described below.

5.1 The participants

A total of 91 L2 bilingual children participated in the study: 26 L1 Spanish children from Spain, 26 L1 Bosnian children from Bosnia & Hercegovina, 26 L1 Danish children from Denmark and 13 L1 English children from Canada as controls (mean age=11; SD age = 0.71). All the L2 participants learned English in an institutional context where on average they received L2 English input for two sessions per week over a period of 3 years.

The parents' of the participants completed a Language Background Questionnaires (LBQ) in their L1 where the children's language history (e.g., how and when they have acquired their L1, whether languages other than the L1 are or were part of their language background), self-reported language proficiency (i.e., how good they believe their command of each of the languages is), and language attitudes (e.g., whether they like learning English) were detailed. The LBQ functions as a subjective measure of linguistic behavior that assesses linguistic experience and status.

In order to take part in the study, the participants had to meet the following inclusion criteria: (i) both the parents and the child had to share the same L1 (i.e., Spanish, Bosnian or Danish); (ii) English had to be the participants' only L2 and, in this respect, the participants that were learning an L3 were excluded; (iv) instruction could only take place in institutional settings in the school that they were attending so that participants who received extracurricular lessons in English were excluded; (v) participants who had spent longer periods of time abroad were also excluded; and (vi) only the participants that had been exposed to L2 English for a period of 2 to 4 years at their primary school were included in this study. These criteria ensure that all the children in the three experimental groups have a rather similar linguistic profile.

The L2 English participants' age ranged from 9 to 12. The difference in age is due to the time when the participants were first exposed to L2 English. In the case of the L1 Spanish participants, who were the youngest, they were first exposed to English at the age of 7, whereas for the L1 Danish and the L1 Bosnian participants the first exposure to English took place two years later (age 9). To compensate for the age gap, the time of exposure was controlled for (2 to 4 years; mean: 3 years). The Spanish participants attended grades 3 to 5 and the Bosnian and Danish participants attended grades 5 to 7.[2]

Regarding the amount of L2 English input received in the institutional setting, all the participants have received on average 2 lessons per week. In the case of the Spanish participants, since they were taking part in a CLIL (Content and Language Integrated Learning) program, they were exposed to more input because two other subjects (Natural and Social Sciences and Arts) were taught in English. More exposure can lead to better results. Nonetheless, even though these participants have received more L2 English input, their overall production is similar to that of the other L2 English groups, as table 1 below shows.

Implementing the above-mentioned criteria resulted in rather homogenous participant groups across the three countries.

In the case of the control group, just the participants who have only been exposed to English at home were included in this study. These participants also belonged to a monolingual English education system and their age ranged from 10 to 11 years to match the age of the L2 participants (9-12).

[2] The information relative to the children's academic profile comes from the information sheet we gathered from each school regarding the general grade system as well as the L2 English instruction curricula that is followed in each school.

Proficiency could not be measured via proficiency tests due to restrictions imposed by schools. We have used the mean length of utterance value measured in words (MLUw) as a production measure.[3] The different MLUw values per participant group appear in Table 1.

Table 1. Descriptive statistics for English MLUw values per participant group.

Group	Spanish	Bosnian	Danish	English
words	10,539	10,676	18,086	5,691
utterances4	2,504	3,515	2,836	1,010
MEAN	4.189	3.468	5.109	5.689
SD	1.079	0.905	1.658	0.950

The MLUw values were calculated in terms of the number of words over utterances. The information in Table 1 shows that there is a difference in terms of word production when comparing across the experimental groups with the L1 Danish participants producing more words. However, this is balanced out when we take into account the number of utterances produced by each L2 English group. When we consider the control group, the amount of production is the lowest. This is not surprising given that it is the group that contains less participants (n=13) when compared to the experimental groups (n=26). The mean of words over utterances (i.e., the MLUw) shows that participants produce utterances that, on average, contain between 3 and 5 words. We use these MLUw values as a production measure and have performed the statistical analyses that are reported next.

To determine whether there are any significant differences between the groups, a one-way ANOVA was conducted after confirming homogeneity of variance of the data. A significant effect of language group was confirmed with a large effect size ($F_{(3,87)}$=13.05, p<.001, η^2=0.31). The results show that there is significant difference between the L1 Bosnian (p<.001) and L1 Spanish (p<.001) groups when compared to the L1 English group. The same difference is found between L1 Bosnian (p<.001) and L1 Spanish (p=.038) when compared to the L1 Danish group. But no such significant difference is found between the L1 Danish and L1 English group (p=.501) nor between the L1 Spanish and L1 Bosnian (p=.151). These results show that the [+null subject] language groups group alike and that the [-null subject] language groups group alike; and that, in turn, there is a difference between participants with a [+null subject] L1 and participants with a [-null subject] L1.

[3] The MLU has been used as an indicator of L1 children's language complexity and language development (Brown, 1973). L2 studies have also resorted to the MLU as an indicator of relative proficiency (e.g., Håkansson, 2001; Unsworth, 2008; Unsworth & Blom, 2010; Hawkins & Filipovic, 2012; Lundell & Lindqvist, 2012, 2014; Faitaki & Murphy, 2023).

[4] In the transcription system that is used in CHILDES, CHAT (Codes for the Human Analysis of Transcripts), an utterance is a speech turn which does not necessarily contain a clause. Thus, an utterance could be an interjection, a DP, or a clause (MacWhinney, 2000).

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5.2 The oral experimental task

The oral data obtained for this study were elicited via a semi-guided oral interview. Following a protocol designed to ensure uniformity in data collection and naturalistic speech, the participants were interviewed individually, and the interviews were audio-recorded. The topics treated in the interview related to family, hobbies, school, music, friends, etc. The participants were always allowed to ask for vocabulary which was provided to them in a non-inflected form. The interviews were conducted in a small room at the schools which the participants attended.

Prior to data collection, warming-up sessions were conducted (e.g., Hedge, 2000; Ellis & Yuan, 2004; Kuiken & Vedder, 2011; Ellis, 2014). The purpose of these sessions was to familiarize the participants with the interviewer and to make sure that they understood and were comfortable with the task. These sessions were presented as a class activity, so that the participants would not feel like they were being examined and would perform the task in a more natural and relaxed environment. They were reminded that they were not going to be graded for part-taking and that the activity was not part of the evaluations that their own school followed.

5.3 Coding procedure

To analyze the data obtained, sentential subjects were extracted both from matrix and embedded clauses. These subjects were then classified in terms of form, grammaticality (i.e., syntax) and adequacy (i.e., syntax-pragmatics).

In terms of form, five categories were distinguished: full DPs and proper names (as in 4), overt personal pronouns (as in 5), grammatical null pronouns (as in 6), and ungrammatical null pronouns (as in 7).

(4) *CHI: *my mother* is a teacher [full DPs]
(L1 Spanish group)

(5) *CHI: I have a hamster [overt personal pronouns]
(L1 Bosnian group)

(6) *CHI: you *pla*y online and *pro* try to win [grammatical null pronouns]
(L1 Danish group)

(7) *CHI: bec*ause pro* is working [ungrammatical null pronouns]
(L1 Bosnian group)

All subjects were classified in terms of their being grammatical or ungrammatical. The subjects were classified as ungrammatical if a null subject was used in any other than coordinated structures. If the ungrammaticality was attributed to issues that were not related to the subject and the subject was correct, the instance was considered as grammatical (for example: incorrect case assignment, as in 8, or incorrect object omission, as in 9).

(8) *CHI: *him* have a job [incorrect case assignment]
(L1 Bosnian group)

(9) *CHI: yes, I love Ø very much [incorrect object omission]
(L1 Bosnian group)

In terms of adequacy, each subject form was classified in relation to its referent. Full DPs are adequate if used for referent introduction, referent reintroduction and disambiguation. Pronouns are adequate if used for reference maintenance and null pronouns are adequate if used for reference maintenance in coordinated structures. Any other uses than the ones indicated were considered non-adequate (e.g., DPs used for reference maintenance (RM), as in 10, pronouns used for reference introduction (RI), as in 11, or pronouns used for reference reintroduction (RRI), as in 12).

(10) DPs used for reference maintenance

Previous context:

*CHI: and then after football my mum come

Example:

*CHI: and &eh my mum drive me to taekwondo (L1 Danish group)

(11) pronoun used for reference introduction

Previous context: *there is no previous context as this is the first sentence produced by the participant*

Example:

*CHI: and then after football *he* come (L1 Bosnian group)

(12) pronoun used for reference reintroduction

Previous context:

*CHI: the last we have done a bit of Guy Forks when he was a catholic terrorist.

*CHI: they tried to explode the whole the House of Parliament.

*CHI: while the king was inside.

*CHI: he meant that the Bibel@s:dan should be read in English and not only Latin.

Example:

*CHI: so *he* decided to try to kill him (L1 Danish group)

The following were excluded from the study as it was not possible to analyze the subject present in the sentences or it was unclear how it could be classified for the purposes of our study: incomplete sentences, codeswitching involving subjects, *wh*-pronouns in subject position and fixed expressions. Expletive subjects and imperatives were also excluded as they are non-referential, in the first case, and constitute an instance of overlap in the four languages, in the second case.

6. Results and discussion

The sentential subjects produced by the experimental groups (i.e., L1 Spanish, L1 Danish and L1 Bosnian) and by the control group (i.e., L1 English) are presented next. The overall amount and distribution of subjects produced by all the participant groups appears in Table 2 and will be discussed in the subsequent paragraphs.

Table 2. Overall distribution of subjects produced.

	grammatical				
L1	**adequate**	**non-adequate**	**total**	**ungrammatical**	**Total**
Spanish	83.79% [853]	1.96% [20]	85.76% [873]	14.24% [145]	100% [1018]
Bosnian	91.18% [982]	3.80% [41]	94.98% [1023]	5.02% [54]	100% [1077]
Danish	96.23% [1838]	1.05% [20]	97.28% [1858]	2.72% [52]	100% [1910]
English	99.01% [663]	0% [0]	99.01% [663]	0.09% [6]	100% [669]
total	92.77% [4336]	1.73% [81]	94.50% [4417]	5.50% [257]	100% [4674]

To run the statistical analyses, two General Linear Mixed Models (GLMMs) were fitted: one that focuses on the grammaticality of the subjects produced (i.e., grammatical vs. ungrammatical subjects) and one that is concerned with the adequacy of the grammatical subjects (i.e., adequate vs. non-adequate subjects). A negative binomial distribution model was created to fit the data, due to overdispersion in the data (dispersion ratio=1.306, p<.005). With DHARMa package overdispersion, residuals distribution and outlier tests were checked. The optimal model included language (Spanish, Danish, Bosnian and English), type of subject (grammatical vs ungrammatical and adequate *vs*. non-adequate) and the interaction as fixed effects parameters. The random effect structure includes random intercept by participant (R^2 = 0.677). The model includes the log of total number of subjects produced by each participant as offset term which allows to use negative binomial distribution to model the rate of occurrences based on the total number of subjects. A model including the MLUw as a variable was also run but no main effect was found (F(1,3)=.054, p=.941). The AIC score is lower in the model run with the MLUw (R^2 = 0.425) when compared to the model run without the MLUw (R^2 = 0.633). Therefore, we report below the analysis corresponding to the latter model.

As for the grammaticality of the sentential subjects produced, the results in terms of subject type (full DPs, overt pronouns, grammatical null subjects and ungrammatical null subjects) are summarized in Table 3.

Table 3. Distribution of subjects per language group: subject type.

L1		full DPs	overt pronouns	gram null	ungram null	total
[+null subject] languages	Spanish	17.88% [182]	66.50% [677]	1.38% [14]	14.24% [145]	100% [1018]
	Bosnian	12.81% [138]	80.78% [870]	1.39% [15]	5.01% [54]	100% [1077]
[-null subject] languages	Danish	11.57% [221]	81.26% [1552]	4.45% [85]	2.72% [52]	100% [1910]
	English [control]	14.50% [97]	75.64% [506]	8.97% [60]	0.90% [6]	100% [669]

To conduct the statistical analysis in terms of grammaticality, Table 4 shows the sets of pairwise comparisons with Tukey adjustments using the emmeans package that were conducted. The model includes the data set of grammatical and ungrammatical subjects produced with two predictors: participants' L1 and grammaticality (i.e., grammatical *vs*. ungrammatical subject). The results in Table 4 show the comparisons obtained, which are discussed below.

Table 4. Summary of the GLMM fixed effects for grammaticality.

fixed effect	*estimate*	*lower CI*	*higher CI*	*z value*	*p value*
(intercept)	0.995	0.908	1.090	-0.102	0.918
L1 Spanish	0.864	0.766	0.975	-2.366	0.017
L1 Bosnian	0.958	0.853	1.077	-0.705	0.480
L1 Danish	0.980	0.881	1.089	-0.369	0.712
ungram subjects: total	0.008	0.003	0.022	-9.776	<0.001
ungram subjects: L1 Spanish	18.258	6.843	48.711	5.801	<0.001
ungram subjects: L1 Bosnian	5.757	2.089	15.864	3.385	<0.001
ungram subjects: L1 Danish	3.164	1.150	8.705	2.232	0.025

These results show that independently of the L1, the preferred subject type for all the participants is the overt pronoun. This preference is significant both for the L2 English groups as well as for the L1 English group (p<.001). All the language groups follow the same pattern: overt pronouns > full DPs > null subjects.

An across group comparison shows that the L1 Danish and the L1 English groups produce more grammatical null subjects in contrast to the L1 Spanish and L1 Bosnian groups who produce more ungrammatical null subjects.

In Table 5 the overall distribution of grammatical subjects appears as one variable (grouping full DPs, overt pronouns and grammatical null subjects) and ungrammatical subjects as the other.

Table 5. Distribution of subjects per language group: grammaticality.

L1		grammatical		ungrammatical		total % [# of cases]
		% [# of cases]	SD	% [# of cases]	SD	
[+null subject] languages	Spanish	85.76 [873]	14.99	14.24 [145]	14.99	100 [1018]
	Bosnian	94.99 [1023]	10.17	5.01 [54]	10.17	100 [1077]
[-null subject] languages	Danish	97.28 [1858]	4.43	2.72 [52]	4.43	100 [1910]
	English [control]	99.10 [663]	2.15	0.90 [6]	2.15	100 [669]

Most of the sentential subjects produced by the three L2 groups, as shown in Table 5, are grammatical and this is significantly so both for the L2 groups as well as for the control group (all p<.001). When focusing on ungrammaticality rates, a between group comparison shows that the L1 Spanish group (p<.001) and the L1 Bosnian group (p=.001) significantly differ from the L1 English group. However, no significant difference is found between the L1 Danish and the L1 English groups (p>.05). Hence, the [-null subject] language groups behave similarly, and they differ from the [+null subject] language groups. In the case of the production of grammatical subjects, the analysis shows no statistically significant difference between neither of the language groups (all p>.05).

To further explore the production of subjects, Table 6 shows the distribution of adequate subjects.

Table 6. Distribution of subjects per language group: adequacy.

L1		adequate		non-adequate		total % [# of cases]
		% [# of cases]	SD	% [# of cases]	SD	
[+null subject] languages	Spanish	97.71 [853]	3.63	2.29 [20]	3.45	100 [873]
	Bosnian	95.97 [982]	11.28	4.03 [41]	10.51	100 [1023]
[-null subject] languages	Danish	98.92 [1836]	4.53	1.07 [20]	4.47	100 [1856]
	English [control]	100 [663]	0.00	0 [0]	0.00	100 [663]

To conduct the statistical analysis in terms of adequacy, zero-inflation condition was checked before fitting the model. The results in Table 7 show the comparisons obtained, which are discussed below.

Table 7. Summary of the GLMM fixed effects for adequacy (zero-inflation model coefficients).

fixed effect	***estimate***	***z value***	***p value***
(intercept)	18.004	0.010	0.992
L1 Spanish	-20.870	-0.012	0.991
L1 Bosnian	-19.063	-0.011	0.991
L1 Danish	-19.516	-0.011	0.991
non-adequate subjects: pronoun_RI	-0.056	0.000	1.000
non-adequate subjects: pronoun_RI	-4.075	-0.003	0.998
non-adequate subjects: L1 Spanish (pronoun_RI)	19.256	0.010	0.992
non-adequate subjects: L1 Spanish (pronoun_RRI)	19.259	0.012	0.990
non-adequate subjects: L1 Bosnian (pronoun_RI)	3.178	0.002	0.999
non-adequate subjects: L1 Bosnian (pronoun_RRI)	5.154	0.003	0.997
non-adequate subjects: L1 Danish (pronoun_RI)	0.183	0.000	1.000
non-adequate subjects: L1Danish (pronoun_RRI)	-4.765	-0.003	0.998

RI = reference introduction and RRI = reference re-introduction

In this case, since all the subjects produced by the control group are adequate and thus, there is no variability, they have been excluded from the statistical analysis and only the comparison within the experimental groups is carried out. Also, within these experimental groups, adequate subjects significantly outnumber non-adequate ones (all $p<.005$).

In the case of non-adequate subjects, the L1 Bosnian group produces the highest rate (4.03%) followed by the L1 Spanish group (2.29%) and finally the L1 Danish group (1.07%). Thus, the three L2 groups pattern alike in this respect.

To further explore the non-adequate subjects and bearing in mind the very low rates seen in Table 6, Table 8 shows that the majority of these are produced when the participants have used a full DP for reference maintenance where a pronoun is expected. This is especially relevant in the case of the L1 Spanish and L1 Bosnian groups. It seems that these [+null subject] language groups prefer to repeat the full DP.

Table 8. Distribution of subjects per language group and adequacy type: non-adequate subjects.

L1	DP_RM	PRON_RI	PRON_RRI	total
Spanish	100% [20]	0% [0]	0% [0]	100% [20]
Bosnian	80.49% [33]	12.19% [5]	7.31% [3]	100% [41]
Danish	55% [11]	35% [7]	10% [2]	100% [20]
English [control]	0% [0]	0% [0]	0% [0]	100% [0]

RM = reference maintenance; RI = reference introduction and RRI = reference re-introduction

In spite of the very low rate of non-adequate subjects, the results in Table 8 point to so-called over-explicitation effects (Hendriks, 2003). In particular, overt DPs are used in contexts of reference maintenance where a pronoun is more pragmatically adequate. This phenomenon has been found to be true independently of the participants' L1 or the L2 being learnt (e.g., Ahrenholz, 1998; Chini, 1998; Muñoz, 2000; Hendriks, 2003). In the case of L2 studies, over-explicitation has been attributed to the learner's concern for communicative success and to a search for hyper clarity linked to the leaners' awareness of their deficiencies in the L2 (e.g., Véronique et al., 2000; Hendriks, 2003).[5]

To further explore the results presented above, we focus first on typological similarity and then on lexical specialization approach with the aim of providing an answer to both research questions.

Previous studies on crosslinguistic influence and language typology have argued that crosslinguistic influence is affected by typological similarity so that when typologically similar languages are in contact, the L1 can facilitate the acquisition of the L2, as per the Facilitation Hypothesis (Gundel & Tarone, 1992). If typological similarity plays a role, then the L1 Spanish and L1 the Bosnian groups (i.e., both with [+null subject] L1s), on the one hand, and the L1 Danish and the L1 English groups (i.e., both with [-null subject] L1s), on the other, should pattern alike. What regards the production of ungrammatical subjects, our results show that the L1 Danish and the L1 English groups pattern alike. Therefore, it can be argued that in the case of [-null subject] languages (i.e., L1 Danish), the L1 functions as a facilitator. Our results also show that in the case of [+null subject] languages (i.e., L1 Spanish and L1 Bosnian), they also pattern alike since they both produce more ungrammatical subjects. Thus, in the case of [+null subject] languages, the L1 may be responsible for these participants' higher rate of ungrammatical subjects when compared to the L1 Danish and the L1 English groups. However, despite this difference between

[5] Similar results are also found in the case of L1 speakers' interpretation data. Lapidus Shin & Smith Cairns (2012) analyzing L1 Spanish children (and adults) found that there was a tendency to accept DPs in contexts where pronouns are more adequate. They claim that children's tolerance for redundancy (overacceptance of DPs) and ambiguous structures (overacceptance of pronouns) is related to difficulties with perspective and referent accessibility.

the two typological groups, data show a very high rate of grammaticality for the three experimental groups, scores ranging from 85% to 99% and the difference between the groups not being statistically significant. In other words, the production of grammatical subjects is similar across the three experimental groups. Therefore, it can be argued that, when it comes to the production of grammatical subjects, typological similarity does not seem to be a very salient factor as it does not predict (nor account for) differences that could be attributed to the typological similarity or difference between participants' L1 and the L2.

The production of adequate subjects is not only contingent on the acquisition of the syntactic properties that characterize sentential subjects in each language. It also involves the combination and mastery of other linguistic domains which, therefore, places the production of adequate subjects at the interface level. Different L2 studies have suggested that the interfaces are one of the salient problems L2 bilinguals have when mastering sentential subjects (e.g., Sorace, 2005; Tsimpli & Sorace, 2006; Sorace & Filiaci, 2006). Thus, an analysis of both grammaticality and adequacy allows for a more comprehensive interpretation of the production of sentential subjects by L2 bilinguals. By separating between syntactic requirements issues and the interface conditions, we can see whether the interface at stake (i.e., syntax-pragmatics) is a conditioning factor in the production of speakers with [+null subject] L1s as well as in that of speakers with [-null subject] L1s. Or rather, whether only the purely syntactic constraints without the influence of the pragmatic factors can account for the L2 bilinguals' production.

The analysis of sentential subjects attending to adequacy yields even more homogeneous results across the four participant groups (experimental and control). So, once more, typological similarity does not seem to explain the results we have obtained as both participants with [+null subject] L1s and those with a [-null subject] L1 behave very similarly showing very high correctness rates. Analyzing the non-adequate subjects, only the L1 Bosnian group seems to perform differently from the rest of the groups. Being the L1 Bosnian group the one that has the lowest MLUw values (Table 1), it could be argued that their production rate may be an indicator of their being less engaged in the task and, possibly so, of their having a different proficiency level. However, these differences across the three L2 English groups never reach statistical significance. In fact, the production for the three experimental groups show similar patterns in their use of over-explicitation, which suggests that L2 English learners, regardless of their L1s, resort to similar strategies. Thus, typological similarity does not seem to be the influencing factor as it does not allow us to predict a different behavior between the L1 Spanish and the L1 Bosnian groups on the one hand, and the L1 Danish group on the other. Quite the opposite: the participants' performance does not seem to change as a function of whether their L1 is typologically similar or typologically different from the L2.

Hence, what our results show is that, for all the languages under study, production of both grammatical and adequate subjects is at ceiling and, consequently, the production of ungrammatical and non-adequate subjects is low. These results seem to suggest that all

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the groups adhere to the overt subject rule in English (i.e., as a one–subject–type language), making the production of null ungrammatical subjects rather marginal. The availability of two subject types (i.e., null and overt) in the superset language (i.e., Spanish and Bosnian in this case) seems to have a facilitative effect in the acquisition of a subset language (English in this case, which only has the overt subject type available).

These results are in line with the lexical specialization approach regarding how the existence and directionality of crosslinguistic influence is shaped when superset and subset languages are in contact, as Liceras & Fernández Fuertes (2019) propose for the L1. That is, crosslinguistic influence takes place from the L1 superset language (i.e., Spanish and Bosnian) into the L2 (i.e., English) and it facilitates the acquisition of sentential subjects, as the results show.

The lexical specialization proposal lies on the availability of two subject types (i.e., overt and null) and it predicts that the language that is lexically specialized (i.e., Spanish and Bosnian in this case as they allow both subject types) would help reinforce the only available option in the language that is not lexically specialized (i.e., English in this case). That is, the prediction is that crosslinguistic influence from the lexically specialized language into the non-lexically specialized language would not have a negative effect making the learner produce (more) illicit null subjects in English. Rather, crosslinguistic influence would have a positive effect by reinforcing the only available option in the non-lexically specialized language (i.e., the overt subject).

In the case of the L1 Danish participants, crosslinguistic influence from their L1 would also yield to a high production of overt subjects given that both the L1 and L2 share the same value of the parameter (i.e., they are both non-lexically specialized languages). That is, the fact that the overtness rates of these two groups of participants is at ceiling is expected. To learn a property that is already available in your L1, as is the overtness of the subject, has been systematically proven to be easier than to learn a property that differs from that in your L1. So, in the case of the L1 Danish group, either facilitative crosslinguistic influence or fast learning of this obligatoriness yields the same results.

Going back to our two research questions, we believe our data lend support to lexical specialization over typological similarity in accounting for the subject production of these three L2 English child groups. It can be argued that signs of crosslinguistic influence interfering effects can be seen in the L1 Bosnian and L1 Spanish groups when compared to the L1 Danish group, because the first two groups pattern alike while the L1 Danish group does so with the L1 English control group. However, while this is true, these differences cannot hide the fact that (i) grammaticality rates are very high for all three groups and that (ii) accurate rates are at ceiling for all three groups. Therefore, as argued above, the availability of two subject types in Spanish and Bosnian (i.e., null and overt pronouns) makes Spanish and Bosnian lexically specialized languages when it comes to grammatical person information because, even if person features are always realized via verbal agreement markers, two subject types are indeed possible. This lexical specialization is what is behind the superset/subset language difference. And it is not only

a matter of having more options, but crucially so that, out of the two options that are available in Bosnian and Spanish (i.e., null and overt), only one of these is available in Danish and English (i.e., overt). This superset relation is what, we believe, is behind the high grammaticality and adequacy rates that these L2 bilingual children have in their L2 English production. And it is also what explains their lack of high null subject rates as a sign of negative crosslinguistic influence from their L1s.

7. Conclusion

Taking formal proposals on sentential subjects as a point of departure, this study has offered an analysis of crosslinguistic influence effects in the case of two L2 contact situations: typologically similar languages (L2 English-L1 Danish) and typologically different languages (L2 English-L1 Spanish and L2 English-L1 Bosnian). Assuming L2 English children rely on their L1 when producing sentential subjects, the focus has been placed on characterizing what has more weight: typological similarity between the L1 and the L2 or lexical specialization whereby the properties of the L1 may be seen as a superset of those of the L2 and this facilitates L2 acquisition. While typological similarity can explain how the L1 Bosnian and the L1 Spanish children pattern similarly and somehow differently from the L1 Danish and the L1 English, it fails to account for the high grammaticality and accuracy rates that all three experimental groups show. These, however, can be accounted for if we claim that lexical specialization in the L2 child bilinguals' L1s has a facilitating effect. That is, as in the case of 2L1 acquisition studies, that there is facilitative crosslinguistic influence effects from the superset language (i.e., Spanish and Bosnian) to the subset language (i.e., English).

The conclusions we reach in the present investigation can be further explored by considering other issues that can help explore the interaction between typological similarity and lexical specialization. These include the analysis of the written production of sentential subjects to see if modality plays a role and of other variables such as time of exposure and proficiency in the L2 bilingual acquisition. This will offer further insight into the representational nature of subjects in child L2 bilinguals.

As previous L2 studies have shown (e.g., Ferrero, 2020; Gómez Garzarán, 2023), empirical research on different grammatical properties can contribute to more felicitous teaching policies and practices. Although this is not the objective of the present investigation, the conclusions obtained in this study could be used as a point of departure to conduct pedagogical research where the design of the curricula and the materials for L2 instruction targets in a more accurate way potential crosslinguistic influence effects.

Together with these pedagogical implications this study leaves the door open to explore more in-depth issues that are fundamental in L2 instruction contexts such as age and language modality. The combination of data elicited via different methodologies (e.g., judgment data, processing data) could also allow us to gain further insight into the representational nature of sentential subjects and put into perspective the results obtained in the present investigation.

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Typological similarity is not always helpful: Second language processing of the Korean dative construction

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Abstract: We investigate how cross-linguistic influence affects L2 sentence processing at the interface of task effects and typological similarity between L1 (English; Czech; Japanese) and L2 (Korean), focusing on the two alternating patterns of dative construction (Dative–Accusative; Accusative–Accusative). Results from an Acceptability Judgement Task showed that, while L2-Korean learners were stringent with Dative−Accusative and were lenient with Accusative−Accusative when compared to native Korean speakers, L1-Japanese L2-Korean learners were notably generous with Accusative–Accusative compared to the other learner groups. Results from a Self-paced Reading Task showed that L2-Korean learners' reading-time patterns were largely the same across the groups, but with substantial reading-time difference across the two patterns only by L1-English L2-Korean learners. These findings suggest by-task and by-group variabilities involving cross-linguistic influence, surrounded with various factors such as linguistic properties of an L2 item, morphosyntactic characteristics of learners' L1, and task-specific requirements. This highlights the noisy – vaguer and less specific – representations of L2 knowledge.

Keywords: *cross-linguistic influence, language typology, dative construction, sentence processing, korean.*

La similitud tipológica no siempre es útil: Procesamiento de la construcción dativa coreana en segunda lengua

Resumen: Este estudio investiga cómo la influencia translingüística afecta el procesamiento de oraciones en L2 cuando se consideran los efectos de la tarea y la similitud tipológica entre L1 (inglés; checo; japonés) y L2 (coreano), centrándonos en los dos patrones alternativos de la construcción dativa (Dativo-Acusativo; Acusativo-Acusativo). Los resultados de una Tarea de Juicio de Aceptabilidad mostraron que, mientras que los aprendices de coreano L2 eran estrictos con la construcción Dativo−Acusativo y flexibles con Acusativo−Acusativo en comparación con los hablantes nativos de coreano, los aprendices de japonés L1 coreano L2 eran notablemente más flexibles con Acusativo-Acusativo en comparación con los otros grupos de aprendices. Los resultados de una Tarea de Lectura a Ritmo Propio revelan que los patrones de tiempos de lectura de los aprendices de coreano L2 eran, en su mayoría, iguales entre los grupos, pero mostraban una diferencia sustancial en los tiempos de lectura entre los dos patrones únicamente en los aprendices de inglés L1 coreano L2. Estos hallazgos sugieren variabilidades de tarea y de grupo que involucran influencia cross-lingüística, rodeada de varios factores como las propiedades lingüísticas de un elemento en L2, las características morfosintácticas de la L1 de los aprendices y los requisitos específicos de la tarea. Esto resalta las representaciones ruidosas – más vagas y menos específicas – del conocimiento en L2.

Palabras clave: *influencia cross-lingüística, tipología lingüística, construcción dativa, procesamiento de oraciones, coreano.*

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1. Introduction

One notable characteristic of second language (L2) knowledge lies in its noisier representations compared to those involving first language (L1) knowledge (Futrell & Gibson, 2017; Tachihara & Goldberg, 2020). Noisiness of L2 knowledge refers to the situation in which linguistic formulations that L2 speakers have are vaguer and less specific than those L1 speakers have, given that memory for L2 knowledge is not as strong as that for L1 knowledge. This characteristic is attributed to L1–L2 competition in the mind (Hartsuiker et al., 2004; Jiang et al., 2017; MacWhinney, 2008) and an increased cognitive load while engaging in L2 behaviour at hand (Cunnings, 2017; Hopp, 2014; Jacob & Felser, 2016; McDonald, 2006; Pozzan & Trueswell, 2016), also interfacing with task effects (Lee et al., 2023; Tan & Foltz, 2020) and learner characteristics (Dąbrowska & Street, 2006). This particular nature of L2 knowledge often leads to a learners' reduced capacity to utilise target knowledge in the course of L2 behaviour[1] (Clahsen & Felser, 2006; Hopp, 2018; Robenalt & Goldberg, 2016; Tachihara & Goldberg, 2020). It also results in their learning trajectories being distinctive from how L1 knowledge is acquired (Frenck-Mestre et al., 2019; Jiang et al., 2011; Park & Kim, 2021; Slabakova, 2014). Together, the noisy nature of L2 knowledge highlights the complex and multifaceted aspects of L2 acquisition (cf. Associative–Cognitive CREED; Ellis, 2006a).

Amongst various factors constructing L2 knowledge, cross-linguistic influence (CLI) is a long-standing topic of L2 literature. CLI has generated active debates on three major and inter-related areas: (i) the status of two (or more) language systems in a learner's cognitive space (Bernolet et al., 2013; Hartsuiker & Bernolet, 2017; Håkansson et al., 2002; Hwang et al., 2018; Kaan et al., 2015; Putnam et al., 2018; Shin & Christianson, 2009; Ullman, 2001); (ii) the direction and magnitude of influence that one language exerts on the other(s) (i.e., L1-to-L2 or L2-to-L1) (Grüter & Hopp, 2021; Hopp & Grüter, 2021; Hopp et al., 2020; MacWhinney, 2008; cf. L1 attrition: Schmid & Köpke, 2017; L2 attrition: Mickan et al., 2019); and (iii) the degree of similarity or difference between two (or more) languages affecting the learning outcomes (Andersson et al., 2019; Cadierno & Robinson, 2009; Frenck-Mestre et al., 2019; Jiang et al., 2011; Mickan & Lemhöfer, 2020; Park & Kim, 2021, 2022). Various proposals have been made to address CLI, with a focus on the extent of the structural overlap between two languages (the shared-syntax account; Hartsuiker & Bernolet, 2017; Hartsuiker et al., 2004), the possibility of realignment of functions routinised in L1 onto forms in L2 (the morphological congruency hypothesis; Jiang et al., 2011; Jiang et al., 2017), the change in strength of form–function mapping in competition across languages (the Competition Model; MacWhinney, 2008, 2013), the asymmetric degree of salience involving L1 and L2 information (the overshadowing and blocking account; Ellis, 2006b; Luk & Shirai, 2009), to name a few.

[1] Throughout this article, we use 'L2 behaviour' as a cover term indicating language activities using an L2 including comprehension and processing.

Despite the fruitful discussions regarding CLI, we identify two major caveats in the current research practice. One is the sampling bias towards a limited range of major (Indo-European) languages (and particularly towards L2 English) prevalent in the literature (cf. Nielsen et al., 2017). This poses a threat to diversity, equity, and inclusion in research, in addition to weakening the generalisability of the implications of previous studies to other (and lesser-studied) languages, considering multilingual communities in which human beings are currently living. The other caveat concerns the distinction between macro-level and micro-level linguistic properties involving CLI. Studies often conflate typological features, which comprise general properties of an overall language system such as word order and case-marking, and item-specific characteristics such as structural components and alternating nature of a construction. Concepts such as typological proximity (Rothman, 2011), cumulative enhancement (Flynn et al., 2004), and applied language typology (Filipović, 2008) encapsulate this practice, reflecting the intuition that the more closely related two languages are holistically, the easier it is to implement the two languages in one mind. Notably, a line of research has shown that this may not be always the case (Cuza et al., 2018; Westergaard, 2021), but more research (also considering lesser-studied language pairs) is needed to precisely evaluate the individual and interactive roles of macro- and micro-level properties involving typological considerations for L2 acquisition.

Against this background, the present study investigates how CLI is manifested during L2 sentence processing in consideration of learners' L1 and task effects. We employ Korean as an L2 and three languages manifesting notable typological characteristics when compared to Korean (English; Czech; Japanese) as L1s, with a focus on the dative construction. Korean has become a popular L2 acquisition target but still remains understudied in the L2-acquisition literature. Pertaining to morphosyntactic properties, the four languages that we consider in this study manifest notable similarities and differences with respect to macro-level typological features and micro-level characteristics about the target construction. The dative construction has drawn L2-acquisition researchers' attention to its productivity and challenge in L2 acquisition due to the intricacies regarding its morphosyntactic characteristics and diverse factors determining its usage (Ambridge et al., 2014; Bresnan & Ford, 2010; Goldberg, 1995; Pinker, 1989; Xiang & Chang, 2022). We also address CLI at the interface of task effects by employing two different tasks: acceptability judgement (offline task) and self-paced reading (online task). Some studies have touched upon how L2 processing is affected by the different requirements by task type (translation vs. eye-tracking in L2 English: Lim & Christianson, 2015; types of comprehension question in a self-paced reading task in L2 English: Tan & Foltz, 2020), but research on this topic for lesser-studied languages is scarce. The current study seeks to answer the following research question: To what extent does L2-Korean learners' processing of the Korean dative construction is affected by L1–L2 differences and task types?

2. Background: Dative construction in four languages

2.1 Target L2: Korean

Korean is an agglutinative and Subject–Object–Verb language, has overt case-marking through particles, and allows scrambling of pre-verbal arguments if the original intention is maintained without ambiguity (Sohn, 1999), as in (1).

(1) A Korean sentence: 'Chelswu hugged Yenghuy.'

a. SOV

Chelswu-ka	Yenghuy-lul	an-ass-ta.
Chelswu-NOM	Yenghuy-ACC	hug-PST-SE[2]

b. OSV

Yenghuy-lul	Chelswu-ka	an-ass-ta.
Yenghuy-ACC	Chelswu-NOM	hug-PST-SE

The dative construction in Korean has two variant patterns while maintaining the canonicity of word order (i.e., recipient-before-theme): a Dative–Accusative pattern (2a) which involves a dative-marked recipient (*Jiho-eykey*)[3] followed by an accusative-marked theme (*chak-ul*), and an Accusative–Accusative pattern (2b) where both recipient (*Jiho*) and theme (*chak*) are marked by an accusative case marker (with two allomorphic variants serving the same function: *-lul* after a vowel; *-ul* after a consonant) (Lee, 2014; Shin, 2016; Yoon, 2015).

(2) The two patterns of Korean dative construction

a. Dative–Accusative

Mina-ka	Jiho-eykey	chak-ul	cwu-ess-ta.
Mina-NOM	Jiho-DAT	book-ACC	give-PST-SE

'Mina gave a book to Jiho.'

b. Accusative–Accusative

Mina-ka	Jiho-lul	chak-ul	cwu-ess-ta.
Mina-NOM	Jiho-ACC	book-ACC	give-PST-SE

'Mina gave Jiho a book.'

While the two dative patterns in Korean share the basic communicative intent that expresses the propositional meaning of *transferability* (Haspelmath, 2015), the Accusative–Accusative pattern is relatively rare in use as found in a corpus (Kim & Shin, 2022) and it is dispreferred relative to its Dative–Accusative counterpart (Cho & Jeon, 2015;

[2] Abbreviations: ACC = accusative case maker; DAT = dative marker; FEM = feminine; MASC = masculine; NOM = nominative case marker; PST = past tense marker; SE = sentence ender.

[3] There are the other possible case markers for this purpose: *-hanthey* in informal contexts, *-tele* and *-poko* in colloquial settings, *-ey* with an inanimate recipient, and *-kkey* to indicate a deferential intention (Sohn, 1999).

Kim & Shin, 2022). However, Korean speakers do employ this pattern for communication (Park & Yi, 2021), which confirms its status as a grammatical pattern for the dative construction in Korean. Focusing on their paraphrase relationship, some studies have utilised this pair to assess Korean speakers' acceptability judgements of dative alternation in Korean (Cho & Jeon, 2015; Kim & Shin, 2022; Lee, 2014) or to investigate cross-linguistic priming in dative alternation between Korean and English (Kim et al., 2020; Shin & Christianson, 2009). These studies provide support for the idea that, although not completely identical in every aspect (cf. Shin, 2016), the two dative patterns in Korean comprise a reasonable pair of alternating relations.

Considering the typical and canonical status of the Dative–Accusative pattern for the dative construction in Korean (Choi, 2009), of great interest is whether and how L2-Korean learners use (i) the Accusative–Accusative pattern itself and (ii) the particular form–function association involving the accusative case marker for that pattern. The accusative case marker typically indicates a theme role in a transitive construction as in (1) (Choo & Kwak, 2008; Sohn, 1999). However, the same marker can also be used to indicate a recipient role in a dative construction as in (2b) (although in a somewhat restricted way; Shin, 2016). An accusative-marked recipient is less favoured in actual language use (Choo & Kwak, 2008; Kim & Shin, 2022; Shin & Mun, 2023), and L2-Korean textbooks for university students often present this marker exclusively with the theme role (Shin & Jung, 2022). Because of this, the cue validity of the Accusative–Accusative pattern (and the accusative-marked recipient) becomes considerably lower than that of the Dative–Accusative pattern (and the accusative-marked theme) in the Korean dative construction (cf. Bates & MacWhinney, 1989). These aspects could pose a challenge to L2-Korean learners' understanding and use of the Accusative–Accusative pattern, and the accusative-marked recipient, for the dative construction in Korean.

2.2 L2-Korean learners' L1: English, Czech, and Japanese

English is an analytic, Subject–Verb–Object language with little inflection. This language has rigid word order and a less active agreement system. The words' position in a sentence provides crucial information about their grammatical status. For example, in the sentence 'Max hugged Tim', given that the transitive verb 'to hug' requires two participant roles (i.e., *hug-ger*, *hug-gee*), it is highly likely that before the verb there will be an actor and after the verb an undergoer of this action. For the dative construction, English has two variants – a prepositional dative as in (3a) and a double object dative (or ditransitive) as in (3b), and this pair is employed as a functional equivalent to the two dative patterns in Korean (Shin & Christianson, 2009; Kim et al., 2020).

(3) English dative constructions

a. Prepositional dative Mary gave a book to Nancy.

b. Double object dative Mary gave Nancy a book.

In the English double object dative pattern, there exists a functional equivalent of an accusative-marked recipient found in the Korean Accusative–Accusative pattern (e.g., *I gave them presents*); however, this inflection is identified only for some pronouns (e.g., *me, him, her, them*), which indicates that the use of an accusative-marked recipient in the English dative construction is not prominent.

Czech is a synthetic, Subject–Verb–Object language and is highly inflectional. In contrast to English, Czech is characterised as having an active agreement system through word inflection indicative of grammatical case, gender, and number. This allows flexible word order while keeping propositional meaning intact while inviting particular discourse effects (Naughton, 2005). As shown in (4), the verb *obejmout* 'to hug' agrees with the subject *ona* 'she', yielding the change of the verb form (*objala* 'hug.FEM'), and this allows for six word-order variations.

(4) Czech sentence: 'She hugged Tim.'

a. SVO

Ona	objala	Tima.
She	hug.PST.FEM	Tim

b. SOV

Ona	Tima	objala.
She	Tim	hug.PST.FEM

c. VSO

Objala	ona	Tima.
hug.PST.FEM	she	Tim

d. VOS

Objala	Tima	ona.
hug.PST.FEM	Tim	she

e. OSV

Tima	ona	objala.
im	she	hug.PST.FEM

f. OVS

Tima	objala	ona.
Tim	hug.PST.FEM	she

The dative construction in Czech has only one case-inflection pattern: Dative–Accusative as in (5). Although this pattern allows scrambling (Accusative–Dative), Czech, unlike Korean, does not allow any dative pattern with two accusative cases.

(5) Czech dative construction

Martin	dal	ji	knihu.
Martin.MASC.NOM	give.MASC.PST	she.FEM.DAT	book.FEM.ACC

'Martin gave her a book.'

Japanese is an agglutinative, Subject–Object–Verb language with active suffixation and particle use. This allows relatively flexible word order, maintaining the verb-final order, while keeping propositional meaning intact while inviting particular discourse effects (Association for the Study of Japanese Descriptive Grammar, 2009) as in (6).

(6) Japanese sentence: 'Taroo hugged Yuko.'

a. SOV

Taroo-ga	Yuko-o	dakisime-ta.
Taroo-NOM	Yuko-ACC	hug-PST

b. OSV

Yuko-o	Taroo-ga	dakisime-ta.
Yuko-ACC	Taroo-NOM	hug-PST

The dative construction in Japanese has only one case-marking pattern: Dative–Accusative as in (7). Although this pattern allows scrambling (Accusative–Dative), Japanese, like Czech and unlike Korean, does not allow a dative pattern with two accusative cases.

(7) Japanese dative construction

Taroo-ga	Yoko-ni	hon-o	age-ta.
Taroo-NOM	Yoko-DAT	book-ACC	give-PST

'Taroo gave a book to Yoko.'

However, Japanese allows double accusative-case when (i) it is *not* a dative construction and (ii) the first nominal marked as accusative is *not* an obligatory argument, as in (8). While this does not relate to dative semantics, the use of double accusative cases is observed and allowed in other types of clausal constructions (Masuoka, 1987; Nakamura, 2003; Sugimoto, 1986).

(8) Non-dative, double accusative-case use in Japanese

Ame-no	naka-o	gurando-o	san-syu	hasit-ta.
Rain-GEN	inside-ACC	ground-ACC	three-lap	run-PST

'(He) ran three laps around the ground in the rain.'

2.3 Expected outcome: L2 processing of Korean dative construction intertwined with L1–L2 difference and task type

Based on the above, we can state that there are notable morphosyntactic similarities and differences shared by the three languages when compared to Korean (Table 1). Given this background, we can make several predictions on L2-Korean learners' processing behaviour by task type.

Table 1. Macro-level typological features and micro-level constructional properties: English, Czech, and Japanese.

	Macro-level typological features		**Micro-level structural properties (dative construction)**	
	What is the canonical word order?	How is case information expressed?	How many alternating patterns exist?	Does the language allow an accusative-marked recipient in this construction?
Korean	SOV; somewhat flexible	Particle use (no major change in word form)	Two - Dative–Accusative - Accusative–Accusative	Yes
English	SVO; rigid	Inflection but minimal	Two - prepositional dative (corresponding to Dative–Accusative in Korean) - double object dative (corresponding to Accusative–Accusative in Korean)	Yes (but limited to some cases of pronominal use)
Czech	SVO; flexible	Inflection (change in word form)	One (corresponding to Dative–Accusative in Korean)	No
Japanese	SOV; somewhat flexible	Particle use (no major change in word form)	One (corresponding to Dative–Accusative in Korean)	No

2.3.1 Acceptability Judgement Task

In an Acceptability Judgement Task (AJT), an interlocutor engages in both partial and holistic considerations of a sentence to arrive at a complete interpretation of it and then to decide its acceptability. During this process, learners may reserve enough space for taking the entire structural frame into account.

If macro-level typological features exert strong influence on L2-Korean learners' acceptability-rating behaviour, we would expect L1-Japanese L2-Korean learners' overall success in this task, indicated by their preference for the Dative–Accusative pattern over the corresponding Accusative–Accusative pattern. This is supported by the global proximity between Korean and Japanese, such as word order and case-marking properties,

alleviating challenges in L2 learning and thus leading to performance close to how native Korean speakers deal with the two patterns. Specifically, the L1 Japanese learners should demonstrate a good command of case-marking facts involving this construction so that they easily link two thematic roles (theme; recipient) to the Korean accusative case marker (cf. Jiang et al., 2017). L1-Czech L2-Korean learners would also demonstrate an enhanced ability to handle the same case-marking facts due to the active use of case information in their L1, possibly benefitting their acceptability rating of the two patterns, but not to the extent that L1-Japanese L2-Korean learners are expected to demonstrate. Meanwhile, L1-English L2-Korean learners may have difficulty judging the target construction due to the typological differences between English and Korean.

If construction-specific, micro-level knowledge greatly affects L2-Korean learners' acceptability-rating behaviour, we would find L1-English L2-Korean learners' comparable degrees of acceptability rates across the two patterns due to the functional equivalency shared by the two dative patterns for each language. These learners' performance may further benefit from the use of the accusative-marked recipient pronominals in English double object dative construction. In contrast, L1-Czech L2-Korean learners and L1-Japanese L2-Korean learners would have difficulty with the Accusative–Accusative pattern, which is not available in their L1s, leading to less acceptability rates for this pattern relative to its counterpart.

2.3.2 Self-paced Reading Task

A self-paced Reading Task (SPRT) requires a participant to engage in a moment-by-moment, sequential, and cumulative interpretation of the incoming items in real time and with more time constraints. During this process, learners may attend more to item-specific requirements within one region at hand than to a broad structure-building process utilising cross-region and upcoming information. This is informed by L2 learners' global difficulty in real-time processing (Clahsen & Felser, 2006; Hopp, 2014; McDonald, 2006; Pozzan & Trueswell, 2016), and specifically, their reduced space for generating expectations of the following representations based on the current information even though they can exhibit the target knowledge in offline tasks (Grüter et al., 2017; Pozzan & Trueswell, 2016).

If holistic typological features exert strong influence on the L2-Korean learners' sentence-processing behaviour, we would expect L1-Japanese L2-Korean learners' shorter reading times for both patterns than L1-Czech L2-Korean learners and L1-English L2-Korean learners due to the global similarity between Korean and Japanese as explained above. Relatedly, this macro-level proximity between languages also predicts that L1-English L2-Korean learners would demonstrate longer reading times for both patterns than L1-Czech L2-Korean learners. If construction-specific, micro-level knowledge greatly affects their sentence-processing behaviour, we expect that L1-English L2-Korean learners would read the Accusative–Accusative pattern faster than L1-Japanese L2-Korean learners and L1-Czech L2-Korean learners. This is because English has the double object dative

pattern (sometimes with an accusative-marked pronominal recipient) while the other two languages do not allow two accusative-marked nominals in the dative construction. This may benefit L1-English L2-Korean learners when processing the Accusative–Accusative pattern in Korean.

Meanwhile, if L2 learners' exclusive focus on here-and-now information in sentence processing supersedes CLI under the word-by-word sentence-reading environment, we predict that L2-Korean learners would mis-parse the accusative-marked recipient in the Accusative–Accusative pattern, interpreting it as a theme, and would not always revise their initial interpretation when encountering the actual theme argument marked with an accusative case marker later in that pattern. It is known that L2 users are prone to interference from garden-path parses (Futrell & Gibson, 2017) and they sometimes miss a revision process (Clahsen & Felser, 2006; Omaki & Schulz, 2011) because of an increased cognitive load when conducting L2 behaviour (Cunnings, 2017; Pozzan & Trueswell, 2016) unless these significantly distort communicative intents (cf. Christianson, 2016; Ferreira, 2003). This will be observed via (i) less reading times spent in the accusative-marked recipient for the Accusative–Accusative pattern relative to those in the dative-marked recipient for the Dative–Accusative pattern and (ii) no substantial reading-time increase in the accusative-marked theme relative to the accusative-marked recipient for the Accusative–Accusative pattern.

3. Methods

3.1 Participants

We recruited L1-English (ENG), L1-Czech (CZH), and L1-Japanese (JPN) learners of Korean, all of whom were non-heritage speakers of Korean and currently residing in their respective home countries (i.e., ENG living in the United States; CZH living in Czechia; JPN living in Japan). Each participant had spent fewer than six months abroad in South Korea at the time of testing. Proficiency in Korean was measured through the Korean C-test (Lee-Ellis 2009), for which the assessment involved participants' comprehension of Korean sentences of varying length and complexity. This test comprises five passages with syllable-unit blanks; we chose the first four passages for testing efficiency, as suggested by the original study. The two tasks in this study require a certain level of (reading) proficiency, but this test does not provide standard score-proficiency indications like CEFR. Therefore, we set a threshold value of 63 out of 188, or scoring 33%, to select appropriate participants for our study. This was informed by previous studies utilising the scores to estimate language proficiency required by the task (Hwang & Lardiere, 2013), also individually supported by the test's reliability/validity (Eckes & Grotjahn, 2006) and high correlation with scores on other language-proficiency tests (McKay, 2019). In the end, we obtained 24 ENG (M_{age} = 23.3, SD = 4.2; $M_{learning_Korean}$ = 4.4 years, SD = 2.0), 28 CZH (M_{age} = 24.1, SD = 2.8; $M_{learning_Korean}$: mean = 3.9 years, SD = 1.8), and 32 JPN (M_{age} = 19.8, SD = 1.0; $M_{learning_Korean}$: mean = 2.9 years, SD = 1.5) from the initial recruitment (33 USA; 35 CZH; 40 JPN). There was no statistical by-group difference in the scores (one-

way ANOVA: $F(81) = 0.984$, $p = .378$), indicating that proficiency in the three L2-Korean groups was not substantially different. We also recruited 40 native speakers of Korean (NSK; $M_{age} = 23.6$, $SD = 4.1$) for the control group.

3.2 Stimuli

We created a total of 32 test sentences (see Appendix A for the entire sentence list) for SPRT, half of which was Dative–Accusative and the other half of which was Accusative–Accusative, as in (9). Each sentence was followed by an invariant carrier phrase (*Yenghui*-NOM *say*-PST-SE). For subjects and objects in the sentences, we used simple and common nouns (e.g., human name, everyday object) often used in daily life. All the verbs (with sufficient usage frequency in use) were in their past tense forms, and there was no overlap in verb use across the sentences. The dative marker used in all the sentences was uniformly *-eykey*. We note that, while the two patterns can be scrambled, the canonical word order (recipient-before-theme) constitutes the majority of this construction type (Choi, 2009). Scrambling also invites discourse effects on interpretation (Shin, 2016; Sohn, 1999), which is beyond the scope of this study. Hence, this study proceeded with the canonical word order.

(9) Example: SPRT

Yengci-ka	Mincay-eykey/lul[4]	hayntuphon-ul	senmwulhay-ss-ta-ko
Yengci-NOM	Mincay-DAT/ACC	cell.phone-ACC	present-PST-SE-COMP
Yenghuy-ka	malhay-ss-ta.		
Yenghuy-NOM	say-PST-SE		

'Yenghuy said that Yengci gave Mincay a cell phone (as a gift).'

Each sentence was presented in six regions (Rs) as in Table 2. We focused on R2–R4 as the critical regions and R5 to accommodate any spill-over effects arising from a task-specific button-press strategy (Koornneef & Van Berkum, 2006).

Table 2. Scheme of stimuli: SPRT.

Condition	R1	R2	R3	R4	R5	R6
Dative–Accusative	N1-NOM	N2-DAT	N3-ACC	V	*Yenghuy*-NOM	*said*
Accusative–Accusative		N2-ACC				

[4] While the accusative marker has two allomorphic variations (*-lul*; *-ul*), these variations come from phonological considerations (*-lul* after a vowel e.g., *uyca-lul* 'chair-ACC'; *-ul* after a consonant e.g., *chayksang-ul* 'desk-ACC') and they do not differ in function. The reason why all the recipient nominals in the test stimuli had *-lul* uniformly was that, except for some specific genres/registers of language use (e.g., novel), it is natural that any human name ending with a consonant is followed by *-i*, whose form is coincidently the same as the nominative case marker *-i*, between the name and a particle. We controlled for as many confounding factors, including this additional *-i*, as possible that might be able to affect the learners' comprehension and processing behaviour in an unexpected way.

Participants also completed AJT with the sentences generated from the critical structure portion (R1 to R4) from the test stimuli and the fillers used in SPRT.

To mask the experiment's intention, the test sentences for both tasks were interspersed with 96 fillers in varying structures and complexity. All the test sentences and fillers were split into two sub-lists and were randomly assigned to participants; we also randomised the sentences' presentation order in each sub-list.

Prior to the experiment, ten native speakers of Korean who did not join the experiment inspected the test stimuli for their grammaticality using a binary scale (i.e., grammatical [1] or ungrammatical [0]). The result confirmed the grammaticality of the stimuli for the Dative–Accusative ($M = 1$, $SD = 0$) and Accusative–Accusative ($M = 0.80$, $SD = 0.40$) conditions. Based on the inspectors' comments, the relatively lower score of the Accusative–Accusative stimuli compared to that of the Dative–Accusative ones was not from the sentences' grammaticality but from the inspectors' dispreference for the Accusative–Accusative pattern in use.

3.3 Procedure

Participants joined a *Zoom* meeting room and completed the two tasks, along with the proficiency test, individually on web-based platforms: *PCIbex* (Zehr & Schwarz, 2018)[5] for SPRT followed by *Qualtrics* for AJT. All sentences were displayed individually (i.e., one by one) on a computer screen. For the stability of the testing environment, mobile devices were prohibited. Participants completed the tasks wherever they wanted (e.g., house, school), as long as they could maintain a good internet connection and keep focusing on the tasks without any disturbance. For this purpose, we asked all the participants invited to the Zoom meeting room to (i) check the internet connection and clear up the surroundings before starting the tasks and (ii) stay in the meeting room until completing all the tasks so that we could observe their participation in real time.

SPRT was run visually in a non-cumulative moving-window paradigm (Just et al., 1982). Participants read sentences as naturally and quickly as possible, pressing a space bar to work through three practice items before proceeding to the main task. Following the final region in each sentence, a comprehension check-up question appeared prompting participants to answer by clicking on one of the two choices presented below the question. The question was designed simply to maintain the participants' attention to the task, asking about simple facts regarding the sentence being read (e.g., what the sentence was about, what action was done). If participants clicked on the wrong answer, 'wrong choice' feedback appeared on the screen in red. This task took around 25 minutes for each participant.

[5] Regarding data quality of online measurement, recent studies have shown that data collection via web-based platforms is as reliable as traditional, lab-based data collection (e.g., Enochson & Culbertson, 2015; Hilbig, 2016; Kim et al., 2019; Slim & Hartsuiker, 2022). We also believe that the experimental procedure that we took in this study – inviting individual participants to a Zoom meeting room and supervising their progress in real time – further ensured data quality.

In AJT, participants rated the acceptability of each sentence with a 6-point Likert scale from zero (unacceptable) to five (acceptable), responding immediately upon encountering the sentences but without sacrificing accuracy and faithfulness/confidence of how they responded to each item. Once the participants clicked on the scale and moved to the next sentence, they were not allowed to revise their previous judgements. This task took around 20 minutes for each participant.

3.4 Analysis

Data from SPRT were first trimmed by excluding reading-time datapoints of all the regions in a sentence if a participant failed to pass the comprehension question of that sentence (data loss: 3.43%) and by excluding outliers (i.e., extremely long or short reading times) per region through a three-standard-deviation cut-off point (collapsing over item and participant; data loss: 1.22%). We then log-transformed the trimmed data for data normalisation and residualised the data to adjust for variability in word length and individuals' reading speed (cf. Baayen & Milin, 2010). Finally, the pre-processed data were submitted to a linear mixed-effect modelling for each critical and spill-over region with *Group* (global model: −.5 for NSK, −.25 for ENG, .25 for CZK, .5 for JPN; by-group model: −.5 for one group, .5 for the other group) and *Condition* (−.5 for Dative−Accusative, .5 for Accusative−Accusative) as fixed effects (centred around the mean and deviation-coded) and with *Participant* and *Word* as random effects using the *lme4* software package (Bates et al., 2015) in R (R Core Team, 2023). The models included the maximal random-effects structure allowed by the model with random intercepts and random slopes for all effects (Barr et al., 2013).

Data from AJT were also trimmed first before the analysis by excluding individual judgement values whose response times were below 1,000 ms or above 10,000 ms (data loss: 5.74%). We then *Z*-transformed the data to satisfy the assumption of normal distribution and proceeded to the same kind of linear mixed-effect modelling, with *Group* and *Condition* as fixed effects (centred around the mean and deviation-coded) and with *Participant* and *Sentence* as random effects (Bates et al., 2015) in R (R Core Team, 2023), including the same maximal random-effects structure as the SPRT data analysis (Barr et al., 2013).

4. Results

We first report the results from AJT since this task shows participants' application of knowledge in an offline manner, which is a prerequisite for appropriately interpreting the results from online measurement such as SPRT.

4.1 AJT

Figure 1 illustrates each group's acceptability-rating outcomes. NSK preferred the Dative−Accusative condition over the Accusative−Accusative condition, which is consistent with previous findings (Cho & Jeon, 2015; Kim & Shin, 2022). The L2-Korean

groups' acceptability for the Accusative–Accusative condition was more generous than NSK's in general, with ENG as the lowest and JPN as the highest. Notably, whereas ENG and CZH rated the Accusative–Accusative condition to be low (with the mean scores below 2.5), JPN demonstrated a similar degree of acceptability for both conditions (with the mean score of the Accusative–Accusative condition above 2.5).

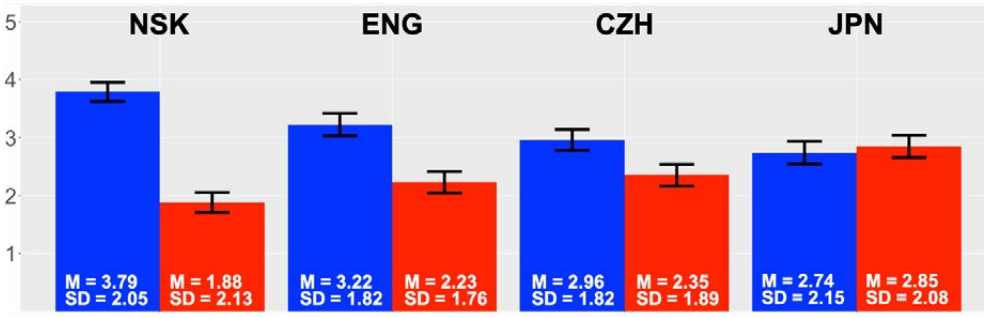


Figure 1. Results (AJT). X-axis: Group & Condition (Blue = Dative–Accusative; Red = Accusative–Accusative); Y-axis: acceptability (6-point Likert scale from 0 to 5). M = mean score; SD = standard deviation. Error bars indicate 95% CI.

Tables 3 to 5 present the model outcomes. In the global model (Table 3), we found an interaction effect between *Condition* and *Group*. Post-hoc analyses revealed three major aspects of the L2-Korean groups' performance. First, in the by-condition models (Table 4), all the learner groups evaluated the Dative–Accusative condition to be significantly lower and the Accusative–Accusative condition to be significantly higher than NSK. Second, in the same models, while no statistical difference was found across the L2 groups in the Dative–Accusative condition, there was statistical difference between ENG and JPN for the Accusative–Accusative condition, with the mean rating score by JPN being higher than that by ENG. Third, in the by-group models (Table 5), we found statistical difference between the two conditions only for NSK and ENG, with the Dative–Accusative condition being higher than the Accusative–Accusative condition.

Table 3. Model outcome (AJT): Global (α = .05).

	β	*SE*	*t*	*p*
(Intercept)	0.004	0.122	0.031	.975
Condition	−0.498	0.243	−2.047	.051
Group	0.011	0.020	0.568	.570
Condition * Group	0.273	0.039	6.927	< .001***

Table 4. Model outcome (AJT): By-condition (α = .025).

Condition	Group	*β*	*SE*	*t*	*p*
Dative–Accusative	NSK–ENG	−0.216	0.077	−2.804	.005*
	NSK–CZH	−0.290	0.074	−3.893	< .0005***
	NSK–JPN	−0.467	0.081	−5.748	< .0005***
	ENG–CZH	−0.039	0.095	−0.410	.682
	ENG–JPN	−0.138	0.117	−1.180	.240
	CZH–JPN	−0.156	0.108	−1.448	.149
Accusative–Accusative	NSK–ENG	0.229	0.076	3.013	.003**
	NSK–CZH	0.257	0.074	3.461	.0006**
	NSK–JPN	0.478	0.082	5.792	< .0005***
	ENG–CZH	0.043	0.099	0.430	.667
	ENG–JPN	0.283	0.112	2.528	.012*
	CZH–JPN	0.221	0.113	1.953	.052

Table 5. Model outcome (AJT): By-group (α = .025).

Group	*β*	*SE*	*t*	*p*
NSK	−0.957	0.326	−2.938	.006*
ENG	−0.478	0.191	−2.506	.018*
CZH	−0.364	0.198	−1.839	.075
JPN	0.062	0.271	0.227	.822

These findings indicate that, given the L2-Korean learner groups' overall stringency with the Dative–Accusative condition and leniency with the Accusative–Accusative condition when compared to NSK's, each group manifested distinctive acceptability-rating patterns: ENG close to NSK, JPN different from NSK, and CZH somewhere between ENG and JPN.

4.2 SPRT

Table 6 presents raw reading times by region, and Figure 2 illustrates each group's reading-time patterns (with residualised reading times). We note three major trends. First, all L2-Korean groups spent considerably more time reading each region than NSK, which aligns with previous studies reporting L2 learners' global challenge in real-time processing (Clahsen & Felser, 2006; Hopp, 2014; McDonald, 2006; Pozzan & Trueswell, 2016). Second, while the learner groups did not demonstrate a notable gap between the two conditions at R3 to R5, they numerically spent more time at R2 (the first critical region; N2-DAT/ACC) for the Dative–Accusative condition than for the Accusative–Accusative condition. Third, every learner group showed a substantial drop in reading times at R5 compared to those at R4.

Table 6. Descriptive statistics: SPRT, by-region reading time (raw; trimmed).

Group & Condition		Mean (SD)					
		R1	R2 (N2-DAT/ACC)	R3 (N3-ACC)	R4 (V)	R5	R6
NSK	Dative–Accusative	348 (264)	386 (258)	404 (249)	423 (313)	384 (238)	353 (165)
	Accusative–Accusative	350 (206)	363 (204)	411 (278)	417 (273)	412 (311)	365 (138)
ENG	Dative–Accusative	992 (458)	1197 (472)	1022 (456)	1101 (465)	649 (338)	455 (259)
	Accusative–Accusative	908 (393)	980 (461)	946 (427)	1138 (498)	590 (283)	443 (196)
CZH	Dative–Accusative	961 (452)	1089 (424)	968 (440)	1035 (442)	619 (310)	461 (257)
	Accusative–Accusative	835 (402)	985 (435)	925 (413)	1015 (492)	652 (328)	459 (205)
JPN	Dative–Accusative	905 (446)	1147 (465)	931 (361)	1017 (466)	543 (291)	421 (183)
	Accusative–Accusative	932 (417)	1021 (475)	993 (406)	1064 (480)	553 (275)	416 (202)

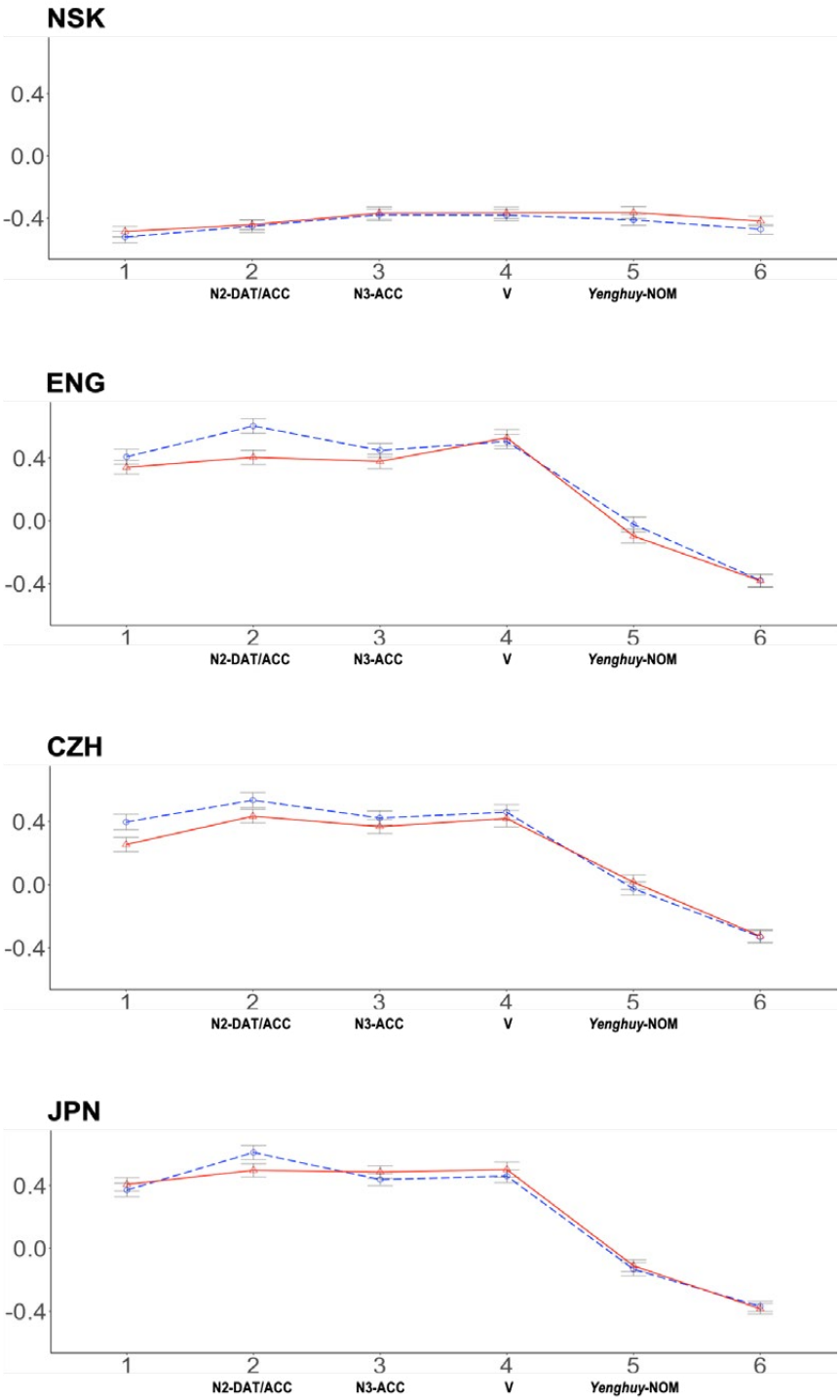


Figure 2. Results (SPRT). X-axis: region; Y-axis: reading time (residualised). Blue, dotted = Dative−Accusative; Red, solid = Accusative−Accusative. Error bars indicate 95% CI.

The global model (Table 7) revealed a main effect of *Group* at all regions of interest, which is consistent with the visual observation in Figure 2, and a main effect of *Condition* at R2. Considering the substantial reading-time difference between NSK and the L2-Korean groups, we conducted additional by-condition and by-group analyses including only the learner groups (see Appendix B for the model outcomes). However, these analyses revealed no significant difference except at R2 for ENG ($p = .006$) given the adjusted alpha-level ($\alpha = .025$).

Table 7. Model outcome (SPRT): Global ($\alpha = .05$).

			β	*SE*	*t*	*p*
Critical region	R2 (N2-DAT/ACC)	(Intercept)	0.182	0.017	10.805	< .001***
		Condition	−0.071	0.034	−2.122	.034*
		Group	0.328	0.014	23.282	< .001***
		Condition * Group	−0.040	0.028	−1.415	.157
	R3 (N3-ACC)	(Intercept)	0.156	0.026	6.042	< .001***
		Condition	−0.004	0.031	−0.130	.896
		Group	0.272	0.013	20.705	< .001***
		Condition * Group	0.010	0.026	0.401	.688
	R4 (V)	(Intercept)	0.180	0.021	8.552	< .001***
		Condition	0.013	0.034	0.382	.703
		Group	0.280	0.014	19.472	< .001***
		Condition * Group	0.004	0.029	0.149	.881
Spill-over region	R5	(Intercept)	−0.171	0.015	−11.485	< .001***
		Condition	0.019	0.030	0.629	.530
		Group	0.095	0.012	7.564	< .001***
		Condition * Group	−0.001	0.025	−0.058	.954

These findings indicate that, whereas the L2-Korean groups' reading-time patterns differed from NSK's and were largely the same across the groups, only ENG notably differentiated the two conditions at R2.

5. Discussions and Conclusion

5.1 AJT

Our findings from AJT suggest CLI interfacing with usage frequency. Across languages, the dative/ditransitive construction is often deemed a complex argument-structure construction (Goldberg, 1995; Haspelmath, 2015) and its acquisition is relatively delayed when compared to simple clausal construction types such as intransitives and transitives (Gries & Wulff, 2009; Kim et al., 2023) in conjunction with multiple factors involving its use (Xiang & Chang, 2022). The use of this construction is also not prominent in L2

textbooks, one primary source of L2-classroom input (Alsaif & Milton, 2012; Römer, 2004; Shin & Jung, 2022). These aspects appear to have led all the learner groups in this study to evaluate the Dative–Accusative condition to be significantly lower than NSK (with no statistical difference amongst these groups for this condition).

Specifically, the L2-Korean groups' substantial leniency towards the Accusative–Accusative condition than NSK lend empirical support to the reduced role of statistical pre-emption for L2 comprehension. Statistical pre-emption refers to a situation in which learners avoid using one formulation if an alternative formulation has been systematically attested in their language-usage experience. This competition-driven learning mechanism well-explains native speakers' linguistic knowledge in general (e.g., Boyd & Goldberg, 2011; Goldberg, 2019; Perek & Goldberg, 2017). A line of research on speakers' judgement of constructional alternations has also shown that the degree of acceptability of one constructional pattern is affected by the existence of competing alternatives (Kim & Shin, 2022; Robenalt & Goldberg, 2015; Stefanowitsch, 2011). L2 speakers (unless highly proficient in L2), however, may not always take competing alternatives into account during their acceptability-judgement activities, taking less advantage of statistical pre-emption (Robenalt & Goldberg, 2016; Tachihara & Goldberg, 2020). Our findings conform to this argument: the learner groups' reduced capacity to consider an alternative (and dominant) formulation – the Dative–Accusative pattern – seem to have allowed them to be substantially generous in evaluating the acceptability of the Accusative–Accusative pattern, which otherwise would have been rejected as NSK did.

Regarding the individual L2-Korean groups, we found that JPN rated the Accusative–Accusative condition more acceptable than ENG and CZH (with the statistical significance found only between JPN and ENG). This finding suggests that JPN may have relied upon their L1 knowledge, which allows the repetition of accusative cases (see (8) for example), during this task. In other words, the fact that Japanese permits repetition of the accusative case marker, albeit not falling into the dative construction, would have led JPN to be more generous with the Accusative–Accusative condition. This further bears two additional interpretations. First, based on the overall proximity between their L1 (Japanese) and L2 (Korean), JPN could have secured more space to consider the parts of their L1 knowledge which is not fully compatible with the target L2 knowledge and yet close enough to that L2 knowledge. If this is valid, it implies that the global proximity between the two languages led them to rather deviate from how native speakers of the target language cope with this low usage-frequency pattern of the dative construction. Second and relatedly, JPN may not have always treated the accusative-marked recipient in the Accusative–Accusative condition as intended (i.e., recipient), which we revisit in the next section.

Meanwhile, it seems that the pattern-wise functional equivalency between Korean and English dative constructions and the pairing between a pronominal recipient and an accusative case found in an English double-object dative pattern did not strongly influence L1-English L2-Korean learners' acceptability-rating of the Accusative–Accusative condition; their evaluation was rather similar to NSK's with a significant by-condition gap.

One promising reason for this outcome lies in the competition between cues involving the accusative case marker in Korean. Although this marker allows for indicating two different thematic roles in composing (di)transitive construction (Choo & Kwak, 2008; Sohn, 1999), the use of the accusative-marked theme is far more frequent and typical in use than that of the accusative-marked recipient (Choo & Kwak, 2008; Kim & Shin, 2022; Shin & Mun, 2023). Furthermore, L2 classroom input pertaining to the accusative case marker appears to be skewed towards the particular form–function association, namely, theme–accusative (Shin & Jung, 2022). Based on the learners' usage/learning history and weak representations of the accusative-marked recipient in English, the L1-English L2-Korean learners in this study could have resorted to the stronger cue involving the accusative case marker (i.e., theme–accusative), thereby suppressing the other option which can be found in their L1. This also implies that ENG, like the case of JPN, may not have interpreted the accusative-marked recipient nominal in the Accusative–Accusative condition as intended (i.e., recipient) all the time. We will return to this issue in the next section.

CZH's acceptability-rating performance was somewhere in between ENG and JPN, showing only a numerical (and not statistically significant given the alpha level) gap in the condition-wise comparison (Dative–Accusative vs. Accusative–Accusative) and the group-wise comparisons (CZH vs. ENG; CZH vs. JPN). We find one plausible locus of this result from the typological properties of Czech in relation to the other two languages of comparison in this study. Czech is an SVO language, which is the same as English, but scrambling is allowed because of its active case system, which is the same as Japanese. Unlike Japanese, however, Czech case is indicated through word inflection, not through particles. In addition, the dative construction in Czech comprises exclusively one pattern (Dative–Accusative), which is different from English but is similar to Japanese. This way, Czech is typologically located between English and Japanese. Therefore, given the same kind of usage-frequency effects that the other L2-Korean groups experienced (thus resulting in the comparable rates of acceptability for the Dative–Accusative condition across all learner groups), the aforementioned properties of Czech in comparison to the two other languages may have led the CZH's acceptability ratings of the Accusative–Accusative condition to remain around the ENG or the JPN (with the same kind of possibility that they mistreated the accusative-marked recipient in this condition).

5.2 SPRT

The L1-Korean group in our experiment did not manifest notable reading-time difference across the two conditions. Specifically, there was no particular processing burden at R3 (the second critical region; N3-ACC) for the Accusative–Accusative condition. This is indicative of L1 speakers' efficient and fast processing of their L1 (in comparison to how L2 learners go about online processing), resulting in a floor effect. This also implies that native Korean speakers have good knowledge that the accusative case marker can indicate a recipient role (albeit not preferred in actual language use) and retain this possibility for later processing of the incoming/upcoming input.

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Turing to the learner groups, we note three major findings. First, they spent substantially longer time reading the critical (R2 to R4) and spill-over (R5) regions compared to NSK. Second, for the Accusative−Accusative condition, they did not manifest notable increase in reading times at R3 in comparison to those at R2 (the first critical region; N2-DAT/ACC). Third, they showed by-condition difference in reading times at R2 but only ENG spent significantly longer time reading R2 for the Dative−Accusative condition than for the Accusative−Accusative condition.

Our findings from the learner groups in SPRT reveal another aspect of CLI interfacing with usage frequency and processing factors. The first finding aligns with previous studies showing L2 learners' global challenge in real-time processing (Clahsen & Felser, 2006; Hopp, 2014; McDonald, 2006; Pozzan & Trueswell, 2016). Given this challenge, the second finding points to the possibility that the learners engaged more in the item-specific requirements at hand than in a broad structure-building process utilising cross-region and/or upcoming information. Specifically, for the Accusative−Accusative condition, the learners in this study would have treated the accusative-marked recipient at R2 simply as the accusative-marked theme. This interpretation seems reasonable by two promising forces. One is the morphological composition of a subject in each test stimulus: a nominative-marked agent (indicated by a human name). The other force is the accusative case marker itself, which typically indicates the theme argument within a (di-)transitive event. Considering the nature of SPRT (i.e., a moment-by-moment, sequential, and cumulative interpretation of the incoming items in real time and with more time constraints), these two forces would have encouraged the learners to be garden-pathed, relying on frequency/usage-based heuristics comprising a canonical active transitive (i.e., nominative-marked agent + accusative-marked theme) rather than searching for the possibility that the accusative-marked argument expresses a recipient role to deliver the dative semantics and holding that possibility until some later points. The learners' endeavour to cope with the here-and-now information in online processing would also address their performance at R3: they may have taken less into account what was interpreted at R2 to revise the previous interpretation as necessary based on the interpretation of the current input at R3. This lends support to the notion of L2 learners' reduced capacity to generate expectations of the following representations given the current input (Grüter et al., 2017; Pozzan & Trueswell, 2016) and to integrate information from multiple routes (Sorace, 2011) given the less precise and vaguer linguistic representations of L2 knowledge (Futrell & Gibson, 2017; Tachihara & Goldberg, 2020).

The third finding that the reading-time gap between the two conditions at R2 (the first critical region; N2-DAT/ACC) was significant only for ENG and not for CZH or JPN suggests asymmetric impacts of CLI on L2 sentence processing. The dative marker (which introduces the dative construction) is employed with less frequency compared to the accusative case marker (which introduces the transitive construction) in L2 textbooks (Shin & Jung, 2022) and does not exist in English. These characteristics would have incurred surprisal to a notable degree and invited more interpretive commitment for ENG, leading them to spend more time reading R2 when encountering this marker than when encountering

the accusative case marker. In contrast, although the way that it is realised in Czech and Japanese differs (i.e., word inflection in Czech; particle use in Japanese), overt realisation of the dative case in these languages is not marked in comparison to English. This holistic typological feature would have afforded CZH and JPN more agility to handle the dative marker (and probably to use the dative-marked recipient) at R2 in real-time processing, resulting in no considerable reading-time difference across the two conditions.

If this interpretation holds, one discrepancy emerges in the learners' performance on the two tasks: while all learner groups presumably mis-interpreted the accusative-marked recipient in the Accusative–Accusative condition for SPRT, only JPN demonstrated a fairly high level of acceptance in this condition for AJT (with the mean rate of 2.85 out of 5; see Figure 1). We attribute this to CLI being intertwined with task effects. The learners' L1s are distinctive with respect to the permission of two accusative-marked entities and the procedures and requirements in each task differ notably (see Sections 2.2 and 2.3). Based on these characteristics, AJT seems to have allowed more space wherein the learners evaluate the constructional composition of the stimuli in the Accusative–Accusative condition than SPRT. In this setting, JPN would have taken into account their L1 knowledge about multiple (accusative) case markers, albeit not related to the dative construction, more actively in AJT than in SPRT, resulting in their increased generosity with the acceptability of (the formal characteristics of) the Accusative–Accusative condition.

Meanwhile, the reason why all the learner groups demonstrated the considerable reading-time drop from R4 (the last critical region; V) to R5 (the spill-over region) for both conditions is somewhat unclear at this point. One may claim that the invariant carrier phrase used at R5–R6 somehow relaxed their processing burden. However, the test stimuli were interspersed with filler items (with different R5–R6 compositions) and the presentation order of the sentences were randomised. We thus believe there is little possibility that the learners benefitted from the invariant carrier phrase. Instead, we speculate that the learners may have focused exclusively on the current information at R5, rather than inspecting their previous (and cumulative) interpretation until R4 and/or pursuing the complete, full clausal integration at R5. This possibility is supported by the same reason that we addressed in the second finding above. In other words, the seemingly shortened reading times found at R5 relative to those at R4 may not indicate that the learners' processing burden was relaxed at R5. We believe this is an avenue for further investigation.

5.3 Typological similarity and L2 sentence processing

This study's findings proffer an intriguing picture of how CLI is manifested in L2 learners' mind at the level of morpho-syntax. Specifically, these findings suggest that, for clausal constructions (and perhaps beyond), the L2 processor operates in conjunction with multiple factors surrounding L2 behaviour currently being executed. In this study, we have identified three major factors that may address how the L2 processor goes about sentence processing: (i) properties of the target L2 item (i.e., the alternation relation of the

two grammatical patterns of dative construction which are distinctive in light of usage frequency and particular form–function mapping of case-marking), (ii) morpho-syntactic characteristics of learners' L1 (i.e., macro- and micro-level proximity involving L1–L2 pairs), and (iii) task-specific requirements (i.e., both holistic and partial evaluation with less time constraints for the acceptability judgement task; moment-by-moment resolution with more time constraints for the self-paced reading task). The three L2 groups' performance demonstrated by-task and by-group variabilities with respect to the role of CLI in L2 sentence processing.

Our results are largely consistent with the claim that macro-level typological proximity does not always ensure the success of L2 learning across the board. Recent studies advocating this claim (Cuza et al., 2018; Westergaard, 2021) often emphasise that a more influential factor in this respect may lie in particular (structural) features that the languages in contact share. What we have shown in this study not only supports this argument, but also advances our understanding of this issue by revealing the way in which CLI is modulated by various (non-)linguistic factors in L2 mind. We have evidenced this point by employing various L1–L2 pairs and different task types applied to the same L2 groups. The implications of our study call for a more fine-grained understanding of the previous proposals on the role of CLI for L2 acquisition (Ellis, 2006b; Frenck-Mestre et al., 2019; Hartsuiker & Bernolet, 2017; Jiang et al., 2017; MacWhinney, 2013), prompting continuous research on typological proximity effects on L2 processing and acquisition thereof. Our findings lend further empirical support to the idea that L2 knowledge is noisy, comprising vaguer and less specific representations in memory (Futrell & Gibson, 2017; Tachihara & Goldberg, 2020), which in turn shows the complex nature of L2 knowledge (Ellis, 2006a). More broadly, we believe the findings of the present study appeal to general L2 acquisition architectures, specifically concerning the pivotal role of usage frequency in learning outcomes (as argued by usage-based accounts; Ellis, 2002; Robenalt & Goldberg, 2016) and the impact of competition between linguistic cues on the degree to which the target L2 knowledge is manifested in the L2 mind (as argued by the Competition Model; MacWhinney, 2013; Park & Kim, 2021).

As a final remark, we acknowledge some remaining areas that the current study could not address clearly, which await further investigation. First, to get a fuller picture of the L2-acquisition architecture, the findings of this study should be cross-validated by way of more ecologically valid measurements (e.g., eye-tracking, EEG) together with assessing learners' cognitive skills relevant to L2 behaviour (e.g., working memory, inhibitory control). Second, more precise evaluation of L2 input, in consideration of learning materials that the learners typically learn in formal language-learning scenes, may be required so as to better quantify L2 learners' language-usage experience. Our study does not speak to this matter directly as we relied upon previous reports regarding the distributional properties of Korean dative construction for L2 learners. Lastly, how L2 learners engage in verb–construction integration when processing the two patterns of dative construction in Korean is something that the present study cannot answer. Although we ensured that the verbs were reasonably frequent in L1 use, we did not manipulate verb frequency carefully

when creating the test stimuli. Considering that a line of research has reported the major role of verb frequency in sentence comprehension and processing (Ambridge et al., 2014; Gries & Stefanowitsch, 2004; Kim & Shin, 2022; Robenalt & Goldberg, 2016; Stefanowitsch & Gries, 2003), we may expect the learners in this study to react to dative sentences with low-frequency verbs differently from what this study has found. This is what we plan to pursue next.

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Appendix A

List of test sentences

Cwuhuy-ka Yumi-eykey/lul kapang-ul cwu-ess-ta.
Cwuhuy-NOM Yumi-DAT/ACC bag-ACC give-PST-SE
'Cwuhuy gave a bag to Yumi.'

Minci-ka Hyeymi-eykey/lul khatu-lul ponay-ss-ta.
Minci-NOM Hyeymi-DAT/ACC card-ACC send-PST-SE
'Minci sent a card to Hyeymi.'

Yengmi-ka Sea-eykey/lul phyenci-lul pwuchye-ss-ta.
Yengmi-NOM Sea-DAT/ACC letter-ACC mail-PST-SE
'Yengmi mailed a letter to Sea.'

Sihwu-ka Huycay-eykey/lul hankwuke-lul kaluchye-ss-ta.
Sihwu-NOM Huycay-DAT/ACC Korean-ACC teach-PST-SE
'Sihwu taught Korean to Huycay.'

Yengci-ka Mincay-eykey/lul hayntuphon-ul senmwulhay-ss-ta.
Yengci-NOM Mincay-DAT/ACC cellphone-ACC give-PST-SE
'Yengci gave a cell phone (as a gift) to Mincay.'

Wenho-ka Sungki-eykey/lul umsik-ul kenney-ss-ta.
Wenho-NOM Sungki-DAT/ACC food-ACC hand-PST-SE
'Wenho handed the food to Sungki.'

Seyhuy-ka Cinwu-eykey/lul noymwul-ul pachye-ss-ta.
Seyhuy-NOM Cinwu-DAT/ACC bribe-ACC offer-PST-SE
'Seyhuy offered a bride to Cinwu.'

Swuci-ka Unci-eykey/lul kakey-lul mathkye-ss-ta.
Swuci-NOM Unci-DAT/ACC shop-ACC leave-PST-SE
'Swuci left the shop to Unci.'

Changhuy-ka Minkwu-eykey/lul ccokci-lul centalhay-ss-ta.
Changhuy-NOM Minkwu-DAT/ACC note-ACC deliver-PST-SE
'Changhuy delivered a note to Minkwu.'

Taywu-ka Manswu-eykey/lul hotheyl-ul chwuchenhay-ss-ta.
Taywu-NOM Manswu-DAT/ACC hotel-ACC recommend-PST-SE
'Taywu recommended a hotel to Manswu.'

Seyho-ka	Cwunha-eykey/lul	sosik-ul	cenhay-ss-ta.
Seyho-NOM	Cwunha-DAT/ACC	news-ACC	deliver-PST-SE

'Seyho delivered news to Cwunha.'

Congswu-ka	Tongho-eykey/lul	sincang-ul	kicunghay-ss-ta.
Congswu-NOM	Tongho-DAT/ACC	kidney-ACC	donate-PST-SE

'Congswu donated kidney to Tongho.'

Ciay-ka	Hyencwu-eykey/lul	catongcha-lul	phala-ss-ta.
Ciay-NOM	Hyencwu-DAT/ACC	car-ACC	sell-PST-SE

'Ciay sold the car to Hyencwu.'

Cinswu-ka	Hyenwu-eykey/lul	chincel-ul	peyphwule-ss-ta.
Cinswu-NOM	Hyenwu-DAT/ACC	kindness-ACC	show-PST-SE

'Cinswu showed kindness to Hyenwu.'

Chelwu-ka	Minhuy-eykey/lul	pic-ul	kaphay-ss-ta.
Chelwu-NOM	Minhuy-DAT/ACC	debt-ACC	repay-PST-SE

'Chelwu repaid debt to Minhuy.'

Chelho-ka	Yenwu-eykey/lul	selkeci-lul	pwuthakhay-ss-ta.
Chelho-NOM	Yenwu-DAT/ACC	dishwashing-ACC	ask-PST-SE

'Chelho asked dishwashing of Yenwu.'

Appendix B

Model outcome: SPRT

By-condition (α = .025)

			β	*SE*	*t*	*p*
ENG–CZH	Dative–Accusative	R2	−0.068	0.067	−1.012	.313
		R3	−0.032	0.057	−0.554	.580
		R4	−0.041	0.062	−0.668	.505
		R5	−0.002	0.063	−0.037	.971
	Accusative–Accusative	R2	0.037	0.061	0.605	.546
		R3	−0.008	0.062	−0.134	.894
		R4	−0.108	0.074	−1.468	.144
		R5	0.113	0.064	1.764	.079
ENG–JPN	Dative–Accusative	R2	−0.028	0.066	−0.428	.669
		R3	−0.027	0.053	−0.506	.613
		R4	−0.040	0.060	−0.669	.504
		R5	−0.133	0.062	−2.121	.035
	Accusative–Accusative	R2	0.093	0.062	1.510	.133
		R3	0.101	0.058	1.753	.081
		R4	−0.029	0.068	−0.433	.666
		R5	−0.034	0.057	−0.596	.552
CZH–JPN	Dative–Accusative	R2	0.058	0.064	0.907	.365
		R3	−0.011	0.053	−0.213	.831
		R4	-2.674e-04	5.975e-02	−0.004	.996
		R5	−0.107	0.058	−1.835	.068
	Accusative–Accusative	R2	0.069	0.058	1.185	.237
		R3	0.109	0.056	1.944	.053
		R4	0.082	0.068	1.199	.232
		R5	−0.102	0.057	−1.793	.074

Note. For R5, we conducted an F1-analysis as there was only one level for *Word* with an invariant carrier phrase *Yenghuy-NOM* (see Table 2).

By-group (α = .025)

			β	*SE*	*t*	*p*
Dative–Accusative ~ Accusative–Accusative	ENG	R2	−0.209	0.070	−2.968	.006*
		R3	−0.077	0.055	−1.399	.164
		R4	0.029	0.066	0.443	.658
		R5	−0.076	0.058	−1.300	.195
	CZH	R2	−0.112	0.070	−1.587	.124
		R3	−0.048	0.052	−0.922	.358
		R4	−0.031	0.064	−0.489	.626
		R5	0.042	0.058	0.716	.475
	JPN	R2	−0.107	0.052	−2.027	.044
		R3	0.050	0.045	1.109	.269
		R4	0.038	0.056	0.687	.493
		R5	0.023	0.052	0.442	.659

Note. For R5, we conducted an F1-analysis as there was only one level for *Word* with an invariant carrier phrase *Yenghuy-NOM* (see Table 2).

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Object clitic use and interpretation in Chinese-speaking learners of Spanish

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Abstract: We examine the role of cross-language interaction on the acquisition of Spanish object clitics among 26 Chinese-speaking learners of Spanish from China. Specifically, we investigate the learners' sensitivity to definiteness and specificity associated with the distribution of Spanish clitics. A question-and-answer task tested the realization of definite specific objects, while a sentence completion task and an acceptability judgment task elicited the production and intuition of clitic use in clitic left-dislocated (CLLD) contexts. The results showed that, while the learners appear to have sensitivity to the non-object-drop nature of Spanish, they tend to avoid object clitics. Furthermore, the learners' clitic use and intuition were not associated with specificity or definiteness features, and their performance was not correlated with language proficiency. In line with the Feature Reassembly Hypothesis (Lardiere, 2008, 2009), we posit that the learners have not yet successfully reassembled the semantic features associated with object clitics into their Spanish grammar.

Keywords: *Spanish, clitics, object-drop, Chinese, CLLD, Feature Reassembly Hypothesis.*

Uso e interpretación de clíticos de objeto en estudiantes chinos de español

Resumen: Examinamos el papel de la influencia interlingüística en la adquisición de los clíticos de objeto directo en español en 26 estudiantes de español de China. Específicamente, investigamos la sensibilidad de estos aprendices a la definitud y a la especificidad asociadas a la distribución de los clíticos en español. Una prueba de preguntas y respuestas evaluó la realización de objetos específicos definidos, mientras que una prueba de completar oraciones y una de juicio de aceptabilidad elicitaron la producción e intuición del uso de clíticos en contextos con desplazamiento de clíticos a la izquierda (CLLD). Los resultados mostraron que, aunque los estudiantes parecen ser sensibles a la naturaleza del español de necesitar un objeto explícito, tienden a evitar los clíticos de objeto. Además, el uso de clíticos y la intuición de los alumnos no estaban vinculados a rasgos de especificidad o definitud y su rendimiento no se correlacionó con su dominio general de la lengua. En consonancia con la Hipótesis del Reensamblaje de Rasgos (FRH; Lardiere, 2008, 2009), postulamos que los aprendices aún no han reensamblado con éxito los rasgos semánticos asociados a los clíticos de objeto en su gramática del español.

Palabras clave: *español, clíticos, objeto nulo, chino, CLLD, Hipótesis de Reensamblaje de Rasgos.*

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1. Introduction

The present study examines the role of crosslinguistic influence, among other factors, on the acquisition of third-person direct object clitics among Chinese-speaking learners of Spanish. In Spanish, these clitics (*lo, la, los, las*; hereinafter 'accusative clitics') are constrained by the definiteness and specificity features of the object they refer to (Leonetti, 2007; Sportiche, 1996; Uriagereka, 1995). Overt clitics are used with definite or specific antecedents, whereas null objects are employed with indefinite non-specific antecedents (Campos, 1986; Clements, 2006; Schwenter, 2006). In contrast, Chinese lacks pronominal clitics that encode definiteness or specificity features. Furthermore, Chinese allows null objects with antecedents that can be retrieved from the discourse (Aoun & Li, 2008; Huang, 1998; Li, 2007, 2014). Null objects in Chinese are discourse-related irrespective of definiteness or specificity features, as we discuss shortly.

Previous work has documented sensitivity to the definiteness and specificity features associated with Spanish clitics among learners whose first language (L1) allows pronominal clitics (Borgonovo et al., 2006; Rothman & Iverson, 2013 for Brazilian Portuguese; Bruhn de Garavito & Guijarro-Fuentes, 2002 for European Portuguese). However, difficulties have been observed with learners whose L1 does not have a clitic paradigm, such as English (Seibert Hanson & Carlson, 2014; VanPatten, 1987; Zyzik, 2008). Despite extensive research among speakers of Indo-European languages, few studies have explored the extent to which native speakers of typologically distant languages have sensitivity to accusative clitics in Spanish (Jiao & Cuza, 2022; Cuza et al., 2013). In contrast with previous work looking at simultaneous or sequential Spanish/Chinese bilinguals in an immersion context (Cuza et al., 2013), we investigate this grammatical domain further by testing the elicited production and intuition of this structure among Chinese-speaking learners in a classroom setting in China. This is relevant to investigate more closely the role of language experience on the acquisition of this structure, as well as the potential effects of language instruction. Additionally, in contrast with previous work with classroom learners looking at semi-spontaneous production (Jiao & Cuza, 2022), we implemented two elicited production tasks and an acceptability judgment task (AJT). These tasks scrutinized specific contexts where the realization or omission of the clitic is constrained by definiteness and specificity features. To our knowledge, no previous studies have conducted such a detailed analysis with Chinese-speaking learners of Spanish residing in China.

We follow the Feature Reassembly Hypothesis (hereinafter FRH) which conceives L2 acquisition as a redeployment of features into the learners' grammar (Lardiere, 2008, 2009). Chinese does not use an article or pronominal clitic system to encode definiteness or specificity morphologically, unlike Portuguese or English. Instead, these semantic features are manifested contextually. The acquisition of Spanish accusative clitics by Chinese-speaking learners involves the reassembling of contextually encoded features into morphologically encoded features in the target language. Specifically, we investigate the production of Spanish accusative clitics within matrix sentences and their usage

and acceptability in clitic-doubled left dislocation (CLLD) structures. To what extent do Chinese-speaking learners of Spanish demonstrate sensitivity to the semantic features of the antecedents that co-refer with clitics in CLLD constructions?

The study is structured as follows. Section 2 discusses the distribution of overt and null object clitics in Spanish as well as object realization in Chinese. Section 3 presents previous work on the acquisition of overt and null clitics in Spanish. Section 4 presents the design of the study, including the participants, the tasks, and the procedure. This is followed by the results in Section 5 and the discussion and conclusions in Section 6.

2. Spanish accusative clitics and direct object realization in Chinese

2.1 Accusative clitics in Spanish

In Spanish, third-person accusative clitics (*lo, la, los, las*) function as the direct object of a verb and are inflected according to the gender and number features of their antecedents. Clitic use in Spanish is constrained by definiteness and specificity features. Overt clitics are required with definite and specific[1] (Sportiche, 1996; Uriagereka, 1995). Clitics can be dropped when their referent is indefinite and non-specific (Campos, 1986; Clements, 2006; Schwenter, 2006). This is represented in (1) below:

(1) a. - ¿Compraste aquellos zapatos? [+definite, +specific]
Buy-2ND-SG-PAST those shoes
Did you buy those shoes'

- Sí, **los** compré Ø.
Yes them buy-1ST-SG-PAST
Yes, I bought them.'

b. - ¿Compraste café? [-definite, -specific]
Buy-2ND-SG-PAST coffee
'Did you buy coffee?'

- Sí, compré **Ø**.
Yes buy-1ST-SG-PAST
'Yes, I bought (some).'

(from Campos, 1986)

[1] Leonetti (2007) proposed that definiteness is the only semantic feature related to clitics, and that the specific reading is a side effect imposed by definiteness and the lack of descriptive content of the pronominal clitics. In this study, we follow the traditional claim that definiteness and specificity are both associated to clitics.

Although clitic drop is not considered a categorical property of Spanish, this phenomenon is present in most varieties. The requirement for definiteness or specificity is found in structures in which the direct object is dislocated to the left periphery of the sentence (i.e., CLLD structures):

(2) a. *Me gusta el té, pero café no tomo.* [-definite, -specific]
'I like tea but coffee I don't drink.'

b. *Julio se comió la carne, pero los vegetales no los tocó.* [+definite, +specific]
'Julio ate the meat, but he did not touch the vegetables.'

In (2a), the dislocated object *café* 'coffee' is generic, and a clitic is not used to co-refer to it in the comment clause. This is different from (2b) in which there is an overt accusative clitic co-referring to the fronted definite object *los vegetales* 'the vegetables', which is definite and specific. CLLD structures are rather infrequent in Spanish oral communication, although more frequent than in English (Slabakova, 2015). According to Slabakova's (2015) calculation in the NOCANDO corpus of 59,800 words (Brunetti et al., 2011), there were 39 instances of CLLD structures, which only take 1.35 % of all finite clauses. Leal & Slabakova (2019) tallied an oral corpus of 27,050 words from three class sessions for high-proficiency learners and they only found 21 instances of CLLD structures (0.72 %) among 2924 terminable units operationalized as a "clause along with its subordinate clauses" and "instances that were reduced by ellipsis" (p.20). We should also note that both the semantic constraints of clitic use and CLLD structures are not explicitly taught in classroom instruction in China.

We examine the knowledge of Spanish clitics from two key perspectives. First, we assess whether the participants can effectively produce the morphological form of clitics when responding to questions of the form 'what did X do to Y'. Second, we explore the relationship between learners' use of clitics and the semantic features of definiteness and specificity via a sentence-completion task (SCT) and an acceptability judgment task (AJT) using CLLD structures. Following Aissen's (2003) scale that combines definiteness and specificity, we examine the production and intuition of overt and null accusative clitics in three conditions: (1) [+definite, +specific], (2). [+definite, -specific] and (3). [-definite, -specific]. We opted for CLLD structures because, in this configuration, participants are restricted in producing and evaluating object realizations solely through overt/null clitics.

The option of a full DP[2] is precluded due to the preceding fronted topic. This design ensures a controlled environment for clitic use. Moreover, as Chinese shows object omission regardless of the definiteness or specificity of the object, CLLD serves as an ideal testing ground to investigate the effects of crosslinguistic influence on the acquisition of these properties.

[2] By "full DP object" we refer to the type of object DP composed of a determiner and a noun instead of a clitic (e.g., Plancha *los pantalones*).

2.2 Direct objects in Chinese

In contrast with Spanish, where accusative and dative clitics are used to mark direct and indirect objects, Chinese does not have a category of accusative clitics. Both nominative and accusative cases are instantiated with the same pronoun (3a-3b). Pronouns in Chinese are not case-marked and do not vary phonologically for gender or animacy, despite the writing system indicating the distinctions for the third person pronoun *ta* (feminine: 她 'she/her'; masculine: 他'he/him', nonhuman: 它 'it' (Li & Thompson, 1981):

(3) a. ***ta*** *kanjian le* *wo* Nominative
he/she/it see PERF me
'He/her/it saw me.'

b. *wo kanjian le* ***ta*** Accusative
I see PERF him/her/it
'I saw him/her/it'

Moreover, unlike indefinite clitic drop in Spanish, object drop is very productive in Chinese. Null objects are allowed regardless of the semantic features of their antecedents (4) (Huang, 1998):

(4) a. - Ni_i *mai na shuang* xie_j *le* *ma?*
you buy that pair shoe PERF Q
'Did you buy that pair of shoes?'

-. e_i *mai le* $\boldsymbol{e_j}$
buy PERF
'I bought them.'

b. - Ni_i *mai* $kafei_j$ *le* *ma?*
you buy coffee PERF Q
'Did you buy coffee?'

-. e_i *mai le* $\boldsymbol{e_j}$
buy PERF.
'I bought some.'

In (4), both the definite object *na shuang xie* 'that pair of shoes' in (4a), and the indefinite non-specific object *kafei* 'coffee' in (4b) are dropped in the responses to the questions. Omission is the preferred option when referents are retrievable in the discourse.[3] While

[3] While our focus lies on the omission of objects regarding definiteness and specificity, we have discussed some of the main theoretical accounts for Chinese null objects. For more analyses on this issue, see Cheng (2013), Huang (1987), and Xu (1986).

null objects have been traditionally approached through the lens of topicalization and topic deletion (Huang, 1984), other proposals have been formulated arguing for VP ellipsis and argument ellipsis (Huang, 1991; Li, 2014; Liu, 2014).

Huang (1984) argues that null objects in Chinese form a topic chain with the antecedent with which they identify. In the topic chain, the topic NPs undergo deletion when they are identified with the topic in a preceding sentence, as shown in (5) below. Huang analyzed null objects in Chinese as a variable bound to a null topic, as in Campos's analysis (1986) for Spanish null clitics. Hence, the null object in the comment clause in (6a) is the same as when the topic is present (6b, from Huang, 1984):

(5) [Zhongguo, difang hen da.] [*e*, renkou hen duo.] [*e*, tudi hen feiwo.]
China place very big population very many land very fertile
[*e*, qihou ye hen hao.] [*e*, women dou hen xihuan.]
climate too very good we all very like

'(As for) China, (its) land area is very large. (Its) population is very big. (Its) land is very fertile. (Its) climate is also very good. We all like (it).'

(from Huang, 1984)

(6) a. - Lisi renshi nage reni ma?
Lisi know that man Q
'Does Lisi know that man?'

- [TOP e_i] Zhangsan shuo Lisi bu renshi e_i.
Zhangsan say Lisi not know
'(That man,) Zhangsan said Lisi didn't know.'

b. *Neige ren$_i$, Zhangsan shuo Lisi bu renshi e_i.*
That man, Zhagnsan say Lisi not know
'That man, Zhangsan said Lisi didn't know.'

Besides being a variable bound to a null topic, null objects are a complex phenomenon. In Huang's (1991) analysis, while in some instances a null object can be analyzed as null epithet, in some other cases, the empty category is caused by VP ellipsis. For the epithet analysis, based on the assumption that an epithet has properties of both referential expressions (such as names and common nouns) and pronouns, Huang argues that a null object is like an epithet in that (1) it cannot be A-bound (7), (2) it can but not need be A'-bound (6), and (3) it may be co-indexed with a non-c-commanding argument (8):

(7) a. Zhangsan$_j$ renshi tai$_{*j}$ Pronoun
Zhangsan know him/her
'Zhangsan knows him/her.'

b. *Zhangsan$_j$ renshi e$_{i*j}$* Null object
Zhangsan know
'Zhangsan knows him/her/them/you...'

c. *Zhangsan$_j$ renshi nage bendan$_{i*j}$* Epithet
Zhangsan know that idiot
'Zhangsan knows that idiot.'

(adapted from Huang, 1991)

(8) a. *Ruguo ni xiang jian Zhangsan, wo jiu pai ren qu zhao zhe xiaozi.* Epithet
if you want see Zhangsan, I then send man go look this sissy
'If you want to see Zhangsan, I will send someone to look for the sissy.'

b. *Ruguo ni bu xihuan zheben shu, jiu qing bie mai e* Null object
if you not like this book, then please don't buy
'If you don't like this book, then please don't buy [it].'

(from Huang, 1991)

On the other hand, Chinese null objects are often found in structures in which the verb in the first clause is reduplicated in the following one, as shown in (9). Huang argued that the reduplicated verb can be analyzed similarly to '*do*-support' in English sentences with VP ellipsis (9):

(9) *John kanjian le tade mama, Mary ye kanjian le.*
John see-PERF his mother Mary also see-PERF
'John saw his mother, and Mary did, too.'

(from Huang, 1991)

This analysis is further developed by Liu (2014) who argues that in parallel structures like (9), the null object is licensed by the identity of the verb in the two sentences, and that the verb is moved to the *v* position leaving the VP including the internal argument of the verb in the second clause elided, as in (10):

(10) [v V_i ... [VP t_i Object]]

Liu (2014) also mentioned that in some cases that do not involve VP-ellipsis, the omission of definite referential objects is more constrained compared to indefinite objects as shown in the contrast between (11a) and (11b). However, he does not exclude the overall productivity of a definite referential null object. For example, the author sustains that the null object in (11c) is an E-type pronoun. What is relevant for our study is that Chinese exhibits both definite and indefinite null objects:

(11) a. *Yuehan xiang ti ta nuer qing yi-wei gangqin jiajiao,*

John want for his daughter hire one-CL piano tutor
Dan, ta haimei zhaodao e. Indefinite object
But he not-yet find-arrive
'John wants to hire a piano tutor for his daughter, but he has not found one'

b. Speaker A: Our little brother was crying this morning.

Speaker B: Really? What happened?
Speaker A': **Baba jintian zaoshang ma-le e.*[4] Definite referential object
Father today morning scold-PERF
'Father scolded [our little brother] this morning.'

c. *Yuehan zuotian maile yiben shu. Ni xiang kan e ma?*

John yesterday mai-PERF one-CL book you want read Q
'John bought a book yesterday. Do you want to read [the book that he bought]?'
(adapted from Liu, 2014)

In another line of analysis, Li (2014) argues against the account of VP ellipsis in some structures such as in ditransitive predicates. In Chinese, both the first and the second object in a ditransitive predicate can be omitted. Given the fact that the first object asymmetrically c-commands the second one in a ditransitive predicate, she pointed out that "it is impossible to have a constituent containing only the verb and the first object, to be deleted by some VP-ellipsis operation, leaving behind the verb and the second object" (p.47). Instead, the author argues for a base-generated True Empty Category (TEC) as the last resort to derive null arguments in Chinese. The TEC has no lexical content and bears only categorical and case features. It only serves to fulfill the subcategorization requirement of the verb. In other words, Chinese differs from other languages like English in that it does not require a full manifestation of the verb's full argument structure.

2.2.1 Definiteness and specificity and Chinese objects

The analyses discussed above demonstrate that null objects in Chinese can be derived from different mechanisms. However, what is relevant for the present study is that both definite and indefinite null objects exist in the surface structure in Chinese.[5] Although a definite referential object is less likely to be deleted in some cases without structural parallelism (Liu, 2014), a null definite object is not scarce at all. It is very frequent in the monologues

[4] According to our informants, although a pronoun *ta* ('him') sounds more natural in (11b), a null object is also possible. Hence, we think a question mark (?) would be more adequate.

[5] Although we maintain a neutral position, we believe that the equivalent structures in Chinese that we have examined do not involve VP-ellipsis. This is because there is no structure parallelism or verb identity as argued by Liu (2014) ('what does X do to Y' for the question-and-answer task and left-dislocation for the SCT and AJT). In the test items, the given verb in the structure for clitic production/judgment is different from the preceding sentence that provides the antecedent.

or dialogues with parallel structures, and in other instances as in (8b) or (11c). Regarding definiteness and specificity, these notions are encoded contextually. For instance, the bare nominal in (12a) can be interpreted as indefinite and nonspecific when responding to a question like 'What did he read?' However, it can also take on a definite interpretation when answering a question like 'Did he read the letter or the postcard from his girlfriend?' In (12b), similarly, the object *yifeng xin* 'a letter' can either be understood as a specific letter or a non-specific one, depending on whether the letter is known to the speaker.

(12) a. *Ta du le xin.*
he/she read-PERF letter
'He read a letter/letters/the letter.'

b. *Ta du le yifeng xin*
he/she read-PERF a letter
'He read a letter.'

According to Chen (2004), definiteness can also be expressed morphologically by the plural marker *-men* for animate (human) nominals, lexically by demonstratives or possessives (as in languages like English and Spanish, etc.), and syntactically by clause-initial positions (subject, topic) or *ba*-marked[6] preverbal positions. However, it is not obligatory to mark definite or indefinite nominal expressions in Chinese, and there is no unambiguous mark for the feature of definiteness (Chen, 2015). For the indefinite nominals, Portner (2002) argues that an indefinite nominal can receive specific reading when the domain of quantification is a covert or overt topic. For example, in (13b), the nominal *xuesheng* 'student' in the quantificational structure may be overtly topicalized and this enables a specific reading. These facts show that Chinese lacks overt unambiguous marks for definiteness and specificity and that these semantic features are encoded in the discourse.

(13) a. You yixie xuesheng laile xuexiao Non-specific
exist some student come-PERF school
'There are some students who came to school.'

b. Xuesheng you yixie laile xuexiao Specific
student exist some come-PERF school
'Some of the students came to school.'

In sum, Spanish has a system of accusative clitics in the position of direct object co-referring to definite or specific antecedents. Accusative clitics with an indefinite non-specific referent can be realized as null clitics. Chinese extensively allows both definite and indefinite null objects that are retrievable from the discourse. This difference applies to constructions with a fronted object in the topic position, like topicalization and CLLD.

[6] *Ba*-marked objects are used in causative sentences or agentive sentences, and has been analyzed as a preposition, as a verb or as a coverb (Bender, 2000; Li & Thompson, 1981; Yang & van Bergen, 2007).

3. The acquisition of Spanish clitics

Previous studies have examined the acquisition of word order (Duffield & White, 1999; Liceras, 1985) and agreement features such as gender and number (Arche & Domínguez, 2011; Klee, 1989) in clitic constructions. Another line of research has explored the semantic distribution of overt and null clitics among learners from various L1 backgrounds, including European Portuguese (Bruhn de Garavito & Guijarro-Fuentes, 2002), Brazilian Portuguese (Borgonovo et al., 2006; Rothman & Iverson, 2013), English (Bruhn de Garavito & Guijarro-Fuentes, 2002; VanPatten, 1987; Zyzik, 2008), and Chinese (Jiao & Cuza, 2022; Cuza et al., 2013). These studies have shown mixed results which are accounted for along the lines of L1 transfer and stages of L2 development. For instance, Borgonovo et al. (2006) examined the interpretation of null and overt objects among Brazilian Portuguese-speaking L2 learners of Spanish in four conditions (definite DP, indefinite DP, bare NP, and topicalized sentences). Results showed target-like performance except for overt clitics with non-specific antecedents and topicalized non-specific bare NPs. It is argued that the non-specific property of null clitics in Spanish is possible to acquire, although overt clitics are still underspecified regarding specificity features.

Similar findings were reported by Rothman and Iverson (2013), demonstrating that Brazilian Portuguese-speaking learners of Spanish reject ungrammatical omissions of definite objects and accept grammatical ones. In a related investigation, Bruhn de Garavito and Guijarro-Fuentes (2002) compared the treatment of null and overt clitics among European Portuguese (EP) and English-speaking learners of Spanish using a grammaticality judgment task (GJT). Test items were distributed in nine conditions involving the presence or absence of an accusative clitic in simple sentences and sentences with different islands (Complex NP, Sentential Subject, or Adjunct Clause). The authors found that advanced EP learners outperformed their English-speaking counterparts in all contexts, showing a mastery of null clitics in Spanish. Furthermore, the intermediate English-speaking learners were able to distinguish grammatical vs. ungrammatical null clitics in all sentence types except for sentences with adjunct islands. This suggests general success in acquiring definiteness constraints on null objects.

Zyzik (2008) implemented a GJT and a series of oral production tasks (a storybook narration task, a structured interview, and two video narration tasks) on 50 English-speaking classroom learners of Spanish. The participants were divided into four proficiency groups based on classroom placement and time spent abroad. The author found ungrammatical clitic omission in coordinated structures and question-and-answer dialogues among English-speaking adult L2 learners across all proficiency levels. She also found that learners with higher proficiency showed more rejection of ungrammatical null clitics. The author argues for a stage of null objects in the learners' development of Spanish grammar and that clitic omission is due to performance factors because the learners' performance showed intra-subject variability regarding the object realization with the same verb and they showed self-correction when they omitted the object, but they never corrected themselves by omitting the object when they produced overt ones. This differed

from Brun de Garavito and Guijarro-Fuentes' findings demonstrating general success in the acquisition of Spanish null objects. However, as the judgment task did not include items for grammatical null clitics, the status of semantic constraints on null clitics remains unclear.

Valenzuela (2006) also examined the acquisition of the syntactic and interpretative constraints of object clitics in CLLD and topicalization contexts by English-speaking adult learners of Spanish. The author assumed that if the learners acquire the syntactic difference between the two contexts, they would accept and produce overt clitics with CLLD contexts and null objects with topicalization. However, if they have acquired the interpretative constraints (specific and non-specific) on these two contexts, they would reject null objects with specific contexts and accept them with non-specific contexts. An oral grammaticality judgment task, an oral sentence selection task, and a SCT were implemented on 15 near-native adult learners of Spanish. The results showed that the learners produced and accepted overt clitics in CLLD contexts and showed less production or acceptance in topicalization contexts. However, they showed more production and acceptance of overt clitics with topicalization contexts compared to native speakers. This suggests that the learners exhibited sensitivity to the syntactic constraint regarding the presence or absence of a clitic. However, they displayed variability in the acquisition of specificity constraints in clitic use.

Numerous studies have examined the acquisition of discourse properties of the CLLD structure by L2 learners and heritage speakers (Sequeros-Valle et al., 2020a,b; Slabakova et al., 2012). The results suggest that the discourse properties are acquirable, particularly among learners with higher proficiency levels. Slabakova & Ivanov (2011) reinterpreted Valenzuela's (2005, 2006) results and compared them to the results from Ivanov (2009) on the acquisition of CLLD structures in L2 Bulgarian. The authors argue that the learners have awareness of discourse cues for clitic use in CLLD structures and that the difficulties lie in the semantic features.

As in the case of English-speaking learners, Chinese-speaking learners of Spanish also must develop a clitic paradigm. However, the learning task is more demanding because Chinese does not encode definiteness morphologically and null objects are productive. Following the FRH, Slabakova (2009) argues that the way the features are configured in the learners' L1 and target language leads to different levels of difficulty. The author posits that the mapping from contextually conditioned features to morphological forms poses more difficulty than mapping a morphologically expressed feature. Following this viewpoint, we would expect the learning task of Chinese-speaking learners (whose L1 lacks a morphological system for definiteness or specificity) to be more difficult compared to those learners whose L1 overtly encodes these semantic features (e.g., English).

Cuza et al. (2013) examined the distribution of overt and null clitics among Chinese-Spanish bilinguals in Peru via an AJT, and two elicited production tasks (a question-and-answer task and a SCT). The simultaneous bilinguals showed comparable proficiency in Spanish to childhood immigrants, who were in turn more proficient

than the adult immigrants. The results suggest that while the simultaneous bilinguals showed no differences from the monolingual controls, the childhood immigrants were more target-like than the adult immigrants regarding the production of overt clitics, although they showed a preference for null objects in the receptive tasks. However, unlike the simultaneous bilinguals who produced clitics in a target-like manner, or the adult immigrants who overextended null clitics, childhood immigrants chose full DP as a strategy of object realization. More recently, Jiao and Cuza (2022) compared the production of Spanish accusative clitics in a story-retelling task among simultaneous and sequential Chinese-Spanish bilinguals from Peru, and classroom learners of Spanish in China. The authors found that, while the simultaneous bilinguals outperformed the other groups, the sequential bilinguals and the classroom learners did not show significant differences in terms of the number of clitics produced. Considering that the learners in China had been exposed to classroom instruction for only less than two years, it is possible that late exposure could be partially compensated by classroom instruction when compared to sequential bilinguals in an immersion context. Having said this, this study is limited in the sense that the semi-spontaneous task (oral narrative) did not elicit clitic use or omission in a variety of contexts where the realization or omission of the clitic is constrained by definiteness and specificity features. We cover this gap by implementing an elicited production task targeting these specific features as well as an acceptability judgment task.

To summarize, previous work suggests difficulties in the acquisition of object clitics in Spanish. Chinese-speaking learners of Spanish not only have to acquire the semantic constraints (definiteness and specificity) regulating clitics but also the clitic paradigm itself, leading to potential form-meaning mismatches or ungrammatical object omission. The lack of specification can be easily accounted for by FRH (Lardiere, 2008, 2009). This proposal argues that languages differ in the assembly and clustering of linguistic features in language forms. The key to successful L2 acquisition resides in dissociating the features assembled in the learners' L1 and in the redeployment of those features in the L2. The learners must identify the morphological items in the L2 that correspond to those in their L1 based on semantic meaning or grammatical function (p.191). Lardiere (2009) poses that "the greater difficulty for the second language acquirer lies in assembling just the right combination of features into the right lexical items for each language and in determining the appropriate conditioning environments" (p.216). Slabakova (2009) argues that the learning task is easier when L1 and L2 semantic features are morphologically encoded, and is more difficult when features are overtly encoded in one language but not in the other. For our study, we argue that the challenge for the learner is linked to the asymmetry that definiteness and specificity are encoded morphologically in Spanish but contextually in Chinese. Moreover, although the morphological form is presented in the learning materials, neither the associated semantic features nor the CLLD structures are taught explicitly in the classroom.

The acquisition of CLLD structures would suggest a distinction between CLLD and focus fronting. In this case, other features such as [+/-anaphoric], [+/-contrastive] and [+/-topic] may be crucial. Since we only use CLLD structures as sentence frame to elicit

clitic production and judgment related to definiteness and specificity, we put the discourse cues for clitic use aside. Moreover, the fact that preverbal or clause-initial position favors definiteness or specific reading in Mandarin might lead to a hypothesis that students will favor clitic use in CLLD contexts. However, since both (in)definite and (non-)specific objects can be dropped in Mandarin, transfer from Mandarin would only favor a definite reading in topic position but not the association between overt clitic in this context. This is because there is a possibility for clitic omission regardless of whether the preverbal element is analyzed as definite or indefinite. Our primary focus is on whether the learners can establish the necessary associations between the semantic features and the presence or absence of overt clitics, rather than their ability to interpret contextual cues. We hypothesize that the learning process will be influenced by crosslinguistic influence from Chinese L1 as well as proficiency, leading to a general underspecification of the definiteness or specificity features of the Spanish clitic system.

3.1 Research questions and hypotheses

We pose the following research questions and hypotheses:

- **RQ1**: To what extent do Chinese-speaking learners of Spanish have a clitic system in place that allows them to use overt clitics?
  - **H1**: The L2 learners will show low production of overt clitics in required contexts in Spanish due to crosslinguistic influence of Chinese, a language that does not feature pronominal clitics.
- **RQ2:** To what extent do Chinese-speaking L2 learners have sensitivity to the semantic constraints of definiteness or specificity that regulate the appearance or absence of Spanish clitics in topicalization and CLLD constructions?
  - **H2:** The Chinese-speaking learners will either overextend object clitics to contexts where they are not required (Valenzuela, 2006), or omit them in contexts where they are needed in Spanish (Cuza et al., 2013; Zyzik, 2008) due to underspecification of the semantic features regulating Spanish clitics (Lardiere, 2008, 2009; Slabakova, 2009).
- **RQ3:** Does proficiency play a role in target clitic use?
  - **H3:** The Chinese-speaking learners with higher Spanish proficiency will show more target-like use of overt and null clitics and more sensitivity to the semantic features of definiteness or specificity encoded in the clitics in CLLD structures in Spanish.

We discuss the participants, tasks, and procedures in the following section.

4. The study

4.1 Participants

Twenty-six Chinese-speaking classroom learners of Spanish (CSLs) (age range: 19-21; *M* = 19.96; *SD* = 0.76) and twenty-one monolingual Spanish speakers serving as baseline group (Monolingual Group) participated in the study (age range: 19-48; *M* = 28.10; *SD* = 6.99). All the classroom learners were Spanish majors at a large university in Northern China. They were completing their second year of college at the time of testing. The CSLs completed an adapted version of the DELE test (*Diploma de Español como Lengua Extranjera*) (Bruhn de Garavito, 2002; Cuza, et al. 2013; Duffield & White, 1999; Montrul & Slabakova, 2003), and their scores varied between 28 and 44 out of 50 points (*M* = 37.4; *SD* = 3.6).

A language background questionnaire (LBQ) was also implemented to elicit the participants' pattern of language use. The CSLs were born and raised in China and Chinese was the language used in the interactions with their family and friends, and in other social circumstances. The learners were exposed to Spanish from their first year of college (approximately 14 hours a week of instruction). The courses were taught in Chinese except for the conversation class two hours per week taught by a native instructor from Spain. The direct object clitics were taught in their first year of Spanish together with the concept of direct object. They were taught that these clitics are used to double co-referring nominal antecedents in the preceding discourse context. However, as mentioned above, the semantic constraints of definiteness or specificity on the overt or null clitics are not taught in the textbook, nor is the structure of CLLD. The Spanish monolingual speakers were tested in Seville, Spain, and participated in the study as baseline group. Six of them had completed college or were receiving college-level education at the time of testing, and fifteen had completed high school.

4.2 Tasks

We implemented a question-and-answer task, a SCT, and an AJT, following previous work (Cuza et al., 2013). The general motivation for choosing the three tasks was to elicit both production and intuition data to tap into the participants' internal grammar. This multifaceted approach was adopted to provide a more robust and nuanced perspective on the phenomena under examination (Crain & Thornton, 1998; Schütze, 2011). The question-and-answer task (Arche & Domínguez, 2011; Castilla & Pérez-Leroux, 2010; Cuza et al., 2013) was designed to answer the first research question by exploring whether the participants used clitics for the realization of anaphoric direct objects in definite specific contexts in matrix sentences. In other words, we implemented this task to examine whether the morphological form of accusative clitics exists in the learners' Spanish grammar, as this is the prerequisite to further acquiring the association between the clitics and the semantic features. It consisted of 8 test items including a short preamble accompanied by a picture. After reading the preamble, the participants were asked to answer a question in the form of "What does X do to Y?", aiming to elicit the production of an accusative clitic. A test item sample of the question-and-answer task is shown below:

(14) Question-and-answer task

Ramón está preparándose para salir al cine. ¿Qué está haciendo Ramón con los pantalones? 'Ramón is preparing himself for going to the movie theater. What is he doing with the pants?'

[An image of a man ironing pants appeared here]

Expected response: *los plancha/los está planchando/está planchándolos or plancha los pantalones* 'He is ironing them/ He is ironing the pants'

For this task, the participants were expected to produce a sentence with the clitic as an anaphora to the antecedent in the question. A sentence with a full DP (*los pantalones* 'the pants') was also an acceptable response. However, a null object would not be an expected response because it is not a grammatical option in Spanish.

The SCT and the AJT were designed to examine the participants' sensitivity to definiteness or specificity features that regulate the distribution of overt and null clitics in contexts with a left-dislocated object. The reason for using structures with left-dislocated objects was to restrict the participants' responses so that they produced either an overt clitic or a null clitic. Thus, these tasks provided the context for examining the distribution of overt/null clitics. The SCT (Cuza et al., 2013; Pérez-Leroux et al., 2011; Valenzuela, 2006) elicited the use of overt or null clitic in CLLD and topicalization constructions. Unlike the question-and-answer task that examined the use of clitics as a strategy for the realization of anaphoric definite specific objects, this task focused on the learners' knowledge of the semantic restrictions of definiteness or specificity on the appearance of overt or null clitics. A full DP was not a possible response as in the case of the question-and-answer task. A total of 15 test items were distributed in three conditions defined by the semantic properties of the fronted object: [+definite, +specific], [+definite, -specific], and [-definite, -specific]. A preamble with visual support was given in each PowerPoint slide. After reading the preamble, the participants were asked to complete the sentence (15):

(15) Sentence Completion Task

a. [+definite, +specific]

Juan puso los libros en el estante pero los documentos no importantes____(tirar)

'Juan put the books on the shelf but threw away the unimportant documents.'

[An image of a wastebasket appeared here]

Expected response: *los tiró* 'threw them away'

b. [+definite, -specific]

Mi hijo odia a los gatos, pero a los perros _____(adorar)

'My son hates cats, but he loves dogs.'

[An image of a child with his dog appeared here]

Expected response: *los adora* 'adores them'

c. [-definite, - specific]

*Mi amigo Ramiro es una persona muy ocupada, pero deporte siempre*_____ *(hacer)* 'My friend Ramiro is a busy person but he always workout.'

[An image of a man working out appeared here]

Expected response: *hace* 'does'

The antecedent is in the topic position, thus the only expected response is the production of overt clitic in the CLLD contexts and the null object in the topicalization context. Since both the sentence completion task and the question-and-answer task are elicited production tasks, they were implemented together with 27 distractors examining the learners' use of other structures, namely differential object marking and definite determiners. All the items were counterbalanced and randomized.

The AJT was implemented to measure the participants' intuition of the distribution of overt and null clitics (Cuza et al., 2013; Montrul, 2010; Montrul et al., 2011). The design of the AJT followed the same conditions as the SCT. The participants were asked to rate grammatical and ungrammatical sentences across three conditions ([+definite, +specific], [+definite, -specific], and [-definite, -specific]) with the use of a Likert scale ranging from 1 (extremely odd) to 5 (completely fine) (16):

(16) Acceptability Judgment Task

[+definite, +specific, overt clitic] Grammatical

Miguel logró llevar su equipo de buceo a Hawái, pero la bicicleta la dejó en el aeropuerto. 'Miguel managed to take his scuba diving equipment to Hawaii, but he left the bike at the airport'

1	2	3	4	5
completamente extraña	*extraña*	*ni bien ni mal*	*bien*	*completamente bien*
'completely odd'	'odd'	'neither good nor bad'	'good'	'completely good'

Expected response: 4 or 5

Unexpected response: 1 or 2

There was a total of 24 test items, 52 distractors and three practice items. Participants were asked to provide a brief explanation for the test items rated as 1 or 2. Responses unrelated to clitic use were excluded from the analysis.

4.3 Procedure and data coding

The LBQ, the DELE test, and the AJT were distributed and completed online via Qualtrics (Qualtrics LLC, Provo, UT, USA). Upon the completion of the online portion, the participants were contacted by the researcher to schedule a face-to-face interview and complete the sentence completion task and the question-and-answer task. The testing sessions were conducted individually in a public place. The tester of the experimental group was a Chinese native speaker, and the tester of the control group was a Spanish native speaker. The testing sessions were conducted in Spanish following the same instructions and procedures.

Regarding data coding, in the question-and-answer task, overt clitics were coded as '1', and null clitics were coded as '0'. Responses presenting a full DP were coded as 'DP' while other responses were coded as 'other'. Whereas the native speakers mostly produced either overt or null clitics in this task, the CSLs opted predominantly for full DPs as their strategy of direct object realization. In the sentence completion task, overt clitics were coded as '1', and null clitics were coded as '0'. A small portion (5 %, 20 instances) of the responses from the CSLs were discarded. All of these responses featured past participles (*tirados* 'thrown' for the item in 7a above). In the AJT, the analysis was performed based on the ratings that the participants gave to the test items. As in the sentence completion task, 98 (8.7 %) of the participants' rejections to test items were discarded as the reasoning that they provided for doing so were irrelevant to the purpose of the study.

5. Results

5.1 Question-and-Answer Task

This task examined the realization of direct objects in the context of a dialogue. There were 8 test items in which the participants were expected to produce an overt accusative clitic referring to a definite specific antecedent. The results showed the realization of full DP objects as the main strategy used by the CSLs, with 159/208 instances (76 %). Clitics were used infrequently as an alternative for object realization, with only 18/208 instances (9 %). This type of response was followed by null clitics, which were used only in 14/208 instances (7 %). Additionally, there were 17/208 instances (8 %) coded as "other". These "other" responses included the use of prepositional phrases (i.e., *Está planchando* ***con*** *los pantalones* '(He) is ironing with the pants') and paraphrases (i.e., *Está haciendo algo para hacer los pantalones planos* '(he) is doing something to make the pants flat'). In contrast, the Spanish monolinguals produced overt clitics categorically in these contexts, as expected. There were only 7/168 (4.17 %) instances of use of overt full DP objects plus one response (0.6 %) featuring a paraphrase, coded as "other". No null clitics were used by the monolinguals. The percentages of each option of object realization are shown in Figure 1 as well as in Table 1.

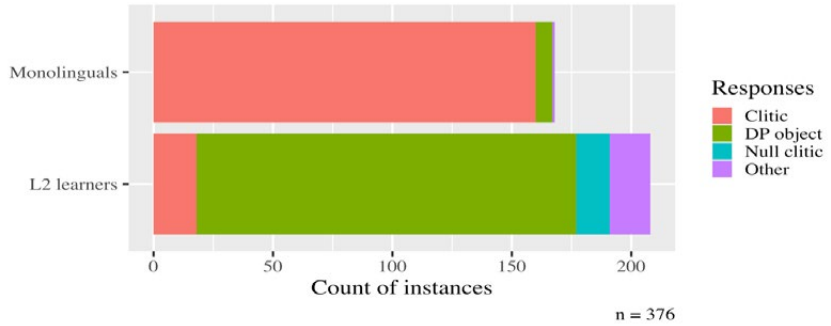


Figure 1. Object realization in the question-and-answer task across groups.

Table 1. Percentages of object realization in the question-and-answer task across groups.

	CLS group	Monolingual group
Clitic	9 % (18/208)	**95.23** % (160/168)
Full DP	**76 %** (159/208)	4.17 % (7/168)
Null clitic	7 % (14/208)	0 % (0/168)
Other	8 % (17/208)	0.6 % (1/168)

Looking at the data individually, there were only five CSLs who produced clitics, four of whom scored from 41 to 44/50 at the DELE as well as the participant with the lowest score, 28/50. Two CSLs produced clitics in more than half of the 8 items (5/8 and 7/8 items respectively). Regarding null clitics, eight participants produced null clitics with DELE scores ranging from 38 to 42/50. However, none of them used null clitics in more than 4/8 test items. The results in the question-and-answer task indicate that, whereas clitics are used categorically by native speakers of Spanish, full DPs are considered the main strategy for object realization in this context.

In order to confirm these trends, one multinomial regression was performed using the *mblogit* function in the *mclogit* package (Elff, 2021) in R (R Development Core Team, 2021). This regression had response (clitic, full DP, null clitic) as dependent variable and group (monolingual group vs. CSL group) as a dependent variable. This regression included '1' or 'clitic' as the baseline response while the baseline level for the independent variable 'group' was 'monolingual'. Tables 2 and 3 below show the results of the multinomial regression performed with the question-and-answer task data.

Table 2. Results of multinomial regression on question-and-answer data - equation for DP vs 1.

Fixed Factor	Estimate	SE	Z Value	P Value
(Intercept)	-3.1293	0.3861	-8.104	< 0.001 *
Group (L2)	5.3078	0.4593	11.556	< 0.001 *

Table 3. Results of multinomial regression on question-and-answer data - equation for null vs 1.

Fixed Factor	Estimate	SE	Z Value	P Value
(Intercept)	-19.89	1646.12	-0.012	0.99
Group (L2)	19.64	1646.12	0.012	0.99

Random factors were excluded to allow for the algorithm to converge. The multinomial regression confirmed the difference between the CLS group and the monolingual group regarding their production of full DP responses. The Appendix A.1 shows more detailed results of the multinomial regression.

5.2 The Sentence Completion Task

This task examined the production of clitics in the following contexts: (1) [+definite, +specific] objects, (2) [+definite, -specific] objects, and (3) [-definite, -specific] objects. As shown in Figure 2 and Table 4 below, the monolingual group produced overt clitics categorically in two conditions and produced very few instances of overt clitics in the [-definite, -specific] condition. On the other hand, the CSLs produced overt clitics below chance in the two conditions in which the monolingual group had performed categorically while their production of null clitics in the [-definite, -specific] condition was above chance given that null clitics are the expected response in that condition.

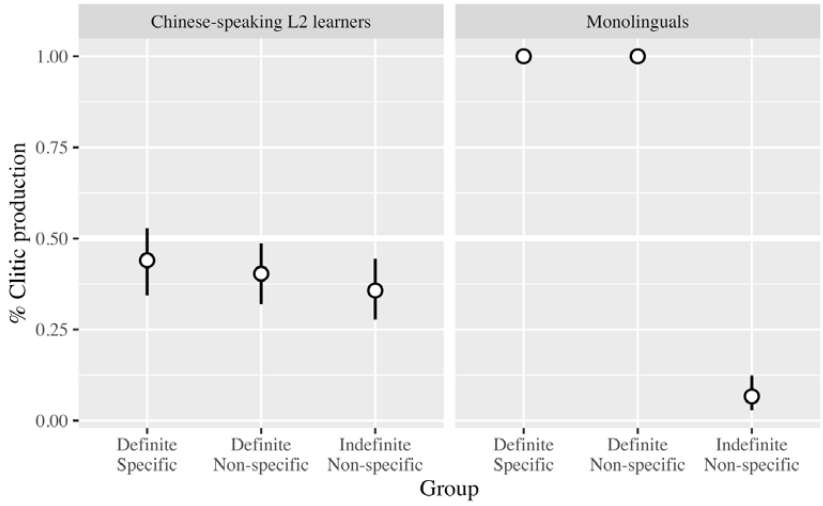


Figure 2. Proportion of overt clitic production in the sentence completion task.

Table 4. Percentages of clitic production realization in the EPT across groups.

Group	Condition		
	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
CSL (n = 26)	*M* = 0.44; *SD* = 0.50	*M* = 0.40; *SD* = 0.49	*M* = 0.36; *SD* = 0.48
Monolingual (n = 21)	*M* = 1; *SD* = 0	*M* = 1; *SD* = 0	*M* = 0.07; *SD* = 0.25

We conducted a generalized linear mixed model (GLMM) in R using the *glmer* function in the *lme4* package (Bates et al., 2015). In this GLMM, response was the dependent variable (coded as 1 for overt clitic and 0 for null clitic), and condition ([+definite, +specific], [+definite, -specific], [-definite, -specific]) and group (monolingual group, CSL group) as independent variables. The baseline values were '[+definite, -specific]' for condition and 'monolingual' for group. The model included random intercepts for each subject as well as for each test item.

This first GLMM analysis found group effects as well as condition effects. The first effect indicates that the CLS group is less likely to produce overt clitics compared to the baseline group ($\beta = -2.53$, SE = 0.98, $z = -2.58$, $p < 0.01$; OR= 0.080, 1/0.080 = 12.5). Specifically, the CLS group was over twelve times less likely to produce overt clitics than the monolingual group. The condition effect suggests that, in comparison with the responses to the test items examining the definite non-specific condition, which the model used as a baseline, the model found that the production of overt clitics in the [-definite, -specific] condition was lower than in the other conditions in both groups, as expected ($\beta = -4.30$, SE = 0.43, $z = -9.95$, $p < 0.01$; OR = 0.014; 1/0.014 = 71.43). The odds of using an overt clitic were about seventy times lower in the [-definite, -specific] condition than in the baseline condition. The output of this GLMM is shown in Appendix A.2.

A second GLMM examined within-group data in the CSL group to examine proficiency effects. This model included response as the dependent variable and condition and DELE scores as independent variables. The model failed to find main effects but yielded two significant interactions between condition and DELE scores, which are shown in Figure 3 below.

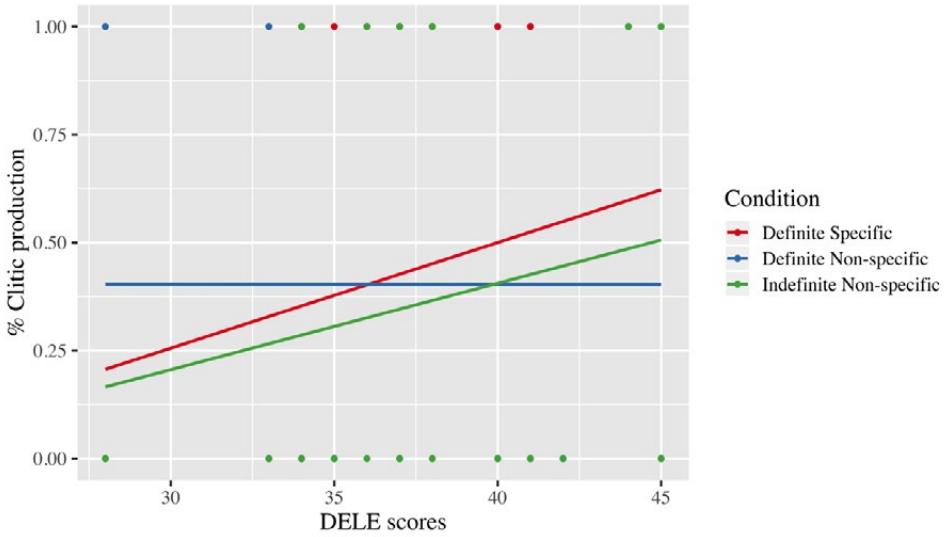


Figure 3. Correlations between responses in the sentence completion task and DELE scores.

The interaction between the [+definite, +specific] condition and DELE scores (β = 1.45, SE = 0.57, z = 2.54, p = 0.01) as well as the interaction between the [-definite, -specific] condition and DELE scores (β = 1.42, SE = 0.57, z = 2.46, p = 0.01) indicate that the likelihood of producing overt clitics increases hand in hand with DELE scores among the CLS group; however, this effect does not occur with the production of clitics in the [+definite, -specific] condition, which the model uses as the baseline. The output of this GLMM can be found in Appendix A.3.

5.2.1 Individual analysis

To confirm that the group differences observed were reflected at the individual level, we conducted an individual analysis. In this analysis, participants were divided into four subgroups according to the number of overt clitics produced per condition: the first subgroup included participants who produced 4-5 overt clitics, followed by participants who produced 3 overt clitics, 1 or 2 overt clitics, and a range of zero production of overt clitics. The results are shown in Table 5.

Table 5. Individual analysis of the sentence completion task.

Group	# of clitics produced	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
CSL (n = 26)	4-5	**8/26 (31 %)**	**9/26 (35 %)**	**10/26 (38 %)**
	3	3/26 (12 %)	0	0
	1-2	6/26 (23 %)	6/26 (23 %)	1/26 (4 %)
	0	**9/26 (35 %)**	**11/26 (42 %)**	**15/26 (58 %)**
Monolingual (n = 21)	4-5	**21/21 (100 %)**	**21/21 (100 %)**	0
	3	0	0	0
	1-2	0	0	**7/21 (33 %)**
	0	0	0	**14/21 (67 %)**

As shown in Table 5, the native speakers of Spanish performed at ceiling in [+definite, +specific] and [+definite, -specific] conditions where the overt clitic was the expected response. In contrast, the CSLs were distributed towards the two extremes: either in the first subgroup with 4-5 overt clitics produced or in the subgroup of participants who had not produced any overt clitic. It is noticeable that more participants clustered in the subgroups with lower clitic production (1-2 clitics or zero production) compared to the subgroups with 3 or more clitics. A closer look at those participants with target-like performance showed that all the participants in the first subgroup in [+definite, -specific] condition were also in the first subgroup in [+definite, +specific] and [-definite, -specific] conditions. These participants tended to use overt clitic regardless of the definiteness or specificity condition.

In the [-definite -specific] condition in which a null clitic was the expected response, null clitic appeared in the response of all the native speakers, and 7 of them used overt clitics in 1/5 items. In contrast, 42 % of the CSLs used overt clitics (38 % in the range of 4-5 clitics, and 4 % in the range of 1-2), whereas the rest of them produced null clitics. The percentage of CSLs that produced null clitics in this condition was higher than the target production of overt clitics in the other two conditions. This confirmed the group analysis in that they treated this condition differently from the other two [+definite] conditions. A closer look at the 15 participants who produced 0 overt clitics in the [-definite, -specific] condition showed that 7 of them also produced 0 overt clitics in the other two conditions where an overt clitic was required. Among the remaining 8 participants, six of them only produced 1 or 2 clitics in one of the other two conditions, and two of them produced 1 or 2 clitics in both conditions that require an overt clitic. Again, the individual analysis showed that the pattern of clitic use in one condition was likely to be extended to other conditions, regardless of definiteness or specificity features.

Regarding the effect of proficiency, as measured by the DELE, 14 participants scored between 28 and 40, and 12 participants scored above 40. The group analysis found interactions between DELE scores and two conditions: [+definite, +specific] and [-definite, -specific]. We looked at the DELE scores of the participants who produced 4 to 5 overt clitics in these conditions. As mentioned above, these were the same 8 participants plus 2 participants who produced 3 clitics in [+definite, +specific] condition and 4 clitics in [-definite, -specific] condition. Six (6/10) of these participants scored from 34 to 38/50 and four (4/10) scored from 41 to 45.

In sum, the sentence completion task showed that the CSLs produced fewer target-like overt or null clitics than the monolingual group. The analysis also revealed that, in general, CSLs do not treat the conditions differently by definiteness or specificity.

5.3 Acceptability Judgment Task

The AJT examined the acceptability of grammatical and ungrammatical instances of overt and null clitics in the same conditions as in the sentence completion task. For visualization purposes, Figure 4 below shows the average response across grammaticality, condition, and group when considering their response as numeric instead of ordinal.

The AJT data were analyzed with two ordinal regressions using the *clmm* (cumulative link mixed model) function in the *ordinal* package (Christensen, 2019) in R. The first ordinal regression included response (ratings ranging from 1 to 5) as the dependent variable, and grammaticality (grammatical, ungrammatical), condition ([+definite, +specific], [+definite, -specific], [-definite, -specific]) and group (monolingual group, CSL group) as independent variables. Additionally, it included both participant and test item as random effects as well as an interaction between group and grammaticality. The goal of this first ordinal regression was to assess between-group differences with regard to the variables under examination. The model found grammaticality ($\beta = -6.31$, SE = 0.30, $z = -20.87$, $p < 0.001$) and group ($\beta = -2.46$, SE = 0.45, $z = -5.49$, $p < 0.001$) effects as well as differences in the acceptance

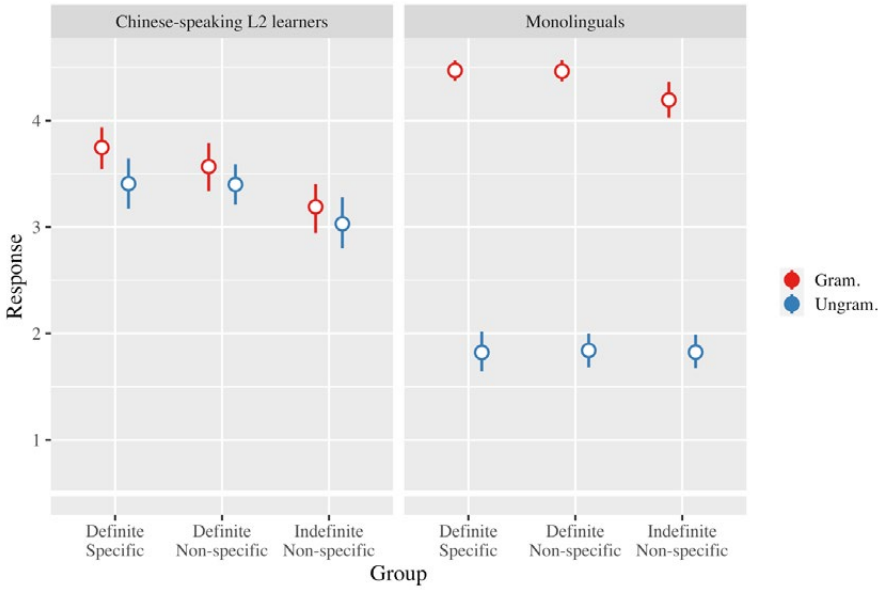


Figure 4. Acceptability of conditions as a function of grammaticality across groups.

of overt clitics in the [-definite, -specific] condition (β = -0.60, SE = 0.20, z = -3.02, $p < 0.01$), as expected. It also found a significant interaction between group and grammaticality (β = 5.71, SE = 0.32, z = 17.89, $p < 0.001$), which indicates that the CLSs do not rate ungrammatical items as low as the native speaker group.

An additional ordinal regression was conducted to analyze the data obtained from CSLs only to assess proficiency effects. This model included response as the dependent variable and grammaticality, condition, and DELE scores as independent variables. The model also included participant and test item as random effects and tested for interactions between grammaticality and condition, and between grammaticality and DELE scores. The model only found differences in the CLSs' responses in the [-definite, -specific] condition (β = 1.00, SE = 0.42, z = 2.40, $p = 0.02$), which indicates that the learners rated this condition lower than the other two regardless of grammaticality. However, no other effects or interactions were found (see Appendices A.4 and A.5 for outputs).

5.3.1 Individual analysis

For the individual analysis, we divided the participants into three ranges according to the average ratings they assigned to the sentences in each condition: accepted (average rating 4-5), unsure (average rating 2.1-3.9), and rejected (average rating 1-2). The results are presented in Table 6 below.

As shown in Table 6, the performance of the CSLs differed greatly from the monolingual group's in both grammatical and ungrammatical sentences at the individual level. For the grammatical sentences, all the monolinguals showed categorical acceptance of grammatical overt clitics in the two [+definite] conditions. The CSLs showed uncertainty

Table 8. Individual analysis: AJT.

Grammatical			
CSL (n= 26)	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
Accepted	8/26 (31 %)	**13/26 (50 %)**	5/26 (19 %)
Unsure	**17/26 (65 %)**	12/26 (46 %)	**16/26 (62 %)**
Rejected	1/26 (4 %)	1/26 (4 %)	5/26 (19 %)
Monolingual (n= 21)	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
Accepted	**21/21 (100 %)**	**21/21 (100 %)**	**17/21 (81 %)**
Unsure	0	0	3/21 (14 %)
Rejected	0	0	1/21 (5 %)
Ungrammatical			
CSL (n=26)	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
Accepted	9/26 (35 %)	8/26 (31 %)	7/26 (27 %)
Unsure	**11/26 (42 %)**	**11/26 (42 %)**	**17/26 (65 %)**
Rejected	6/26 (23 %)	7/26 (27 %)	2/26 (8 %)
Monolingual (n= 21)	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
Accepted	0	0	0
Unsure	1/21 (5 %)	1/21 (5 %)	0
Rejected	**19/21 (95 %)**	**19/21 (95 %)**	**21/21 (100 %)**

in these two conditions. In the [-definite, -specific] condition with a grammatical null clitic, both groups showed variation. Whereas 14 % of the monolingual speakers showed uncertainty, this proportion increased to 62 % for the CSLs. In ungrammatical sentences, the monolinguals performed as expected in the three experimental conditions. In contrast, the CSLs showed acceptance or uncertainty towards sentences with ungrammatical clitic omission in the [+definite] conditions. Similarly, there were even more CSLs who were unsure about ungrammatical overt clitics (65 %) and fewer CSLs who rejected them (8 %). The individual analysis is consistent with the group analysis. The results confirmed our hypothesis 2, which states that the learners have difficulty with the distribution of overt and null clitics, regulated by the semantic features of definiteness and specificity.

Regarding DELE scores, we took a closer look at the CSLs that accepted grammatical sentences and those who rejected ungrammatical ones. We found that, except for the [-definite, -specific] condition with an ungrammatical overt clitic, in none of the conditions the CSLs who scored above 40 in the DELE test behaved more target-like (a score of 4-5 to the grammatical items and 1-2 to the ungrammatical ones) than the learners who scored below 40. This is consistent with the group analysis in that no effect of proficiency was found. The analysis is shown in Table 7.

Table 7. Proportion of the participants with target performance in the AJT by DELE score.

Grammatical			
DELE score	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
28-40	5/14 (36 %)	8/14 (57 %)	3/14 (21 %)
41-45	3/12 (25 %)	5/12 (42 %)	2/12 (17 %)
Ungrammatical			
DELE score	[+definite, +specific]	[+definite, -specific]	[-definite, -specific]
28-40	3/14 (21 %)	4/14 (29 %)	0
41-45	3/12 (25 %)	3/12 (25 %)	2/12 (17 %)

In sum, the AJT showed that the CSLs' knowledge of the semantic distribution of overt and null clitics is not as perceptible as their monolingual counterparts. The CSLs showed uncertainty in all three conditions regardless of grammaticality. However, their treatment of the [-definite, -specific] condition differs from the other conditions in the sense that they generally gave lower ratings in this condition regardless of the grammaticality.

5.4 Summary of the results

To summarize, the results from the question-and-answer task showed that the CSLs have the knowledge that an overt object is required in transitive structures in Spanish, but they preferred full DP over clitics in the contexts where overt clitics were preferred. The data from the sentence completion task show that the learners differed from the monolingual speakers regarding the distribution of clitics as constrained by the definiteness and specificity features of their antecedents. Similarly, the two groups also showed differences in the AJT, with the CSLs showing more uncertainty regardless of the grammaticality status of the test items. In addition, DELE scores were not found to be a significant predictor in any task. Finally, the individual analyses confirmed the results of the group analyses in all the tasks.

6. Discussion and conclusions

The present study examined the extent to which Chinese-speaking learners of Spanish have knowledge of the use and the semantic distribution of accusative clitics in Spanish. Following the FRH (Lardiere, 2008, 2009; Slabakova, 2009), the learners were expected to recognize the form before associating the features with the morphological form. Thus, difficulties with target clitic use and distribution by Chinese L2 learners were expected to stem from (1) using the morphological form of clitics as a strategy for object realization, and (2) from associating definiteness and specificity to the clitics, and acquiring the indefinite, non-specificity property of the null clitics. Accordingly, our first research question asked to what extent CSLs had knowledge of accusative clitic use in Spanish as a strategy of direct object realization. In light of Cuza et al. (2013) and Jiao and Cuza's (2022) previous work, we expected crosslinguistic influence from Chinese into Spanish leading to low production

of overt clitics in definite specific contexts in which a clitic is preferred. The prediction was borne out by the results of the question-and-answer task. The results showed that overt clitic is not the Chinese-speaking learners' preferred strategy for anaphoric object realization, since only 7 % of the total instances of object was produced as overt clitic, compared to the monolingual group who produced overt clitic in 95.23 % of the instances. The fact that eight of the learners (8/26) but none of the monolingual speakers showed null clitics showed that crosslinguistic influence was present. However, rather than preferring null clitics, the Chinese speakers' preferred strategy was overt DP (76.44 %). This suggests the learners seemed to know that null objects are not an adequate option for anaphoric objects, and that the use of DP stems from an avoidance strategy.

Regarding the learners' knowledge of Spanish as a language that does not generally allow object drop, their performance differed from the adult immigrants in Cuza et al. (2013), who were also exposed to Spanish during adulthood. In our study, eight (8/26) classroom learners produced null clitics in at least one of the items, in contrast to the fact that all the adult immigrants produced null objects, from which 95 % (12/13) of them only used null clitics. This suggests that classroom instruction compensates for late exposure to some level, consistent with Jiao and Cuza' (2022) findings with semi-spontaneous data and with VanPatten (1987), who claimed effects of instruction on the recognition of non-object drop in Spanish. However, this compensation effect was not present for the use of clitics as the preferred strategy. From a FRH perspective, if recognizing the use of clitic as a strategy of overt object realization is the first step of acquisition, these learners have not completed this step because they showed avoidance of producing overt clitics. However, they were aware that Spanish is a non-object-drop language, which means that they have fulfilled the prerequisite for using the morphological forms of clitics. In other words, they are in the process of including the morphological form of clitics in their inventory.

The second research question focused on the learners' knowledge of the semantic distribution of Spanish accusative clitics, namely associating the semantic feature of definiteness and specificity with clitic use and intuition in CLLD constructions. We hypothesized difficulties with the acquisition of the definiteness or specificity constraints evidenced in clitic overextension or omission. This question was addressed by the sentence completion task and the AJT, and the results from both tasks confirmed our expectations. In the SCT, the learners' production of overt clitics was below chance in the expected conditions (44 % in [+definite, +specific] and 40 % in [+definite, -specific] contexts). They produced overt clitics 36 % of the time in the [-definite, -specific] contexts where the clitic is not required. The results of the individual analysis also showed a cluster towards both extremes in all the contexts among the L2 learners: most participants were either in the range of clitic production of 4 to 5 clitics out of 5 trials or in the range of zero production. This suggests that the production of the clitics by Chinese learners is not regulated by definiteness or specificity features.[7] Moreover, this suggests that they may first acquire the

[7] As suggested by a reviewer, difficulties might stem from sources other than definiteness or specificity. While this could be possible, our data showed that these semantic features are not related to the learners' choice of overt/null clitics.

indefiniteness and non-specificity property of the null clitics. Additionally, their patterns of performance in one condition were likely to extend to other conditions. Specifically, if one participant did not produce any clitic in one condition, it was very likely that the participant also produced none or very few clitics in the other conditions. This provides another piece of evidence that the semantic features of definiteness and specificity do not play a role in clitic use.

The results of the AJT also support Hypothesis 2. The learners showed a general uncertainty in their judgment of clitic use regardless of grammatical context as their main judgment scores in all the contexts were between 3 and 4, in contrast to the monolinguals who performed categorically as expected. The individual results showed that the learners were clustered in the range of 'unsure' in almost all contexts, except for a very close distribution in the ranges of 'accepted' (50 %) and 'unsure' (46 %) in the [+definite, -specific] condition with a grammatical clitic.

The results from the SCT and the AJT showed that overt and null clitics were used and interpreted regardless of the semantic features of the antecedents to which they referred, suggesting insensitivity to the semantic constraints of overt and null clitics in Spanish. Provided that these semantic features are not related to the realization of overt or null objects in Chinese, the results show that the first language did not, at least, play a facilitative role in their feature reassembly process. Moreover, in both tasks, the learners' performance in the [-definite, -specific] condition differed from those in the [+definite] condition. In the SCT, they produced fewer clitics in the [-definite, -specific] condition, and in the AJT they gave lower ratings to this condition regardless of the presence of an overt clitic. This can also be explained by crosslinguistic influence. Given that in Chinese the topicalized element usually receives a definite reading, a topicalized [-definite, -specific] element would be less natural compared to a definite or a specific one, and thus receives lower acceptability. Moreover, their avoidance strategy can be accounted for by the fact that overt clitics are more cognitively taxing than null objects since they specify case, gender, and number.

The insensitivity to the semantic constraints on Spanish overt or null clitic among Chinese speakers was found by Cuza et al (2013), especially in the adult immigrants who were exposed to Spanish after puberty. The immigrants also showed low production of overt clitics in the sentence completion task and uncertainty in the AJT. However, compared to Cuza et al (2013) in which the adult immigrants showed a pattern of rejecting clitic production, more CSLs in our study produced clitics in all the contexts. Moreover, while the adult immigrants in Cuza et al. (2013) accepted overt and null clitics regardless of grammaticality with a mean rating above 4 in all the contexts, the CSLs in our study gave lower ratings showing uncertainty across all contexts. This, again, confirms previous studies on the effect of classroom instruction on the grammatical awareness of clitic use (Jiao & Cuza, 2022; VanPatten, 1987). Results from the two studies on Chinese adult learners of Spanish in different contexts also revealed the persistent difficulty in developing sensitivity to the semantic constraints on clitics for adult learners of Spanish. This is also

consistent with Valenzuela (2006) on English-speaking adult learners in Spain with near-native proficiency, who showed a trend of acquisition but difference from native speakers regarding production and acceptance with overt clitics in CLLD compared to topicalized constructions with a non-specific topic.

As mentioned in Section 2.1, while the accusative clitic was introduced in the instruction process as a strategy for object realization, CLLD structures were not taught. The teaching of this structure is relatively rare in classroom instruction in China. Results of this study only suggest that the CLSs have only developed some awareness of the non-object-drop property of Spanish and a full mastering of clitic use is yet to come. However, this does not mean that the learners cannot acquire a structure that is lacking in the input or the discourse cues of clitic use. Although the acquisition of complex discourse properties of CLLD is outside the scope of the current study, other studies have shown that L2 learners and heritage speakers can successfully acquire the distinction between CLLD structures and other types of information structure such as focus fronting and cleft (Sequeros-Valle et al., 2020a,b; Slabakova, 2015; Slabakova et al., 2012).

In addressing the third research question, which aimed to examine the effect of proficiency on clitic use and distribution, we hypothesized that participants with higher proficiency would outperform those with lower proficiency. We expected more target production of clitics in anaphoric contexts and greater sensitivity to the semantic features among more advanced learners. However, contrary to our expectations, results did not reveal a correlation between proficiency in Spanish and target clitic use or sensitivity to the semantic features governing their appearance. The effect of proficiency was only found in the interactions with [+definite, +specific], and [-definite, -specific] conditions in the SCT, with the learners with higher proficiency producing more overt clitics in these two opposite conditions. These results showed that proficiency was not a predictor for target performance regarding clitic use and distribution, but learners with higher proficiency levels might be more aware of the morphological form of the clitics, which is a prerequisite for the subsequent acquisition. The lack of proficiency effects was also observed in the narrative data in Jiao and Cuza (2022). Additionally, Cuza et al. (2013) showed that Chinese-speaking simultaneous bilinguals and childhood immigrants in Peru with very close DELE scores performed differently in both the productive and the receptive tasks, and the results seem to be better accounted for by experience with Spanish as measured by age of onset of bilingualism. Hence, while proficiency can be defined as the learners' overall level in their L2, experience with the L2 as measured by their exposure and use of the language might be a stronger predictor for the acquisition of this specific structure.

In conclusion, results from the present study showed difficulties with clitic production and intuition among Chinese-speaking learners of Spanish. While the CSLs showed avoidance of clitic use as a strategy of anaphoric object realization, the semantic features regulating clitic use and intuition appear to remain underspecified in the learners' Spanish grammar, as predicted by the FRH. This underspecification might stem from crosslinguistic influence and existing differences between Chinese and Spanish regarding the lexical

encoding of definiteness and specificity (Iverson & Rothman, 2015; Slabakova, 2009). While crosslinguistic influence was partially mitigated with learners demonstrating that Spanish does not allow definite or specific object drop, its impact persisted in the acquisition of the semantic distribution of overt and null clitics. In comparison with prior research, our study indicates that classroom instruction might increase the learners' awareness of using overt objects but does not seem to influence the reassembly of semantic features into accusative clitics in their Spanish grammar. From a developmental perspective, the results suggest that the Chinese-speaking learners of Spanish seemed to realize the need for an overt object, but they did not acquire the other two steps necessary to acquire target-like clitic use, namely choosing clitics as the preferred option for anaphoric objects and being aware of the semantic constraints on the distribution of overt/null clitics. Finally, we did not find an effect on language proficiency in the learners' productive or receptive grammatical knowledge.

There are some limitations of the study. As noted by a reviewer, the number of test tokens included per condition is relatively small. While the study's findings align with our hypotheses, a larger number of test tokens could have strengthened the validity of our conclusions. For instance, we observed interactions between proficiency and clitic use in certain conditions but not in others in the SCT. Including more test items would provide a better understanding of whether there is a strong association between proficiency and target clitic use and intuition. Another limitation is the absence of quantified information on the learners' Spanish experience in our analysis. Future research would benefit from examining the effect of these factors on the acquisition of Spanish accusative clitics and their distribution.

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Appendices

A.1. Multinomial regression for question-and-answer task

Equation for DP vs 1:

Fixed Factor	Estimate	SE	Z Value	P Value	Odds Ratio	95 % CI of Odds Ratio	
						2.5 %	97.5 %
(Intercept)	-3.1293	0.3861	-8.104	< 0.001 *	0.0438	0.0205	0.0934
Group (L2)	5.3078	0.4593	11.556	< 0.001 *	201.9048	81.9461	497.46782

Equation for null vs 1:

Fixed Factor	Estimate	SE	Z Value	P Value	Odds Ratio	95 % CI of Odds Ratio

						2.5 %	97.5 %
(Intercept)	-19.89	1646.12	-0.012	0.99	< 0.001	0.000	Inf
Group (L2)	19.64	1646.12	0.012	0.99	337209900	0.000	Inf

Approximate residual Deviance: 274.6

Number of Fisher scoring iterations: 18

Number of observations: 358

A.2. GLMM for between-group analysis of EPT data

Fixed Factor	Estimate	SE	Z Value	P Value	Odds Ratio	95 % CI of Odds Ratio	
						2.5 %	97.5 %
(Intercept)	2.7357	0.7523	3.637	< 0.001 *	15.4208	3.51915	73.666
Group (L2)	-2.5309	0.9809	-2.580	0.0099 *	0.0796	0.01019	0.548
Condition (+def, +spe)	0.3329	0.3687	0.903	0.3666	1.3951	0.65983	3.027
Condition (-def, -spe)	-4.3017	0.4324	-9.948	< 0.001 *	0.0135	0.00524	0.030

Random effects:

Groups	Variance	Standard Deviation
Participant (Intercept)	9.632719	3.10366
Item (Intercept)	0.007461	0.08638

Number of observations: 685; participant: 47; item: 15

AIC: 480.0

BIC: 507.1

A.3. GLMM for within-group analysis of EPT data

Fixed Factor	Estimate	SE	Z Value	P Value	Odds Ratio	95 % CI of Odds Ratio	
						2.5 %	97.5 %
(Intercept)	-1.1390	0.8693	-1.310	0.1901	0.3201	0.05826	1.7590
Condition (+def, +spe)	0.2806	0.5265	0.533	0.5941	1.3239	0.4718	3.7151
Condition (-def, -spe)	-0.7414	0.5386	-1.376	0.1687	0.4764669	0.1658	1.3693
DELE	0.1899	0.8614	0.220	0.8255	1.2091	0.2235	6.5415
Condition (+def, +spe) × DELE	1.4464	0.5699	2.538	0.0112 *	4.2476	1.3900	12.9799

Condition (-def, -spe) × DELE	1.4167	0.5749	2.464	0.0137 *	4.1237	1.3362	12.7256

Random effects:

Groups	Variance	Standard Deviation
Participant (Intercept)	13.44061	3.6661
Item (Intercept)	0.06512	0.2552

Number of observations: 370; participant: 26; item: 15

AIC: 266.6

BIC: 297.9

A.4. Ordinal regression for between-group analysis of AJT data

Fixed Factor	Estimate	SE	Z Value	P Value	Odds Ratio	95 % CI of Odds Ratio	
						2.5 %	97.5 %
Grammaticality (Ung.)	-6.3133	0.3025	-20.870	< 0.001 *	0.0018	428.6157	0.0000
Group (L2)	-2.4581	0.4476	-5.491	< 0.001 *	0.0856	10.5879	0.0007
Condition (+def, +spe)	0.1553	0.2065	0.752	0.45206	1.1680	0.8615	1.5834
Condition (-def, -spe)	-0.6028	0.1997	-3.018	0.003 *	0.5473	1.7836	0.1679
Grammaticality (Ung.) × Group (L2)	5.7123	0.3193	17.891	< 0.001 *	302.5623	0.0042	22035470

Threshold coefficients:

Threshold	Estimate	SE	Z Value
1|2	-7.0546	0.4296	-16.420
2|3	-4.4440	0.3932	-11.303
3|4	-3.3349	0.3832	-8.702
4|5	0.1026	0.3539	0.290

Random effects:

Groups	Variance	Standard Deviation
Participant (Intercept)	1.82230	1.3499
Item (Intercept)	0.07592	0.2755

Number of observations: 1128 (98 observations deleted due to missingness)

Participant: 47; item: 24

AIC: 2230.96

A.5. Ordinal regression for within-group analysis of AJT data

Fixed Factor	Estimate	SE	Z Value	P Value	Odds Ratio	95 % CI of Odds Ratio	
						2.5 %	97.5 %
Grammaticality (Ung.)	-0.25382	1.46486	-0.173	0.8624	0.77583453	1.2759031	0.4717593
Condition (+def, +spe)	0.19946	0.41981	0.475	0.6347	1.22073755	0.8257445	1.804675
Condition (-def, -spe)	-1.00272	0.41708	-2.404	0.0162 *	0.36687881	2.6184398	0.05140468
DELE	-0.04729	0.07137	-0.663	0.5075	0.95380692	1.0464469	0.8693682
Grammaticality (Ung.) × Condition (+def, +spe)	-0.19467	0.59176	-0.329	0.7422	0.8231094	1.2054736	0.5620273
Grammaticality (Ung.) × Condition (-def, -spe)	0.38211	0.58137	0.657	0.5110	1.46537111	0.692941	3.098839
Grammaticality (Ung.) × DELE	-0.01134	0.03811	-0.298	0.7661	0.98872548	1.0109441	0.9669952

Threshold coefficients:

Threshold	Estimate	SE	Z Value
1|2	-5.7121	2.7067	2.110
2|3	-4.0486	2.6998	-1.500
3|4	-2.6724	2.6966	-0.991
4|5	0.3886	2.6932	0.144

Random effects:

Groups	Variance	Standard Deviation
Participant (Intercept)	2.1180	1.4553
Item (Intercept)	0.1786	0.4226

Number of observations: 624 (83 observations deleted due to missingness)

Participant: 26; item: 24

AIC: 1393.79

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Project-based learning and young EFL learners: Assessing vocabulary gains and perceptions

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Abstract: Although project-based learning (PBL) has been widely studied in educational settings—particularly for its emphasis on collaboration, autonomy, and other 21st-century skills—its impact on English as a Foreign Language (EFL) learning and specific linguistic components such as vocabulary, remains underexplored. This quasi-experimental study examined the effects of a PBL approach on vocabulary learning and retention among 90 young EFL learners, as well as their perceptions of the methodology. Participants were assigned to either an experimental group, which engaged in a seven-week PBL intervention, or a control group that received traditional coursebook instruction. Vocabulary gains were assessed using immediate and delayed post-tests targeting ten specific words. Results revealed that learners who received PBL instruction made significantly more vocabulary gains in the post-tests than those in the control group, a trend that was sustained in the delayed measures. Additionally, learners in the PBL group displayed positive perceptions of the approach across four dimensions: motivation, organisation, interaction/collaboration, and learning. Findings are discussed in relation to 21st-century skill development, the involvement load hypothesis, and pedagogical implications.

Keywords: *project-based learning, vocabulary learning, PBL perceptions, EFL language learningy.*

Aprendizaje basado en proyectos y aprendientes de inglés como lengua extranjera: evaluación de vocabulario y percepciones

Resumen: Aunque el aprendizaje basado en proyectos (ABP) ha sido ampliamente estudiado en contextos educativos —particularmente por su énfasis en la colaboración, la autonomía y otras competencias del siglo XXI—, su impacto en el aprendizaje de inglés como lengua extranjera (ILE) y en componentes lingüísticos específicos, como el vocabulario, sigue siendo insuficientemente explorado. Este estudio cuasiexperimental examinó los efectos de un enfoque ABP en el aprendizaje y la retención de vocabulario en 90 estudiantes de ILE, así como sus percepciones sobre esta metodología. Los participantes fueron asignados a un grupo experimental que completó una intervención ABP de siete semanas de duración, o a un grupo de control que recibió instrucción tradicional basada en libro de texto. El aprendizaje de vocabulario se evaluó mediante pruebas inmediatas y diferidas centradas en diez palabras específicas. Los resultados revelaron que los estudiantes que recibieron instrucción mediante ABP obtuvieron ganancias de vocabulario significativamente mayores en comparación con el grupo de control, tendencia que se mantuvo en las mediciones diferidas. Asimismo, los estudiantes del grupo ABP manifestaron percepciones positivas sobre el enfoque en cuatro dimensiones: motivación, organización, interacción/colaboración y aprendizaje. Los hallazgos se relacionaron con el desarrollo de competencias del siglo XXI, la hipótesis de "involvement load", e implicancias pedagógicas.

Palabras clave: *aprendizaje basado en proyectos, aprendizaje de vocabulario, percepciones sobre el ABP, aprendizaje del inglés como lengua extranjera .*

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1. Introduction

Over the last 20 years, the academic goals of learners have been reframed to meet evolving needs. The advent of 21st-century skills—e.g., creativity, collaboration, problem-solving, self-direction, autonomy, critical thinking strategies, social and communication skills, and digital literacy—has been found to successfully address the challenges of the globalised world (Boss & Krauss, 2022; Boss & Larmer, 2018). In line with this, project-based learning (PBL) was introduced in educational settings as a collaborative learning approach that prompts groups of learners to cooperate towards reaching a shared goal and allows them to experience their learning process as both active and reflective agents (Helle et al., 2006). As Dooly (2013) stated, "project-based learning is founded on contextualised, learner-centred outcomes and social practices that emerge as the participants collaboratively move toward shared goals and output" (p. 78). Therefore, the teacher does not assume a central role in the learning process and thus can focus on providing support and guidance regarding emerging questions or problems presented by the project, while students are exposed to authentic resources in a targeted content area (Boss & Larmer, 2018). In English as a Foreign Language (EFL) settings, PBL is a methodology that prompts students to engage with constant input as they work on a product that encourages them to use the L2. Since PBL is regarded as "a versatile vehicle for fully integrated language and content learning" (Stoller, 1997, p. 2), L2 vocabulary learning emerges as a feature that can benefit from the approach. In EFL classrooms, the coursebook provides content and practice activities for linguistic skills at specific levels. However, Nunan (2017) argued that "language learning aptitude is not a unitary construct" (p. 76), which implies that children differ cognitively from one another and present a diverse set of learning skills. A PBL approach is well equipped to cater to diverse learning styles and nurture a variety of learning skills. Moreover, research in EFL contexts suggests that learners who are exposed to PBL activities develop 21st-century skills that help them improve their linguistic skills and outperform learners who are taught through traditional teaching methodologies (Artini et al., 2018; Torres & Rodríguez, 2017).

A focus on vocabulary learning is warranted in EFL settings. Vocabulary is "the basic building block of language, the units of meaning from which larger structures such as sentences, paragraphs and whole texts are formed" (Read, 2000, p. 1). When children are exposed to books, they make an effort to increase their vocabulary, which is key to achieving communication (Webb & Nation, 2017). In line with this, Nation (2002) regards vocabulary as an indispensable component for language learning that is as crucial as the four skills of English (speaking, reading, writing, and listening), since the lack of vocabulary knowledge greatly hinders either proper communication or comprehensive understanding. Thus, it becomes relevant to seek teaching methodologies that can enhance young learners' L2 lexical processing. In this respect, a PBL approach with a focus on lexical development is supported by theoretical foundations. The involvement load hypothesis (Hulstijn, 2013; Laufer & Hulstijn, 2001) identifies three components, namely, "need", "search", and "evaluation", that can increase or decrease vocabulary learning depending on the extent of their presence

in an instructional task (Wang, 2020). The motivational component of "Need" is high when learners require knowledge of a word to complete a task. "Search" is a cognitive factor that is heightened when learners search for a word or ask a teacher for its meaning (as opposed to being given the translation in a text). Finally, the cognitive component of "Evaluation" is high when learners complete activities prompting them to discriminate between lexical items (e.g., fill-in-the-blank activities). The involvement load hypothesis has received support from the literature, with meta-analyses finding that learners make more vocabulary gains when the activities they complete have higher involvement load profiles (Yanagisawa & Webb, 2021). In line with this, when learners in a PBL approach seek to collaboratively access the meanings of specific vocabulary items to successfully complete a project, they activate deeper word processing that can promote lexical learning. Although PBL has been firmly established as a collaborative, learner-centred methodology in educational settings, studies addressing the impact of the approach on specific linguistic components such as L2 vocabulary in EFL settings are scarce in young EFL learning contexts. Research addressing young learners' vocabulary gains and their perceptions of the approach can shed light on these learners' lexical gains and attitudes towards PBL and can contribute to research providing theoretical reasoning when linking PBL and L2 vocabulary development. Such an approach gains further relevance in EFL contexts such as Chile, where much of the interaction that students typically have with the L2 occurs within the confines of the classroom (Cancino & Panes, 2021), and where the benefits of project-based interaction can further boost language learning. Therefore, this study sought to compare the vocabulary learning and retention of primary EFL learners assigned to either a PBL group or a group receiving regular coursebook instruction, as well as to assess the PBL group's perceptions of the learning approach. The study addressed the following research questions:

> RQ1: Do primary EFL learners learn and retain more words when exposed to a PBL approach than when exposed to coursebook-based lessons?
>
> RQ2: What are primary EFL learners' perceptions of the PBL approach?

2. Literature review

2.1 Project-based learning: Key aspects

Project-based learning (PBL) can be defined as "an inquiry-based instructional method that engages learners in knowledge construction by having them accomplish meaningful projects and develop real-world products" (Guo et al., 2020, p. 2). Thomas (2000) regarded projects as "complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities" (p. 1). Some PBL projects are closely supervised by the teacher, while in some cases, decisions are made jointly by students and teachers. In contrast, certain projects are highly unstructured, with students having the freedom to decide on project objectives (Stoller, 2006). A project typically starts with a driving question that seeks to address a challenging problem. Driving questions organise and contextualise the learning goals in a project while awakening curiosity in learners (Boss & Larmer, 2018; Krajcik & Mamlok-

Naaman, 2006). Even when the teacher proposes the driving question, students should formulate their own questions at the beginning of the project, which will be answered as they complete the activities. Boss and Larmer (2018) highlight the importance of learner-generated questions and state that enough time needs to be allocated for learners to ask questions and think critically about how they can answer the driving question. Authenticity is pivotal in the process because a project should address a real-world context or be connected to students' personal lives in some manner. This aspect makes a project unique, boosts motivation, and enhances the feeling of achievement, as students know they are attempting to solve a real-life problem (Larmer et al., 2015). Similarly, a teacher-guided reflective stage is crucial in the PBL methodology, as it allows students to address emerging issues critically, find possible solutions, and evaluate whether the strategies used to solve an issue are appropriate (Larmer et al., 2015). Furthermore, PBL encourages learners to develop techniques to critically evaluate themselves and their peers, and to receive feedback from experts and teachers (Boss & Larmer, 2018; Stoller & Myers, 2019). Thus, PBL is intentionally carried out in groups to "harness the social power of learning" (Boss & Larmer, 2018, p. 82) and promote cultural diversity. The final product can "range from a physical artefact to an event or performance to the presentation of a solution to a problem" (Larmer et al., 2015, p. 86). Under ideal circumstances, the product should be shared with a community to reach people beyond the classroom and further reinforce its authenticity (Boss & Larmer, 2018).

2.2 PBL applications in educational settings

PBL has been adopted in most educational contexts and subject areas of the curriculum (Bender, 2012). It has been extensively applied in Science, Technology, Engineering, and Mathematics (STEM) subjects, where a hands-on approach is commonly preferred (Erdogan & Bozeman, 2015). There is ample research addressing the impact of PBL in these contexts, with results reporting that learners increase academic achievement when constructing their own learning and adapt their learning behaviours to accomplish project goals (Hsu et al., 2014; Kaldi et al., 2011; Karaçalli & Korur, 2014). Moreover, STEM learners have displayed positive perceptions and behavioural intentions towards PBL (Lou et al., 2011; Wurdinger et al., 2007). In second/foreign language learning settings, PBL appeared as a more communicative approach to English language teaching in the mid-seventies, where concepts such as teaching in a learner-centred environment and the importance of fostering learners' autonomy caught the eye of educators. Beckett and Slater (2005) indicated that it is crucial for teachers to foster students' awareness on how a second/foreign language is learnt through PBL. The four language skills are improved when using PBL since learners acquire and use language functionally (Stoller, 2006). Additionally, PBL provides students with opportunities to use the L2 in real-world environments as written and spoken output (Beckett & Slater, 2005; Slater & Beckett, 2019). Thus, Stoller and Myers (2019) created a framework based on five stages derived from earlier models that introduced PBL in language classrooms (Papandreou, 1994; Sheppard & Stoller, 1995; Stoller, 1997). The adapted steps included preparation, information gathering, information

processing, information display, and reflections. This framework considers the interactive and collaborative essence of PBL, the scaffolding instructions students need, the skill and planning needs at each stage, and the types of reflective/evaluative project feedback at the end of the project. The PBL stages also encourage autonomy, but language development is at the centre of the learning process so that teachers do not disregard linguistic components while implementing project content (Stoller & Myers, 2019).

2.3 Empirical studies on PBL and EFL learning

Evidence of the impact of PBL on learning has been reported in EFL settings. Artini et al. (2018) sought to assess the effect that PBL had on Indonesian high school EFL learners' productive skills and their attitudes towards PBL. The authors carried out a mixed-methods study with 36 junior high school students, including interviews with teachers and learners, a questionnaire, classroom observation, and productive skill assessment in a pre- and post-test design. Results showed that PBL significantly improved students' speaking and writing performance, while class observation and interview data showed that students were highly motivated when engaging in PBL activities. The researchers concluded that when students are engaged in PBL activities that allow them to connect resources to the real world, they display increased performance and positive perceptions towards the PBL methodology. Similarly, Torres and Rodríguez (2017) conducted an action research study with 30 ninth grade students in a Colombian public school located in a low-income area, aiming to assess the extent to which PBL could foster oral production. The authors presented three projects for the students to choose from, which were related to their community and portrayed a real-life problem to be solved, such as improving students' relationships to avoid hostile situations in class (e.g., peer ridicule over pronunciation), making proposals to improve school problems, and generating involvement in the neighbourhood. The authors collected data through field notes, transcriptions of students' oral production, and student interviews. Results revealed that PBL encouraged learners to increase their oral production through vocabulary learning, and that the collaborative aspect of PBL was key to increasing learning and engagement since the participants helped each other with L2 vocabulary to create interviews for the projects. Also with a focus on speaking, Benlaghrissi and Ouahidi (2024) implemented a mobile-assisted PBL approach with 91 Moroccan secondary school students. Speaking test results showed that the experimental group, which received PBL instruction through mobile-assisted projects, outperformed the group taught using only PBL and the group receiving traditional instruction. Interestingly, the group that received only PBL instruction also outperformed the group receiving traditional instruction, confirming PBL's potential to enhance speaking performance, as documented in the literature (Shi et al., 2024). Turning to writing outcomes, meta-analyses on the impact of PBL on writing have reported positive effects of the approach. For example, Cahyono et al. (2024) argued that better learning outcomes can occur when learners work on projects that are relevant to their interests, as they increase engagement and direct greater effort into their writing activities (Aubrey, 2022). In line with this, Alemneh & Gebrie (2023) found that the writing and sub-writing abilities (i.e., content, organisation of

ideas, word choice) of tenth-grade L2 learners improved after a three-month exposure to a PBL approach. The authors conclude that the impact of the PBL approach should consider the level of proficiency of the participants, as lower proficiency learners may not fully take advantage of PBL for writing development.

Focusing on vocabulary learning as a linguistic component, Shafaei and Rahim (2015) conducted a quasi-experimental study to evaluate the impact of a five-week PBL approach on the vocabulary learning and retention of 40 Iranian EFL private school learners whose ages ranged between 16 and 18 years old. Students were randomly separated into two groups of 20 students. One group was taught by means of a PBL methodology involving group work with four or five students, presentations, and activities involving magazines, newspapers, videos, and journals, while the other group received traditional, coursebook based lessons. Participants' vocabulary gains were assessed through 30 lexical items in an EFL coursebook. Post-test results indicated that the treatment group outperformed the control group in both recall and retention rates, although scores were somewhat reduced in both groups for the latter, perhaps due to the eleven weeks that elapsed between immediate and delayed post-tests. No effect size was reported, which would have been helpful to evaluate the impact of the vocabulary gains considering the somewhat reduced number of participants in each group. Addressing the impact of a PBL methodology that included digital storytelling, Nami and Asadnia (2024) assessed the vocabulary learning of 146 non-major English students. By means of vocabulary tests, reflective journals, and interviews, the authors found that learners who processed the words through collaborative digital storytelling outperformed learners who only used flashcards to learn target lexical items. Also focusing on PBL through digital storytelling, Kristiawan et al. (2022) employed a qualitative approach to assess vocabulary gains. Analysis of focus group interview data, reflective journals, and classroom interactions showed that digital storytelling embedded in a PBL methodology prompted learners to express their cultural identity, increased their motivation, and helped develop a bridge between familiar and unknown EFL vocabulary. Finally, Gómez-Ortiz et al. (2023) implemented a PBL methodology based on Instagram to explore the perceptions of 75 undergraduate learners regarding English for specific purposes vocabulary gains. Survey results revealed that learners displayed positive perceptions of technical vocabulary learning through their Instagram accounts. However, a more quantitative treatment of concrete vocabulary learning would have contributed further to validating the survey results.

Research has explored students' perceptions about PBL with respect to critical thinking, motivation, learning, and 21st century skills. Song et al. (2025) reported that college EFL learners significantly increased their critical thinking after being exposed to an 11-week online PBL course with critical thinking components. The authors also found that EFL teachers may face challenges in assessment and implementation when employing the approach. García-Varcálcel and Basilotta (2017) administered a survey assessing motivation, organisation, interaction/collaboration, and learning in relation to PBL projects with 364 learners in fifth and sixth grade in a Spanish primary school. Their results suggested that students highly valued the PBL methodology in the four dimensions identified by the

authors, particularly in the interaction/collaboration and motivation components. Similar results were reported by Yamada's (2021) study with 73 EFL high-school students. The author found that after participating in a seven-month project involving EFL and home economics (world food production), students valued the collaborative learning environment the most during the project. They also valued 21st-century skills (e.g., decision-making, analytical, and problem-solving skills) along with their motivation to learn English. Yamada concluded that PBL triggers the embracing of more active EFL learning methodologies because "team learning encourages even passive students who are accustomed to traditional one-way lectures to actively engage in PBL" (p. 14). To sum up, PBL has been positively regarded in EFL settings regarding motivation, interaction, collaboration, and 21st century skills. PBL is perceived as a methodology that nurtures a student-centred environment and prompts student collaboration and engagement. The empirical data reviewed suggest that PBL may help EFL learners improve their oral production and support learning, but research assessing the impact of PBL on vocabulary learning along with several dimensions of PBL perceptions in younger EFL learners is scarce. Most of the findings on PBL in EFL settings address perceptions of EFL learners, which calls for quasi-experimental studies that can assess specific linguistic outcomes.

3. Methodology

3.1 Research design

The present study applied a quasi-experimental design with four intact classrooms divided into an experimental group ($n = 47$) that was exposed to a PBL approach and a control group ($n = 43$) that received traditional coursebook instruction. Convenience sampling was used to select the sample, as the researchers were granted access to the educational institution. The treatment (PBL) group received instruction through a PBL methodology for seven weeks, while the control group received regular coursebook instruction for the same duration. Both the PBL and control groups were exposed to ten previously unknown target words that were later assessed by means of immediate and delayed vocabulary tests.

3.2 Participants and context

The participants in this study were 90 students (47 females and 43 males) in fourth grade (9-10 years old) at a private Catholic school in Chile. The school is a private institution but welcomes learners from lower socioeconomic levels and offers scholarships and flexible payment schemes. The school provides kindergarten, primary and secondary education along with EFL instruction starting in kindergarten. From first to sixth grade, students attend five hours of English a week including one hour in a computer laboratory. Students in all levels use traditional coursebooks portraying activities that are to be completed individually. Although the school adheres to government guidelines to teach EFL with a focus on providing learners with reading and listening activities, it began implementing PBL in 2017, when a six-year plan to include the approach in the institutional project was introduced. The SARS-CoV-2 pandemic prevented participants in the study to

engage with PBL projects in previous years, so they were not familiarised with such approaches. Nonetheless, the school requires its EFL teachers to hold CEFR (Common European Framework of Reference for Languages) Level C1, which suggests that these students have had opportunities to develop accurate linguistic knowledge during their classroom interactions. Furthermore, their teachers reported high levels of participation and engagement with the target language, which was confirmed by the learners' previous grades. The baseline proficiency of the participants was controlled by means of the reading and writing section of the Cambridge English (n.d.) Pre-A1 Starters test. The test was administered to 144 students, and those whose scores fell within one standard deviation of the mean (M = 18.93; SD = 4.31) were selected for inclusion in the study (n = 90).

3.3 Instruments

3.3.1 Baseline target word test

The lexical items selected for this study were ten words taken from unit five "I'm at the canteen" of the coursebook *Learn with Us 4* (Oxford University Press, 2019). Lee and Pulido's (2017) translation production test was first modified to be used as a baseline target word test with 24 coursebook words from unit five. Participants read an L2 word and were asked to circle the word "yes" and provide an L1 (Spanish) translation or explanation if the word was known, or circle "no" if the word was unknown. Words that were correctly translated or explained received one point, while incorrect guesses received no points. The scoring was carried out by both researchers, and any disagreement was discussed and resolved before calculating scores. The instrument was presented with instructions in the learners' L1 to reduce comprehension issues. A sample item is provided below:

1.-	*Healthy*
Yes	No
Translation or explanation in Spanish:	

Prior to its administration, the baseline target word test was piloted with 35 fifth grade students from the same school population. The pilot feedback focused on modifying item format to facilitate responses, and the replacement of the word "dine", which was very similar to the noun "dinner" included in the example item. No other comprehension issues were reported by the pilot participants. Baseline results revealed that the ten target words for which learners showed no prior knowledge were *nuts*, *raisins*, *grapes*, *butter*, *seeds*, *puddings*, *biscuits*, *sweetcorn*, *dairy*, and *healthy*.

The selected target words included eight nouns and two adjectives. The list contains three one-syllabled words, and seven two-syllabled words. According to Nation's (2012) BNC/COCA corpora of most frequent word families, two words ("healthy", "sweetcorn") are found in the 1000 most frequent word families, five words ("biscuits", "butter", "nuts", "puddings", "seeds") in the 2000 most frequent word families, two words ("dairy", "grapes") in the 5000 most frequent word families, and one word ("raisins") in the 8000 most frequent word families. Comparability was ensured, given that the target words were the same for

both groups and the baseline proficiency of learners in both groups was similar. Moreover, ecological validity was considered in the study, as the target words belonged to the unit that the participants had to review in the semester as part of the coursebook syllabus.

3.3.2 Translation production post-test

Lee and Pulido's (2017) translation production instrument was also adapted as a post-test to assess immediate learning of the ten target words (two hours after the treatment was completed) and delayed retention (two weeks after the immediate post-test). The instructions and procedures of the instrument were identical to the ones used in the baseline target word test, where learners were asked to provide an L1 translation or explanation of the word. Immediate and delayed post-tests only included the ten target words identified for the study.

3.3.3 Receptive knowledge of meaning and form (RKMF) post-test

A more sensitive vocabulary measure was also administered as a post-test. The receptive knowledge of meaning and form test (Webb, 2007) was adapted following Laufer and Goldstein (2004) and Lee and Pulido (2017) to evaluate passive word recognition. In the instrument, the target word is provided as the L2 prompt in a multiple-choice format with five L1 options. The distractors for the multiple-choice items fulfilled various aspects. They belonged to the same part of speech as the target word so that participants could activate partial knowledge of a word to select the correct answer (Webb, 2007). Lee and Pulido (2017) posited certain criteria for the distractors, along with the correct answer and a fifth option, "I don't know," which helps reduce guessing. An example item is provided below for the word "grapes":

a) frutillas	A distractor contextually proximate to the target word ("strawberries")
b) uvas	Correct answer
c) grados	A distractor phonologically or orthographically close to the TW either in the L1 or L2 ("grades")
d) puertas	A distractor not sharing any semantic or phonological relation to the target word ("doors")
c) no sé	(I don't know)

3.3.4 PBL perceptions survey

A survey assessing perceptions towards PBL (García-Varcálcel & Basilotta, 2017) was adapted for the study. The instrument explores participants' perceptions of PBL in four distinct dimensions: Motivation (how engaging the project was for students; items 1, 4, 8, and 10), Organisation (the organisation of the different tasks they achieved in the project; items 2, 12, 16, and 18), Interaction/Collaboration (the interaction and cooperation among the students and between students and teachers; items 11, 13, 14, 15, 17, and 19), and Learning (how meaningful the learning achieved in the project was for students; items 3, 5, 6, 7, and 9). The survey employs a semantic differential scale that uses pairs of opposite statements on a scale from 1 (most negative statement) to 7 (most positive statement). Some changes were made to the instrument to improve comprehension. Certain verb

tenses were modified to fit Chilean Spanish, and an item assessing reading ("I read a little/I read a lot") was removed since reading was not a skill that was explicitly encouraged by the teacher for the type of project selected. Thus, the questionnaire administered to the PBL group included 19 items in total (see appendix A). The reported Cronbach's alpha for the instrument in García-Varcálcel and Basilotta (2017) was .91, similar to the .89 value reported for the participants in the present study, which indicates high reliability.

3.4 Procedures

3.4.1 Treatment group activities

A description of the activities and exposure to the target words in each group can be found in appendix B. The activities for the treatment group can be summarised as follows. The project used in the treatment (PBL) group was "Food on wheels", which was adapted from a website providing teaching resources (Teachers Pay Teachers, n.d.). The original project was created for Maths students from fourth to sixth grade, so it was modified to suit the proficiency level and goals of EFL learners and to include the ten unknown target words identified. Based on the resources from the website, 17 modules were created together with a 16-page booklet that was handed to the participants so they could follow the steps required to complete the project. The group worked with a PBL methodology in 21 hours over the course of seven weeks (three hours per week, with classes twice a week). The participants were divided into groups of four students, with each student fulfilling a distinct role to facilitate project completion. Thus, the "supply manager" was in charge of organising all the material needed for the project; the "spokesperson" was in charge of addressing the group's questions to the teacher; the "project manager" coordinated what the group needed to accomplish; and the "timekeeper" organised how much time the group had to complete each activity. The timekeeper used a "Kanban board", which displayed a table with three columns ("to do", "doing", and "done") to organise project tasks. Before role selection, a video was shown to the students detailing the responsibilities and tasks for each role. In order to ensure that learners fulfilled their roles in their groups, the teacher explained the importance of the roles in the project and asked students to wear role tags that were handed out every week by the supply manager. Students chose the roles themselves and kept them throughout the duration of the treatment, which increased their autonomy and agency as decision makers while encouraging collaboration within the group. Role selection was also done in consideration of their young age and to ensure project completion.

At the beginning of every class, students got together in their groups, were given a folder containing the booklet, and received the instructions for the module. The activities the participants completed were focused on a food truck fair as a final product, where students would present a miniature food truck, food made of plasticine, and a menu of their own creation to an audience of students from other classes in the school. In the lessons, students were first asked to watch a video about real food trucks and were prompted to check real restaurant menus and reflect on their own personal experiences. The driving questions (How can we create a successful food truck? How possible is it to

eat fast and healthy food? Why is it important to eat healthy meals?) presented by the teacher were discussed in the groups and then with the whole class to encourage peer feedback. Students were invited to ask more questions about the topic and write them on Post-it notes, which they would stick to a wall. During the course of the project, these questions were read aloud by the teacher and students in the groups tried to answer them with their newly acquired knowledge about food trucks. In the following classes, students brainstormed ideas for their food truck and decided on the type of food they would serve. Students delivered brief presentations of their work as the project progressed so that they could appraise each other's work and provide feedback. Students also practised how to express the value of Chilean money in the L2, as the audience would be buying food from the miniature food trucks using printed play money. Since the proficiency of these young EFL learners prevented them from using the L2 exclusively to interact, using the L1 in the classroom was allowed to discuss the project, but the activities were presented in the L2.

Regarding exposure to the target words, when students started working on the menu for the food truck fair (module 8), they were first exposed to them through a PowerPoint presentation, along with lexical items that were related to the project (e.g., "appetizer", "chopsticks"). Students were asked to include the lexical items throughout the activities as follows. They heard the target words as the teacher presented them together with their corresponding image on the board. Students were asked about the type of food that they were going to offer, and they included the target words in a draft menu where they wrote the words and drew the food items. The teacher monitored whether the students were including the target words in their menus. Students practised the target words when they had to make the food items with plasticine and when they discussed them in the groups and with the teacher. Finally, during the food truck presentation the attendees were given question prompts focused on the ingredients so that the students could provide oral responses that included the target words. All the modules created for the project allowed students to ask for input including the target words in both written and spoken form, in their groups and with the teacher. Although students' projects were evaluated by means of rubrics, students were not assessed on the target words as part of class activities.

3.4.2 Control group activities

The control group was exposed to the same target words, but all the activities were based on the coursebook *Learn with Us 4* (Oxford University Press, 2019), which is part of a six-level English language coursebook series designed for young learners and pre-teens. The coursebook included seven units that were divided into various lessons covering the vocabulary of the unit, grammar points, cross-curricular activities, a story, and a culture and communication section. The unit selected for the control group was "I'm at the Canteen", which was divided into seven lessons. The control group worked on this unit for the same number of hours as the PBL group. A lesson would typically present the vocabulary items and grammar structures of the unit, which were taught through reading and listening activities, repetition, dialogues, songs, and guessing games using grammatical forms (e.g., *Have you got…?*) and tasks included in the workbook. All the

lessons in the control group included oral activities conducted in pairs or groups along with student coursebook practice. The target words were presented to these students along with other related lexical items (e.g., "appliances", "spoon") as they appeared in the coursebook unit lessons and through the different activities completed. For example, students watched videos and completed reading exercises about a canteen in the UK that contained the target words and reviewed cross-curricular content related to healthy eating. They also completed grammar (e.g., countable/uncountable nouns, quantifiers) and vocabulary activities such as crossword puzzles with images and the creation of questions and songs with food-related vocabulary that included the target words. No special focus was placed on the target words by means of summative tests, which helped maintain a similar exposure in both groups.

3.4.3 Data collection and analysis procedures

First, the Pre-A1 Starters test was administered to a larger group of fourth graders ($n = 144$) to control for general baseline proficiency. The participants sharing a similar proficiency level ($n = 90$) were administered the baseline target word test to identify the ten target words in the study. Then, both groups completed the seven weeks of PBL and coursebook instruction, respectively. Once this was achieved, the immediate translation production and immediate receptive knowledge of meaning and form (RKMF) post-tests were administered two hours after the treatment was completed. The PBL group was also administered the PBL perceptions survey. Finally, delayed translation production and RKMF post-tests were administered two weeks later to assess vocabulary retention. From a methodological perspective, the type of learning being assessed was regarded as incidental, as learners were not told in advance that they would be completing vocabulary tests (Laufer & Hulstijn, 2001; Lindstromberg, 2019). Figure 1 displays a summary of the experimental procedures conducted in the study.

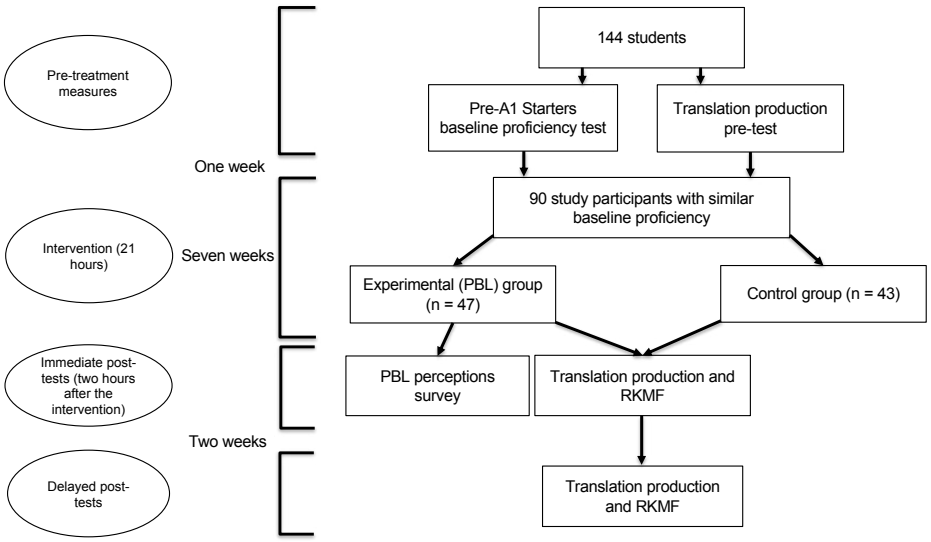


Figure 1. Summary of the experimental procedures.

Descriptive statistics were run with the translation production post-test, the RKMF post-test, and the PBL perceptions survey data. Two mixed 2×2 (treatment × time) ANOVAs were performed to assess the effect of the PBL treatment on the mean gain scores in the translation production post-test and the RKMF post-test across group and time measures.

4. Results

4.1 Descriptive statistics for the translation production and the RKMF post-tests

Table 1 displays descriptive statistics for the gain scores in the translation production and the RKMF post-tests across group and time measures. Results revealed that the treatment (PBL) group consistently outperformed the control group on both the immediate and delayed post-tests. The immediate RKMF post-test data yielded somewhat higher means, which may be due to the multiple-choice format being more receptive in nature when compared to the translation production post-test, which required learners to produce an L1 translation or explanation.

Table 1. Descriptive statistics for vocabulary post-test gain score data across groups and time measures.

Measure	Group	Statistic*	
Immediate translation production post-test	Treatment	Mean	4.36
		SD	2.36
	Control	Mean	2.74
		SD	2.29
Delayed translation production post-test	Treatment	Mean	5.43
		SD	2.34
	Control	Mean	3.93
		SD	2.43
Immediate RKMF post-test	Treatment	Mean	7.70
		SD	1.61
	Control	Mean	6.53
		SD	2.4
Delayed RKMF post-test	Treatment	Mean	7.89
		SD	1.59
	Control	Mean	6.67
		SD	1.95

*The minimum and maximum possible mean scores are 0 and 10, respectively.

4.2 Mixed 2×2 ANOVA for the translation production vocabulary post-test

The mixed 2×2 (treatment × time) ANOVA on translation production gain scores revealed simple main effects for treatment, $F(1, 88) = 11.072$, $p < .005$, $\eta_p^2 = .11$ (medium-large effect) and time $F(1, 88) = 44.394$, $p < .001$, $\eta_p^2 = .34$ (large effect), indicating that learners made significantly greater vocabulary gains in the treatment group ($M = 4.36$) than in the control group ($M = 2.74$). This difference was maintained in the delayed translation production post-test for the treatment ($M = 5.43$) and control ($M = 3.93$) groups. Significant group differences still held in the delayed post-test across treatment measures. Figure 2 displays the mean gain scores across treatment and time measures.

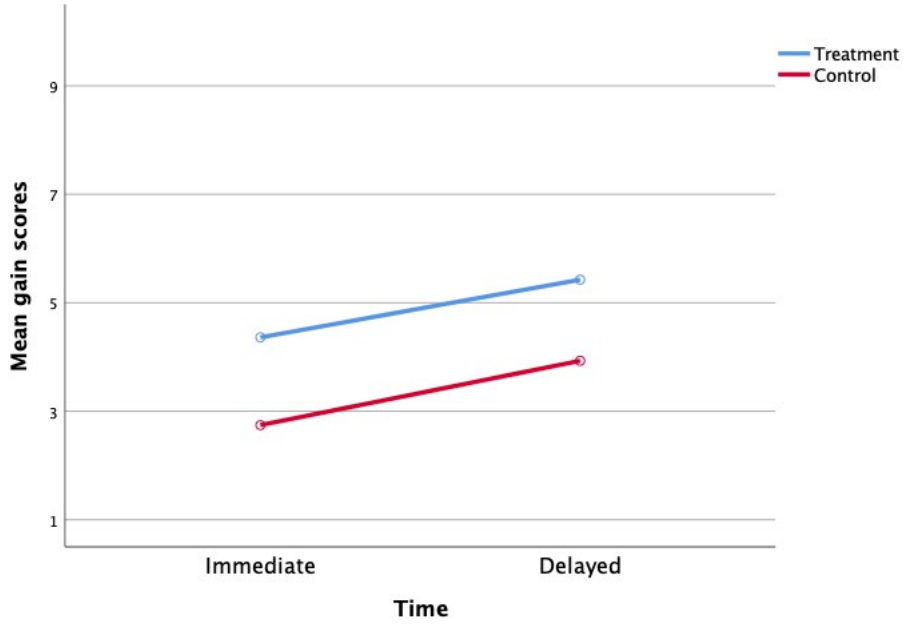


Figure 2. Gain scores for the translation production post-test data across treatment and time measures.

4.3 Mixed 2×2 ANOVA for the RKMF test

The mixed 2×2 (treatment × time) ANOVA run with the RKMF post-test reported a simple main effect for treatment, $F(1, 88) = 11.029$, $p < .005$, $\eta_p^2 = .11$ (medium-large effect), but not for time $F(1, 88) = .844$, $p = .361$. This result indicates that for the immediate vocabulary measure, learners once again made significantly more gains in the treatment group ($M = 7.7$) than in the control group ($M = 6.53$), and that this impact was maintained in the delayed measure for the treatment ($M = 7.89$) and control ($M = 6.67$) groups. The significant difference between the groups was maintained across time measures. Figure 3 displays this trend.

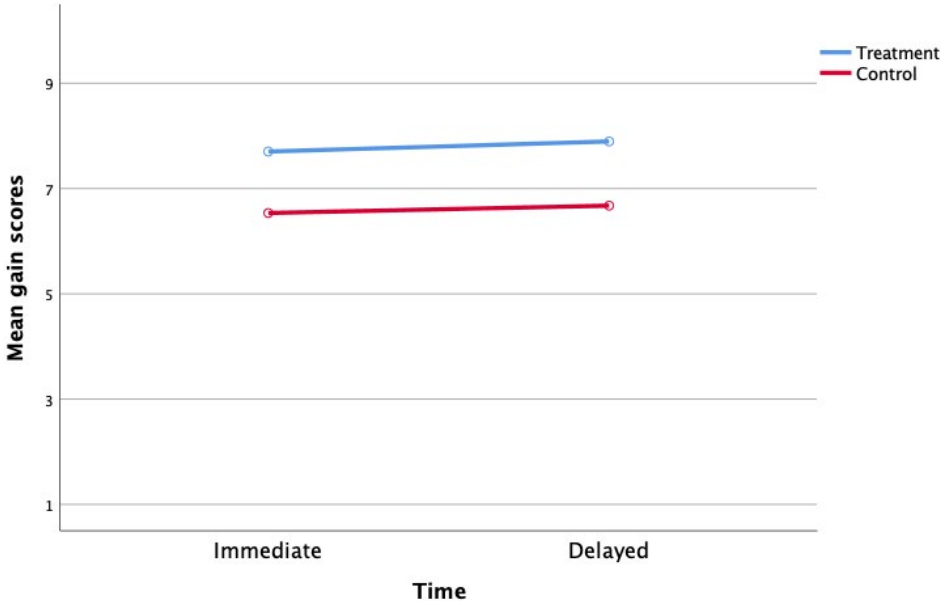


Figure 3. Gain scores for the RKMF post-test across treatment and time measures.

4.4 Descriptive statistics for PBL perceptions survey

Table 2 displays descriptive statistics for the PBL perceptions survey in the four assessed dimensions and the total mean score. Results indicate that the mean score for the four components was high, which is confirmed by the total mean score ($M = 6.09$; $SD = .66$). The highest mean score is found in the organisation component, followed by motivation, interaction/collaboration, and learning.

Table 2. Descriptive statistics for PBL perceptions survey.

	N	Minimum	Maximum	Mean*	SD
Motivation	47	2.25	7.00	6.15	.87
Organisation	47	4.75	7.00	6.24	.63
Interaction/Collaboration	47	3.17	7.00	6.05	.83
Learning	47	4.20	7.00	5.96	.69
Total mean score	47	4.21	6.95	6.09	.66

*The survey scale's minimum and maximum possible values are 1 and 7, respectively.

5. Discussion

The first research question concerned the impact of PBL on L2 vocabulary learning. The main effect for treatment found in the 2×2 Mixed ANOVAs across time measures revealed that PBL had a significant impact on the (immediate and delayed) vocabulary gains made by these learners. That is, participants learnt and retained more words when they were

exposed to a PBL methodology than when they were exposed to regular coursebook practice. The academic achievement enhanced by a project-based methodology has been reported in previous studies in STEM settings (Hsu et al., 2014; Kaldi et al., 2011; Karaçalli & Korur, 2014), EFL settings (Benlaghrissi & Ouahidi, 2024; Song et al., 2025), and L2 vocabulary learning settings (Kristiawan et al., 2022; Nami & Asadnia, 2024; Shafaei & Rahim, 2015). Interestingly, unlike the findings of Shafaei and Rahim (2015), participants in both groups did not show a decline in their retention test scores and, in fact, demonstrated significant gains in the translation production post-test. Although the delayed post-tests were administered two weeks after the immediate post-tests, learners in both groups may have continued to have exposure to the target words after the treatment (Loewen & Plonsky, 2016). In addition, the nature of the experimental design—which included the target words as a baseline test, an immediate post-test, and a delayed post-test—may have caused a test effect whereby "learners improve simply through exposure to the same test items" (Loewen & Plonsky, 2016, p. 48). Although separating the delayed post-test from the immediate test may reduce memory effects, significant group differences emerged in the immediate post-tests and were sustained in the delayed measures.

The results can be explained in terms of the characteristics of PBL practice that are developed in line with 21st-century skills and have been found to support learning in this context, namely collaboration, problem solving, social skills, and autonomy (Boss & Larmer, 2018; Boss & Krauss, 2022). First, a skill such as collaboration is deeply entrenched in PBL, as socialising the knowledge is crucial for learners to achieve a higher developmental stage while interacting with peers (Vygotsky, 1978). Boss and Larmer (2018) and Bringle and Hatcher (2009) have underscored the role of collaborative learning and the academic benefits that students can achieve through social interaction. This is supported by research in EFL settings, which suggests that the collaborative co-creation inherent in PBL can enhance language learning by encouraging learners to share responsibility in completing tasks and engage in culturally relevant, scaffolded activities that foster lexical development (Kristiawan et al., 2022). Moreover, the social learning environment nurtured in the PBL context supported meaning-making and the active construction of vocabulary knowledge (Lee et al., 2021; Nami & Asadnia, 2024). Second, problem-solving was developed by these learners as they worked on the driving questions identified at the beginning of the project. These questions increased learners' curiosity towards the topic of the project and served as an agent of motivation (Krajcik & Mamlok-Naaman, 2006) to process the target words. The food-themes project that was implemented in the study involved hands-on activities such as creating food-trucks and menus, which allowed learners to connect new lexical items to referents in the real world, and internalise those meanings through active use. Third, addressing real-world problems fostered the development of social skills relevant to EFL learning, as learners jointly participated in a language project connected to their community and explored how their school could benefit from it (Torres & Rodríguez, 2017). Thus, the project was connected to the real world and students thought that what they were doing was relevant (Bell, 2010), which may have increased their motivation in the activities and, consequently, their engagement with the target words. Social skills

were also developed when learners asked for input in both written and spoken form as part of the PBL group activities, helping them develop stronger form-meaning connections (Uchihara et al., 2022). Finally, the authenticity of the materials, the language used, and the final product created by learners supported their EFL learning and increased autonomy through a sense of ownership with the learning process (Artini et al., 2018; Nami & Asadnia, 2024; Shi et al., 2024). Larmer et al. (2015) argued that authentic activities that are directly connected to the real world can make a project meaningful through student-centred learning experiences. That is, the self-directed, real-life decisions made by these learners helped them make their learning more meaningful and relevant (Boss & Krauss, 2022), which prompted better target word learning and retention. Establishing a connection with real-world contexts is essential, as learners' ability to construct meaning and develop critical thinking are life skills that extend beyond the classroom and remain valuable throughout their lives (Gómez-Ortiz et al., 2023).

The involvement load hypothesis (Laufer & Hulstijn, 2001; Hulstijn, 2013) offers a theoretical lens for explaining the greater target word engagement and vocabulary gains observed in the PBL group. The activities completed by the participants in the PBL group included a high involvement load in the components of Need (learners needed to engage with the meanings of the target words to complete the activities for the project), and Search (learners had to ask the teacher for the meaning of the target words or look them up in the digital materials created by the teacher). While the component of Evaluation was reduced in the PBL group (learners did not complete target word discrimination activities), it can be argued that the motivational impact of Need in a PBL approach is stronger than in regular coursebook instruction. Higher target word engagement in the PBL group seems to provide support for this proposition. Although previous studies have reported high levels of student motivation towards PBL (García-Varcálcel & Basilotta, 2017; Yamada, 2021), no quasi-experimental studies including a control group to assess motivation have been conducted, perhaps due to the difficulties in administering a single instrument that can cater for motivation in both conditions. Nevertheless, these young learners increased vocabulary gains in the PBL group because they sought to access the meanings of the target words so that they could successfully complete the final product. The finding highlights the relevance of motivational aspects in activating deeper word processing levels.

The second research question addressed primary EFL learners' perceptions of the PBL approach. In line with García-Varcálcel and Basilotta (2017), results in the PBL perceptions survey revealed that participants displayed positive perceptions towards PBL in the components of motivation, organisation, interaction/collaboration, and learning. Participants reported that they were informed about the steps they had to follow and the roles they had to fulfil throughout the project (e.g., $M = 6.6$ for item 12: "The teacher did not give us clear instructions/The teacher clearly explained what we had to do"). This aspect may have boosted their confidence when completing the tasks and engaging with L2 linguistic items and structures (Stoller, 2006). The completion of the project involved an organised sequence of self-directed decisions and actions that actively engaged participants and increased their intrinsic motivation, which supported cognitive development (Ocak &

Uluyol, 2010). In line with this, the vocabulary gains made by these learners as they engaged with the project were a source of motivation for them as they processed and internalised more lexical items into their repertoire and felt more proficient (Webb & Nation, 2017). High levels of motivation can also influence the interaction/collaboration dimension, as PBL encourages learners to engage actively with peers and the teacher in working toward a shared final product (e.g., $M = 5.93$ for item 15: "We didn't do a good job with the project working as a team/We did a good job with the project working as a team"). These results are supported by studies reporting that PBL environments promote collaborative skills, engagement, and positive attitudes towards teamwork in an engaging workspace (García-Varcálcel & Basilotta, 2017; Liu et al., 2022). Students also reflected on their work and acknowledged feedback from the teacher (e.g., $M = 6.15$ for item 9: "The teacher did not tell us anything about the quality of our work/The teacher told us what we were doing right or wrong with our work"), which allowed them to assess whether the strategies they were using were appropriate for their project (Larmer et al., 2015). Learners were allowed to reflect on their vocabulary learning experiences and seek strategies for effective vocabulary learning, which may have been boosted by the collaborative nature of their interactions (Nami & Asadnia, 2024). Thus, this study supports previous findings (e.g., Yamada, 2021) suggesting that learners regard a collaborative learning environment as one of the most positive characteristics of PBL. In a vocabulary learning context, PBL can prompt learners to support each other and share responsibilities to unlock lexical meanings, such as looking up words in a dictionary or contextualising word use (Kristiawan et al., 2022).

The features of PBL discussed above prompted participants to display positive perceptions towards learning (e.g., $M = 5.62$ for item 3: "I learnt fewer things than at other times/I learnt more things than at other times"), as results for the motivation component suggest that the project was interesting (e.g., $M = 6.29$ for item 1: "The project was boring/The project was fun") and that they wanted to continue learning about the topic (e.g., $M = 5.49$ for item 8: "I am no longer interested in the topic of the project/I want to learn more about the topic of the project scored). Since the students were in control of their learning while being guided by the teacher, a positive appraisal of the learning process was created, results that are in line with García-Varcálcel and Basilotta (2017), who reported a high level of student commitment towards autonomous PBL activities. It is worth noting that when autonomous vocabulary learning is complemented by interaction among peers, motivation is increased. In addition, the authenticity of the materials used in the PBL sessions (e.g., plasticine food, food truck) nurtured visual memory, aiding learners in understanding and mentally organising word meanings (Nami & Asadnia, 2024). The positive perceptions expressed by the participants in the study contrast the attitudes reported by Beckett's (2005) participants, who felt that learning English in a conventional manner was more useful for them than with a PBL methodology. The ESL nature of the setting in Becket's study may have prompted the rather negative views towards a PBL methodology. Unlike ESL learners, learners in EFL settings have fewer opportunities to engage in real-world EFL projects outside the classroom (Cancino & Panes, 2021), so they may display higher motivation and greater enjoyment when participating in such projects.

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6. Conclusions and implications for pedagogy

The present quasi-experimental study sought to assess the vocabulary learning and retention gains of two groups of young EFL learners being exposed to PBL and regular coursebook methodology, respectively, as well as to explore learners' perceptions of PBL. Results revealed the significant impact of a PBL methodology over regular coursebook instruction in relation to lexical gains, highlighting the strength of the approach for L2 vocabulary learning and contributing to the scarce evidence reported in the literature. The process of planning, developing, and presenting a project allowed for constant peer feedback, a negotiation of the word meanings to be conveyed, and a systematic revision of the completed work, features that are essential in project-based education (Liu et al., 2022). It must be noted that the results mainly focus on form-meaning connections, and that other aspects such as pronunciation and usage also constitute word knowledge. This approach to word learning was adopted in light of the participants' age and the unfamiliarity of the target words. Learners also displayed positive perceptions towards PBL in EFL environments and suggested additional attitudinal benefits that draw from 21st-century skills and are activated with the methodology. A methodological limitation of the study was related to the number of words that were assessed. Since the selected target words were taken from the coursebook used by learners and had to be unknown to them, lexical variety was somewhat reduced (e.g., no verbs were selected). Although ecological validity for these young learners was addressed in this way, increasing the number of words that are assessed can account for the wider range of lexical items to which learners are exposed in a school year.

A critical takeaway from the study is that EFL teachers can benefit their primary classrooms by including methodologies that go beyond traditional coursebook use and encourage the development of 21st-century skills. This approach does not imply that teachers should choose one methodology over the other, but that there is value in including some of the features of PBL in their lessons. PBL places learners at the centre of the educational experience, as they are decision makers in the design, planning, and execution of a project. Allowing for more autonomy and collaboration in the creation of short-term projects that do not disregard the language learning component of an EFL class will likely support learning and increase young learners' engagement through collaborative work. These "mini projects" can involve creating a poster based on learners' interests, creating a blog with relevant information for the class, or creating a family tree. They can also be more suited for students whose language and/or presentation skills are underdeveloped. Once young learners are familiarised with the basic aspects of PBL, they can move on to more complex projects that can be presented in front of an audience. A crucial aspect is the scaffolding of target lexical words, phrases, and collocations by means of specific strategies (e.g., highlighting) that can increase peer awareness (Nami & Asadnia, 2024). Teachers can also scaffold learning by allowing L1 use when learners discuss the project in their groups and switching to L2 when learners give brief presentations of their work. As PBL methodologies become more ubiquitous when responding to the challenges of the 21st

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century, the role of the teacher becomes key in supporting young learners throughout the steps required to complete a PBL project. Active engagement in young learners is crucial to focus the methodology on the child. Teachers can help accomplish this by designing authentic projects that align with learners' interests, prompting them to contribute to project creation, and ensuring sustained engagement throughout each stage. Although teachers generally value the relevance of PBL methodologies, they can benefit from being trained on how to plan and organise a PBL classroom for children who have not been exposed to the methodology before (Kaldi et al., 2011). Therefore, planning and follow-up efforts must be carefully structured, as simply providing a common space for PBL does not guarantee effective communication or collaboration (García-Varcálcel & Basilotta, 2017). PBL encourages teachers to recognize that each student possesses a unique set of skills that can be nurtured within a collaborative environment—a perspective that has become increasingly relevant in the 21st-century EFL classroom.

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Appendix A.

Semantic Differential Scale Items from the PBL Perceptions Survey (adapted from García-Valcárcel & Basilotta Gómez-Pablos, 2017)

1. *Fue aburrido (el proyecto)/fue divertido (el proyecto).*
   It was boring/It was fun.

2. *Perdí el tiempo con el proyecto/Aproveché el tiempo con el proyecto.*
   I wasted my time with the project/I took advantage of the time with the project.

3. *Aprendí menos cosas que otras veces/Aprendí más cosas que otras veces.*
   I learnt fewer things than at other times/I learnt more things than at other times.

4. *Fue interesante (el proyecto)/No fue interesante (el proyecto).*
   It was not interesting/It was interesting.

5. *No comprendí nada de lo que hicimos en el proyecto/Comprendí lo que hicimos en el proyecto.*
   I did not understand anything about what we did in the project/ I understood what we did in the project.

6. *Me distraje con el proyecto/Me enfoqué en el proyecto.*
   I was distracted with the project/I have been focused on the project.

7. *Solo copié y pegué información/Pude crear y compartir información.*
   I only copied and pasted information/I could create and share information.

8. *Ya no me interesa el tema del proyecto/Quiero aprender más sobre el tema del proyecto.*
   I am no longer interested in the topic of the project/I want to learn more about the topic of the project.

9. *El proyecto fue inútil/El proyecto fue útil.*
   The project was useless/The project was useful.

10. *No me gustó nada esta forma de trabajar en el proyecto/Me encantó la forma de trabajar en el proyecto.*
    I did not like this way of working in a project at all/I liked this way of working in a project.

11. *La profesora no me ayudó/La profesora me ayudó.*
    The teacher did not help me/The teacher helped me.

12. *La profesora no nos dio instrucciones claras/La profesora explicó claramente lo que teníamos que hacer.*

    The teacher did not give us clear instructions/The teachers clearly explained what we had to do.

13. *No compartimos materiales entre los compañeros de grupo del proyecto/ Compartimos materiales entre los compañeros de grupo del proyecto.*

    We did not share materials among the members of the group/We shared materials among the members of the group.

14. *Ahora me resulta más difícil relacionarme con mis compañeros del proyecto/Ahora me resulta más fácil relacionarme con mis compañeros del proyecto.*

    Now it is more difficult for me to talk with my project classmates/Now it is easier for me to talk with my project classmates.

15. *Trabajando en grupo no conseguimos hacer bien el proyecto/Trabajando en grupo conseguimos hacer bien el proyecto.*

    We did not do a good job with the project working as a team/We did a good job with the project working as a team.

16. *El tamaño del grupo no fue adecuado (éramos pocos o éramos muchos para hacer el proyecto)/El tamaño del grupo fue el adecuado.*

    The size of the group was not appropriate (we were too few or too many students)/ The size of the group was appropriate.

17. *No me sentí cómodo con mis compañeros/Me sentí cómodo con mis compañeros.*

    I did not feel comfortable with my classmates/I felt comfortable with my classmates.

18. *La profesora no nos decía si estábamos haciendo bien el proyecto/La profesora nos decía si estábamos haciendo bien el proyecto.*

    The teacher did not tell us if we were doing a good job in the project / The teacher told us if we were doing a good job in the project.

19. *La profesora no nos dijo nada sobre la calidad del trabajo presentado/La profesora nos dijo lo que estaba bien o mal del trabajo presentado.*

    The teacher did not tell us anything about the quality of our work/The teacher told us what we were doing right or wrong with our work.

Appendix B.

Summary of activities for the treatment group and the control group

Week/ Lesson	Treatment group activities		Control group activities
1	Module 1	- Group assignment. - DVD: Project description and roles. - Role selection. - Driving questions: Discussing possible answers.	- Main vocabulary words of the unit. - Listening activities, repetition activities, dialogues, guessing games with grammatical form have you got? - Workbook activities. - Target word exposure: *pudding*.
	Module 2	- Recapping of activities. - Booklet page 1: Food truck brainstorming. - Brainstorming result sharing.	
2	Module 3	- Booklet page 2: Questions about food trucks. - Checking other groups' work in pairs. - Booklet page 3: Name and location for food truck.	- Vocabulary word practice: song. - *is there/are there* grammar practice. - Dialogues, listening activities from workbook.
	Module 4	- DVD: Famous company logos. - Using computers to find interesting logos for food truck.	
	Module 5	- Booklet page 4: Creating logo and slogan for food truck. - Presenting logos in front of the class. - Work on feedback from other groups.	
3	Module 6	- Brainstorming session: ideas and colours for food truck. - Booklet page 5: Colouring a draft food truck. - Food truck design presentation to the class and feedback.	- Students watch a DVD about a canteen in the UK. - Reading exercise from workbook. - Vocabulary activity from workbook.
	Module 7	- DVD: Chef cooking. - Naming ingredients for dishes. - Booklet page 6: Brainstorming session: Food to be served in the food truck.	
	Module 8	- Presentation: Main vocabulary words of the unit. - Booklet pages 7 and 8: Food to be served and ingredients for the food. - Target word exposure: 10 target words.	
4	Module 9	- Booklet page 9: Menu draft. - Draft presentation to the class and feedback. - Work with materials to create menu (cardboard, glue, markers, magazines, etc.).	- Description of a healthy meal. - Target word exposure: *healthy*, *dairy*. - Workbook activities.
	Module 10	- Booklet page 10: Menu design. - DVD: How to assemble a miniature food truck. - Work on the presentation for the food truck fair.	

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Week/ Lesson	Treatment group activities		Control group activities
5	Module 11	- Booklet pages 11-16: Food truck creation under teacher supervision.	- Reading activity: A Special Cake. - Target word exposure: *nuts*, *raisins*, *grapes*, *butter*, *seeds*, *biscuits*. - Comprehension activity (true/ false).
	Module 12	- Food truck creation. - Food truck and menu presentation to the class with feedback.	
6	Module 13	- Food creation with plasticine. - Food ingredients practice.	- Grammar activities with a story. - Countable and uncountable nouns. - Quantifiers: a few, a little, some, and any. - Workbook activities.
	Module 14	- Presentation of food truck and food made of plasticine to classroom with feedback.	
	Module 15	- Food truck fair instructions. - Work on plasticine food to be sold at the fair. - Poster with questions to be answered at the fair (e.g., *How much is it?*).	
7	Module 16	- Practice for the food truck fair.	- Reading exercise. - Workbook activities. - Target word exposure: *sweetcorn*.
	Module 17	- Food truck festival: presentation of food trucks and plasticine food and interaction with audience. - Guided SWOT (strengths-weaknesses-opportunities-threats) about students' work after the food truck fair.	

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Las oposiciones individuo/estadio y evento/objeto en combinación con *ser y estar*. Un estudio basado en juicios de preferencia y aceptabilidad

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Resumen: El presente trabajo busca analizar el comportamiento de las cópulas del español *ser* y *estar* en combinación con adjetivos de tipo *i-level/s-level*, así como con sustantivos eventivos y no eventivos en oraciones locativas. Estudios previos han mostrado que algunas de estas unidades admiten con facilidad una de las cópulas, pero no así la opuesta, lo que permite plantearse si esta asimetría se debe a una representación mental diferente. Para comprobarlo, se han realizado seis estudios en los que hablantes nativos de español debían manifestar sus preferencias de uso o el nivel de aceptabilidad de estas unidades en oraciones con *ser* o *estar*. Los resultados muestran que ciertas combinaciones no prototípicas (adjetivo *s-level* con *ser* o sustantivos eventivos con *estar*) poseen un alto nivel de aceptabilidad y que, por tanto, pueden ser fácilmente reinterpretadas; en cambio, otras (adjetivo *i-level* con *estar* o sustantivos no eventivos con *ser*) son más difíciles de reanalizar. Estos resultados permiten reflexionar sobre la representación mental tanto de los adjetivos como de los sustantivos, así como sobre la naturaleza de las cópulas.

Palabras clave: *adjetivos i-level, adjetivos s-level, sustantivos eventivos, sustantivos no eventivos, ser, estar.*

Individual- vs. stage-level and event vs. object contrasts in combination with *ser* and *estar*. A study based on preference and acceptability judgement tasks

Abstract: This paper aims to analyze the use of the Spanish copulas *ser* and *estar* in combination with i-level/s-level adjectives, as well as with event and object nouns in locative sentences. Previous studies have shown that some of these units easily admit one of the copulas, but not the opposite one, which raises the question of whether this asymmetry is due to a different mental representation. To analyze this question, six studies examine Spanish-native speakers' preferences and acceptability of these units in sentences with *ser* or *estar*. The results show that certain non-prototypical combinations (s-level adjectives with *ser* or event nouns with *estar*) present a high level of acceptability and can, therefore, be easily reinterpreted; on the other hand, other non-prototypical combinations (i-level adjectives with *estar* or object nouns with *ser*) are more difficult to reanalyze. These results contribute to the debate concerning the mental representation of both adjectives and nouns, as well as the nature of Spanish copulas.

Keywords: *i-level adjectives, s-level adjectives, eventive nouns, object nouns, ser, estar.*

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1. Introducción

El objetivo del presente trabajo es estudiar las oposiciones *individuo/estadio* y *evento/objeto* al combinarse con las cópulas *ser* y *estar* en español. Por tanto, el foco central de esta investigación son oraciones como las de (1) y (2), construidas con distintos tipos de adjetivos (*i-level* en (1a) y *s-level* en (1b)) y distintos tipos de sustantivos (eventivos en (2a) y no eventivos en (2b)) en oraciones locativas. Existen ciertas preferencias a la hora de combinar estos elementos con las cópulas; sin embargo, esta distinción no está tan delimitada, como demuestran las oraciones de (3) y (4), donde tanto los adjetivos como los sustantivos aparecen con la cópula no prototípica.

(1) a. La profesora *es simpática*

b. La profesora *está nerviosa*

(2) a. *La fiesta es* en el parque

b. *El café está* en el salón

(3) a. La profesora *está simpática*

b. La profesora *es nerviosa*

(4) a. *La fiesta está* en el parque

b. *El café es* en el salón

En este trabajo se parte de datos empíricos para aportar nueva información sobre la combinatoria de estas unidades con las cópulas *ser* y *estar* con el objetivo de establecer —si es posible— los límites entre categorías. En concreto, se diseñaron seis estudios en los que hablantes nativos de español manifestaron sus preferencias de uso y juzgaron la aceptabilidad de las distintas combinaciones para así comprobar hasta qué punto estas son viables.

El presente trabajo se estructura como sigue. En la sección 2 se presentan trabajos previos que versan sobre la distinción entre los distintos tipos de adjetivos y sustantivos. Se recogen no solo aproximaciones teóricas sino también evidencias experimentales sobre el comportamiento de estos elementos en relación con las cópulas *ser* y *estar*. A continuación (sección 3), se exponen los seis estudios realizados, así como los resultados obtenidos, cuyas aportaciones más significativas se analizan en relación con diferentes cuestiones teóricas en la sección 4. El trabajo cierra, finalmente, con unas conclusiones (sección 5).

2. Estudios previos

2.1 Adjetivos *i-level* y *s-level*

La distinción clásica entre los adjetivos *i-level* y *s-level* surge con Carlson (1977), siguiendo la idea de Milsark (1974), y se acepta todavía de manera general en la bibliografía más reciente (Marín, 2016; Horno-Chéliz e Igoa 2017; Silvagni, 2017; Escandell-Vidal, 2018a,

entre otros).[1] Por un lado, los predicados *i-level* (*individual level*, adjetivos de propiedad o de individuo) son aquellos que denotan estados que se entienden como estables y que carecen de un límite temporal interno, es decir, son estados que prevalecen en el tiempo. Así, alguien es *inteligente*, *francés* o *alto*. Por otro lado, los predicados *s-level* (*stage level*, adjetivos de estadio) son aquellos que denotan estados de un individuo acotados a un límite temporal específico y, por tanto, se entienden como situaciones transitorias. Entran en esta categoría ejemplos como *enfermo*, *desnudo* o *lleno*. Así pues, la diferencia principal entre ambos tipos de predicados reside en "the absence (IL states) or existence (SL states) of internal temporal limits associated with the adjective denotation" (Marín, 2010, p. 308).

Esta oposición entre 'propiedad (estable)' y 'estadio (transitorio)' es especialmente pertinente si tenemos en cuenta que está ligada a diferentes aspectos, tanto sintácticos como semánticos.[2] Así, los adjetivos *i-level* funcionan mejor con tiempos perfectivos y los *s-level*, con imperfectivos (*Estuvo egoísta/Estaba asqueroso*; ejemplos extraídos de Leonetti y Escribano, 2018); además, los *i-level* se vinculan con lecturas genéricas y los *s-level*, con lecturas existenciales (siguiendo la línea de los ejemplos de Carlson, 1977, *Los tiburones son peligrosos* permite extrapolar la cualidad de 'peligrosidad' a todos los tiburones, mientras *Los tiburones están hambriento*s obliga a vincular la predicación a un grupo de individuos concreto y, por tanto, a un momento determinado). Es por ello por lo que encontramos la siguiente tendencia: los adjetivos *i-level*, vinculados con propiedades y sin un límite temporal interno, suelen combinarse en español con la cópula *ser* (*Es {inteligente/francés/alto}*), mientras que los *s-level*, relacionados con estadios y, por tanto, acotados a un periodo temporal en el que esa situación se produce, tienden a combinarse con *estar* (*Está {enfermo/desnudo/lleno}*). Sin embargo, este panorama se complica cuando tenemos en cuenta que oraciones como la de (3a), en la que un adjetivo *i-level* se combina con *estar*, o (3b), en la que un adjetivo *s-level* se combina con *ser*, son totalmente aceptables en español. Recogemos a continuación otros ejemplos para mostrar que este no es un caso aislado, sino que las alternancias son comunes en español:

(5) a. La comida está riquísima

b. Estás muy británica últimamente

(6) a. La normativa es rígida

b. Es muy sonriente

Según Marín (2010), aparte de los adjetivos *i-level/s-level*, podría considerarse la existencia de un tercer grupo de "adjetivos ambivalentes" (p. 310), es decir, de adjetivos que tienen diferentes significados, uno para la lectura de 'propiedad' y otro para la lectura de 'estadio'. Sin embargo, aunque esto permitiría explicar los casos en los que la combinación con la

[1] Existen otras propuestas para distinguir dos tipos de adjetivos no basadas en la oposición *individuo-estadio* como, por ejemplo, Gumiel-Molina et al. (2015) o Bazaco (2020), por nombrar algunas de las más recientes.

[2] Este trabajo se centra en la combinación de las cópulas con estos predicados en español, pero la distinción entre *i-level/s-level* no se limita a este aspecto gramatical ni a esta lengua (véase Maienborn, 2004; Marín, 2010; Arche et al., 2019).

cópula no es la esperada, es una solución contraria al principio de economía del lenguaje, tal y como sugiere Escandell-Vidal (2018a).[3] Por tanto, varios autores han tratado de explicar estos adjetivos ambivalentes, no entendiéndolos como una categoría extra, sino estudiando si existe algún patrón que explique por qué algunos adjetivos sí permiten la alternancia de la cópula (*Es/Está simpático*) y otros no (*Está/*es lleno*).

En este sentido, existen diferentes soluciones, que van desde reformular la oposición *individuo/estadio* (Silvagni, 2018) hasta estudiar este fenómeno en términos pragmáticos (Maienborn 2004; Escandell-Vidal, 2018a). Para este trabajo, nos centraremos en las propuestas basadas en el lexicón. Desde el ámbito de la lingüística aplicada, en el que se enmarca el presente trabajo, el lexicón se define como el diccionario mental al que los hablantes acceden para recuperar las unidades léxicas necesarias para comunicarse. Existen evidencias de que en la memoria a largo plazo almacenamos, de una manera u otra, el contenido léxico-semántico (expresado mediante una forma fonológica) que se vuelca en la estructura sintáctica.[4] Así pues, es posible hipotetizar que, si se registra un comportamiento diferente de los adjetivos, esta diferencia ha de venir dada por un almacenamiento concreto en el lexicón. De esta manera, el debate en torno a la combinación de las cópulas con estos predicados puede aportar información sobre la interfaz léxico-sintáctica.

Concretamente, existen dos propuestas principales sobre el almacenamiento de los adjetivos en el lexicón y ambas se centran en el argumento eventivo davidsoniano (en adelante, <e>). Para estudiar las diferencias entre clases aspectuales, Davidson (1967) propone que los estados carecen de un argumento extra (<e>), relacionado con la eventividad, que sí poseerían los eventos (véase Marín, 2018, para una aproximación en español). Esta oposición de presencia/ausencia de <e> se ha extendido al estudio de otras categorías lingüísticas, entre las que se encuentran los adjetivos *i/s-level*. En primer lugar, Kratzer (1995) plantea que los adjetivos *i-level* carecen de <e>, de manera que su estructura argumental sería más simple que la de los adjetivos *s-level*, que sí contarían con <e>, por la necesidad comentada previamente de un límite temporal específico. Por otro lado, Chierchia (1995) considera que ambos tipos de adjetivos tienen presente <e> en el lexicón, pero la proyección en la sintaxis varía: los adjetivos *i-level* tienen <e> saturado desde el lexicón, por lo que su estructura argumental es más compleja y su combinatoria, más rígida; al contrario, los adjetivos *s-level* no saturan <e> y esto hace que sean más flexibles a la hora de combinarse en la sintaxis.

[3] Escandell Vidal (2018b) explica esta diferencia entre adjetivos a partir de un anclaje espacio-temporal, mediado por la evidencialidad, es decir, por un aspecto extralingüístico: en este sentido, la manera en la que el hablante recibe la información puede ser relevante para el proceso de coerción (o reinterpretación), sobre el que se volverá más adelante.

[4] Siguiendo la recomendación de un revisor anónimo, hemos de señalar que este contenido léxico-semántico es al que nos referimos en este trabajo cuando hablamos de "representación mental", es decir, toda aquella información almacenada y memorizada, que se selecciona para construir oraciones, y que puede estar más o menos especificada según la teoría de la que se parta. Debido al corte experimental de este trabajo, es necesario señalar que creemos que las tareas de procesamiento (tanto síncronas como asíncronas) son un medio para elaborar hipótesis sobre la naturaleza de dichas representaciones.

Aunque estas propuestas han tenido detractores (Cohen y Erteschik-Shir, 2002; Jaque Hidalgo, 2013), uno de los aspectos más interesantes de ambos modelos es que permiten elaborar diferentes hipótesis que pueden probarse a partir de estudios experimentales. El modelo de Kratzer (1995) puede vincularse con una carga de procesamiento mayor para los adjetivos *s-level*, puesto que su estructura argumental es más compleja en comparación con la de los *i-level*. Por otro lado, del modelo de Chierchia (1995) se desprende precisamente lo contrario: al tener los *i-level* su argumento <e> ya saturado (y, por tanto, contener más información codificada en el lexicón), la carga de procesamiento habrá de ser necesariamente mayor al compararlos con los *s-level*, con una estructura más ligera y una combinatoria más libre. A este respecto, existen diferentes evidencias experimentales en español, que constituyen el punto de partida para el planteamiento de la presente investigación.

En primer lugar, Alquézar (2016) estudió la adquisición de los dos tipos de adjetivos en español[5] en un grupo de niños y sus resultados indican que los adjetivos *i-level* se adquieren más tarde que los *s-level*. Una posible explicación sería esta estructura argumental más compleja de acuerdo con la propuesta de Chierchia (1995). Los resultados de Horno-Chéliz e Igoa (2017) apuntan en esta misma dirección: en una tarea de lectura autoadministrada,[6] los participantes combinaron adjetivos con cuantificadores que eran esperables (*El cajón estaba completamente cerrado*) o novedosos (*El cajón estaba muy cerrado*); la hipótesis de partida era que, si los adjetivos son flexibles en su combinatoria sintáctica, no habría diferencias en el procesamiento de ambos cuantificadores (lo cual iría a favor del modelo de Kratzer, 1995). Sin embargo, los resultados obtenidos muestran una demora en la lectura de los adjetivos *i-level* cuando van acompañados de un cuantificador inesperado, apuntando a una mayor carga en el procesamiento de estos predicados (a favor, por tanto, del modelo de Chierchia, 1995). Más recientemente, Soler (2021) abordó el procesamiento de los adjetivos *i-level* con *ser/estar* para comprobar si existe un comportamiento diferencial a partir también de una tarea de lectura autoadministrada. Los resultados muestran que estos adjetivos *i-level* generan mayores tiempos de reacción cuando se combinan con la cópula no prototípica (*estar*).[7]

El modelo de Chierchia (1995) explica mejor los resultados de los trabajos elaborados hasta el momento: los predicados *i-level* parecen tener una estructura argumental más compleja que hace que su proyección sintáctica sea menos flexible. Aquí entraría en juego el mecanismo de *coerción*, mediante el cual se corrigen los desajustes producidos en la interfaz léxico-sintaxis (Pustejovsky, 1995): al darse un desajuste entre las restricciones léxicas y el contexto sintáctico (por ejemplo, cuando se combina un *i-level* con *estar*), se

[5] Su trabajo sigue la lógica de la investigación de Syrett (2007) para la lengua inglesa.

[6] La lectura autoadministrada es un tipo de tarea conductual que permite medir el tiempo de lectura de determinados segmentos de las oraciones. Puede verse una introducción a esta técnica en Igoa (2022).

[7] A estas investigaciones se suman los trabajos de Sánchez-Alonso et al. (2017) y Bazaco (2017), que comprueban experimentalmente (a través de la lectura autoadministrada y del estudio de movimientos oculares, respectivamente) que el uso de *estar* va ligado a una lectura existencial (frente a la genérica/universal). Por otro lado, Bel (2013) demostró que tanto en español como en catalán *estar* se adquiere antes y de manera más estable que *ser* con predicados de estadio e individuo.

activa este mecanismo de coerción que "transforma" la categoría que produce el desajuste en una categoría adecuada para que se pueda interpretar de manera plausible. Si bien hay debate acerca de hasta qué punto se produce una transformación del adjetivo (y, por tanto, una coerción en el sentido puro), lo esencial es que los predicados *i-level* sí suponen una mayor carga de procesamiento, que puede venir dada por este proceso de reinterpretación derivado del desajuste léxico-sintáctico (sea este resuelto mediante coerción o mediante otros procesos, que algunos autores vinculan a la pragmática; veáse en esta línea Escandell-Vidal y Leonetti, 2002; Escandell-Vidal, 2018a).

2.2 Nombres eventivos y no eventivos

En español también existe una alternancia para las cópulas en la localización de entidades eventivas y no eventivas. Así, al construir una oración copulativa con un sintagma preposicional, si el sujeto es un nombre eventivo, se utiliza el verbo *ser* (7) y si es no eventivo (o un objeto, siguiendo a Fábregas y Marín, 2012), *estar* (8):

(7) La *fiesta* {es/??está} en el salón de actos

(8) El *proyector* {está/*es} en el salón de actos

Como afirman Fábregas et al. (2023), pese a la atención que han recibido las cópulas en español en combinación con los predicados de individuo y de estadio, su distribución con locativos no ha generado tanto interés en la bibliografía.[8] Sin embargo, para comprender en profundidad la oposición entre *ser* y *estar*, es necesario dar cuenta de este tipo de estructuras pues, como mostraremos a continuación, no encajan dentro de la distinción *estadio* vs. *individuo* de la que se ha hablado en el apartado anterior.

De hecho, uno de los aspectos más interesantes de esta alternancia es que supone un contraste total con los adjetivos: si en el caso de los adjetivos parecía que *ser* era el término no marcado (puesto que no estaba ligado a ningún límite temporal), en el caso de las localizaciones *ser* presenta más restricciones que la cópula *estar*, ya que se combina de manera exclusiva con sustantivos eventivos (es decir, con sustantivos que denotan un evento circunscrito a un contexto espacio-temporal). Por el contrario, y siguiendo la argumentación de Fábregas et al. (2023), *estar* sería la cópula no marcada en los predicados locativos, pues si bien es cierto que *estar* se combina con los sustantivos no eventivos de manera muy estable, también aparece en combinación con otras clases, como los sustantivos de estado (9) y de cualidades (10).

(9) La *nostalgia* {está/*es} en su cabeza

(10) La *belleza* {está/*es} en el interior

(ejemplos extraídos de Fábregas et al., 2023)

[8] Existen algunos trabajos que sí han abordado este tema, como Leonetti (1994), Brucart (2012) o Gallego y Uriagereka (2016).

Esta propuesta ha recibido apoyo desde el ámbito de la adquisición, con estudiantes de español tanto italianos (Perpiñán y Marín, 2021) como ingleses (Perpiñán et al., 2020): ambos grupos muestran que la cópula que antes se adquiere en predicados locativos (aunque con diferentes patrones según la lengua materna) es *estar*, lo que se traduce en un uso preferencial y sobregeneralizado de este verbo por parte de los aprendientes; por el contrario, las construcciones con *ser* se aprenden de manera más tardía.

Por tanto, el uso de *estar* está mucho más extendido en combinación con los locativos que el de *ser*, que parece admitir solo sujetos que expresen un evento. Así, Fábregas et al. (2023) afirman que *ser* no es la cópula por defecto en estos casos, sino la que más restricciones de combinación impone: en principio, siempre selecciona un evento. Continuando la argumentación de estos autores, *ser* es la única cópula que localiza temporalmente (por lo que podemos decir *La fiesta es a las diez* pero no **La fiesta está a las diez*); no obstante, tal y como nos muestran los datos expuestos en el apartado anterior, *estar* también se vincula con el tiempo al combinarse con predicados *s-level*: *El niño está cansado* presupone un contexto concreto en el que el estado transitorio 'cansado' se exprese. La noción temporal no es, entonces, suficiente para explicar la alternancia entre *ser* y *estar*, puesto que ambas cópulas localizan temporalmente en combinación con distintos predicados. Ante esta situación, se han planteado diversas propuestas que buscan explicar (ya sea de manera conjunta para los adjetivos y los sustantivos o de manera diferenciada) el comportamiento de las cópulas en español a partir de rasgos que van más allá de la delimitación temporal. Entre estas propuestas, destacamos la de Fábregas et al. (2023), quienes reconocen que el asunto clave se halla en el aspecto interno de los predicados, de manera que en los estados se pueden distinguir fases internas, es decir, son heterogéneos e implican cambio o dinamismo.[9] Por tanto, en el caso de los locativos, las restricciones que impone *ser* tienen que ver con este rasgo [+dinámico] (y no tanto con el límite temporal en general).

A este panorama hay que sumarle otro hecho relevante y es que existen casos de "ambigüedad eventiva", es decir, sustantivos que pueden tener una lectura eventiva (*La evaluación de los datos tuvo lugar ayer*) o de objeto (*La evaluación de los datos se consideró incorrecta*; ejemplos extraídos de Picallo, 1999) y que admiten la combinación con ambas cópulas, como se refleja a continuación:

(11) La evaluación final *es* en la sala de profesores

(12) La evaluación final *está* en el boletín

Al igual que ocurría con los adjetivos, existen trabajos experimentales sobre el procesamiento de oraciones copulativas con nombres eventivos en español. Aunque su número es significativamente menor que los dedicados a los adjetivos, pues solo encontramos dos trabajos con registro de potenciales evocados[10] (Leone-Fernandez et al., 2012 y Dussias et al., 2014), los resultados son bastante robustos: ambos trabajos encuentran que,

[9] Para una introducción al tema de los sustantivos eventivos en relación con el aspecto léxico, puede verse Resnik (2010).

[10] Para una introducción a esta técnica, véase Haro (2022).

ya sea con hablantes nativos de español (Leone-Fernandez et al., 2012) o con hablantes de español como L2 (Dussias et al., 2014), se produce una onda P600 ante oraciones con anomalías en la combinación de sujeto-cópula. Es decir, si los participantes se encuentran ante una oración con un sujeto eventivo con *estar* o un sujeto no eventivo con *ser*, se produce algún tipo de reanálisis sintáctico-semántico para poder interpretar el significado de manera correcta. Este proceso de reinterpretación (que podríamos vincular de manera más o menos estricta con la coerción) es un reflejo de lo que también se ha encontrado con los adjetivos: existe algún desajuste entre la información recogida en la entrada léxica y lo expresado en la sintaxis, de tal forma que los hablantes necesitan enfrentarse a este desajuste, con el consecuente aumento de la carga de procesamiento.

2.3. Objetivos

Atendiendo a lo expuesto anteriormente, el objetivo principal de este trabajo es analizar la percepción de los hablantes nativos de español sobre las posibilidades combinatorias de *ser* y *estar* con los adjetivos *i-level/s-level*, por un lado, y con los sustantivos eventivos/no eventivos en oraciones locativas, por otro. Para ello, planteamos seis estudios: tres de ellos centrados en el comportamiento de los adjetivos con ambas cópulas (apartado 3.1) y los otros tres sobre los sustantivos que permiten la dualidad de cópulas (apartado 3.2).

Por un lado, los estudios sobre los adjetivos buscan aportar nuevos datos acerca de la representación mental de estas unidades, que apoyen la hipótesis de Kratzer (1995) o la de Chierchia (1995). De acuerdo con los resultados experimentales obtenidos hasta la fecha (Alquézar, 2016; Horno-Chéliz e Igoa, 2017; Soler, 2021), sería de esperar que, dada la mayor complejidad argumental de los adjetivos *i-level*, estos fuesen valorados como menos aceptables cuando se combinan con la cópula no esperada (es decir, *estar*) en comparación con los adjetivos *s-level* combinados con *ser*. En otras palabras, los adjetivos *i-level* presentarían un comportamiento menos flexible.

En el caso de los sustantivos, y de acuerdo con los resultados de estudios previos (Leone-Fernandez et al., 2012; Dussias et al., 2014), las combinaciones eventivo+*estar* y no eventivo+*ser* no cumplirían el patrón general y, por tanto, sería esperable que los hablantes las valorasen como menos aceptables. No obstante, y como argumentan Fábregas et al. (2023), en este contexto *estar* es una cópula menos marcada que *ser*, por lo que su combinación con sustantivos eventivos sería más fácil de reinterpretar, dando lugar a un mayor nivel de aceptabilidad en comparación con los no eventivos+*ser*.

En última instancia, intentaremos comparar los resultados de unos y otros estudios con el objetivo final de determinar si existe un patrón común para los adjetivos y sustantivos ambivalentes cuando se combinan con las cópulas *ser* y *estar* que explique sus usos, así como su representación en el lexicón mental.

3. Trabajo empírico: un estudio basado en juicios de preferencia y aceptabilidad

Como apuntamos previamente, se realizaron seis estudios con el objetivo de analizar el comportamiento de estas unidades en combinación con las cópulas *ser* y *estar* en español. Dado que no todos los estudios presentan el mismo formato, presentaremos de manera conjunta la metodología y los resultados de cada uno de ellos. Así pues, en el apartado 3.1 se recogen la metodología y los resultados de los tres estudios centrados en el análisis de los adjetivos *i/s-level*, mientras que en el apartado 3.2 haremos lo propio con los tres estudios sobre sustantivos eventivos/no eventivos.

No obstante, y para facilitar la comprensión de unos y otros cuestionarios, podemos establecer un paralelismo en lo que respecta a sus objetivos: el primer estudio (tanto el de los adjetivos como el de los sustantivos) tiene por objeto la categorización de estas unidades; el segundo parte de esa categorización para analizar el nivel de preferencia a la hora de combinar estas unidades con las cópulas del español; el último estudio examina el nivel de aceptabilidad de una serie de oraciones creadas a partir de los resultados de los trabajos anteriores (y que constituirán el material de futuros estudios experimentales).

3.1 Adjetivos *i-level/s-level*

3.1.1 Estudio 1: producción de oraciones

3.1.1.1 Método

El objetivo del primer estudio era recopilar una lista de adjetivos *i-level/s-level* en español que pudiesen ser utilizados en los estudios subsiguientes. Para ello, los participantes debían producir oraciones por escrito: se presentaba un adjetivo y se les pedía que construyesen una oración simple con ese adjetivo y un verbo copulativo (*ser* o *estar*).

Concretamente, se seleccionaron 120 adjetivos en español a partir de los datos de estudios previos y de la propia intuición de los investigadores del proyecto, y se distribuyeron de manera aleatoria en cuatro listas (30 adjetivos por lista). Los adjetivos de cada lista eran diferentes, de tal forma que un mismo participante podía realizar más de un cuestionario sin que los adjetivos que en él aparecían se repitiesen.

El cuestionario se realizó a través de la plataforma Google Forms. En total, participaron 159 hablantes nativos de español europeo (41 en la lista 1, 36 en las listas 2 y 3, y 46 en la lista 4), de los cuales 62 eran mujeres, 24 hombres y 73 prefirieron no identificarse.[11]

3.1.1.2 Codificación y resultados

Los datos se analizaron manualmente en función de su combinatoria con las cópulas: así, los adjetivos que se combinaban con *ser* se codificaban como 0, mientras que aquellos que se combinaban con *estar* se codificaban como 1 (anexo 1). Esta codificación permitió establecer una primera clasificación de los adjetivos en tres grupos en función de su

[11] Consideramos que la edad de los participantes no influiría en el uso de estas estructuras, por lo que no se preguntó por ella ni en este ni en los estudios subsiguientes.

combinatoria: el primer grupo está formado por aquellos adjetivos que solamente admiten la combinación con el verbo *ser* y que, por lo tanto, se clasificaron como adjetivos de tipo *i-level*; el segundo grupo incluye aquellos adjetivos que únicamente se combinan con *estar* y que, en consecuencia, se definieron como adjetivos de tipo *s-level*; por último, el tercer grupo incluye adjetivos que presentan una combinatoria alternante, pues aparecían tanto con *ser* como con *estar*. No obstante, estos últimos no presentan un comportamiento homogéneo, sino que algunos se combinaban más frecuentemente con *ser* o con *estar*, aunque admitiesen en ciertos contextos la combinación con la cópula opuesta. Así pues, los adjetivos de este tercer grupo fueron, a su vez, clasificados como *i-level* o *s-level* en función de la proporción de respuestas en las que se combinaban con *estar*: aquellos adjetivos que presentaban una proporción de respuesta con *estar* menor de 0.5 fueron clasificados como *i-level*, mientras que aquellos cuya proporción de respuestas con *estar* era igual o superior a 0.5 fueron definidos como *s-level*. Esta clasificación permitió, por tanto, diferenciar cuatro grupos de adjetivos en función de dos variables: tipo de adjetivo (*i-level* vs. *s-level*) y combinatoria (fija vs. variable).

Asimismo, uno de los objetivos de este primer trabajo era seleccionar el material que nos permitiese posteriormente estudiar el procesamiento de los adjetivos *i/s-level* en español a través de técnicas psicolingüísticas. Como es bien sabido, el procesamiento léxico está condicionado, entre otras variables, por la longitud de las palabras y su frecuencia léxica (Just y Carpenter, 1980; Rayner y Duffy, 1986). Es por ello por lo que, a partir de la categorización de los 120 adjetivos anteriores, llevamos a cabo una selección en función de su longitud en número de caracteres y de su frecuencia.[12] Así, para cada una de las cuatro categorías (*i-level*/fijo, *i-level*/variable, *s-level*/fijo, *s-level*/variable) escogimos aquellos adjetivos que permitiesen mantener constantes tanto su longitud como su frecuencia. La Tabla 1 recoge el resultado de esta selección que, como puede observarse, incluye 12 adjetivos para cada categoría. Por su parte, la Tabla 2 muestra los resultados estadísticos a la hora de comparar la longitud y la frecuencia (absoluta y relativa) de las cuatro categorías de adjetivos, entre las que no existen diferencias significativas ni en su longitud ($\chi^2(3)=0.79$, $p>0.05$) ni en su frecuencia absoluta ($\chi^2(3)=0.4$, $p>0.05$) o relativa ($\chi^2(3)=0.4$, $p>0.05$).

Tabla 1. Lista de los 48 adjetivos seleccionados y su clasificación según el tipo de adjetivo (*i-level* vs. *s-level*) y su combinatoria (fija vs. variable) organizados en función de la proporción de respuestas con *estar*. Las últimas dos columnas muestran la frecuencia, absoluta y relativa, asociada a cada adjetivo.

Adjetivos	Proporción De ReSpuestas Con *Estar*	Clasificación		Frecuencia	
		Tipo De Adjetivo	Combinatoria	Absoluta	Relativa
voluntaria	0	i-level	fijo	38	6.75
útil	0	i-level	fijo	148	26.29
decisivo	0	i-level	fijo	123	21.85
admirable	0	i-level	fijo	81	14.39
doloroso	0	i-level	fijo	46	8.17

Tabla 1, continúa en la página siguiente.

[12] La frecuencia léxica de los adjetivos de estos estudios, así como la de los sustantivos eventivos/no eventivos (apartado 3.2), fue tomada de la base de datos NIM de la Universitat Rovira i Virgili de Tarragona (Guasch et al., 2013).

Tabla 1, continúa de la página anterior.

Adjetivos	Proporción De ReSpuestas Con *Estar*	Clasificación		Frecuencia	
		Tipo De Adjetivo	Combinatoria	Absoluta	Relativa
inexplicable	0	i-level	fijo	51	9.06
lógico	0	i-level	fijo	222	39.44
ateo	0	i-level	fijo	37	6.57
ingenua	0	i-level	fijo	37	6.57
ambiciosa	0	i-level	fijo	18	3.20
falso	0	i-level	fijo	121	21.50
crucial	0	i-level	fijo	41	7.28
simpática	0.03	i-level	variable	47	8.35
gracioso	0.03	i-level	variable	50	8.88
repugnante	0.05	i-level	variable	40	7.11
ingenioso	0.07	i-level	variable	35	6.22
bonito	0.09	i-level	variable	113	20.07
optimista	0.09	i-level	variable	38	6.75
lindo	0.14	i-level	variable	36	6.40
caro	0.15	i-level	variable	92	16.34
elegante	0.15	i-level	variable	123	21.85
perfecta	0.16	i-level	variable	234	41.57
guapo	0.22	i-level	variable	84	14.92
barato	0.23	i-level	variable	79	14.03
blanda	0.51	s-level	variable	36	6.40
rígida	0.53	s-level	variable	47	8.35
tierno	0.6	s-level	variable	39	6.93
orgullosa	0.68	s-level	variable	48	8.53
serena	0.69	s-level	variable	55	9.77
atento	0.7	s-level	variable	75	13.32
sonriente	0.75	s-level	variable	104	18.48
tranquilo	0.78	s-level	variable	197	35.00
nervioso	0.83	s-level	variable	202	35.88
hueca	0.83	s-level	variable	18	3.20
pálido	0.88	s-level	variable	80	14.21
completo	0.93	s-level	variable	162	28.78
furioso	1	s-level	fijo	51	9.06
perplejo	1	s-level	fijo	38	6.75
oculto	1	s-level	fijo	87	15.46
contenta	1	s-level	fijo	43	7.64
pensativa	1	s-level	fijo	10	1.78
vacía	1	s-level	fijo	117	20.78
intacto	1	s-level	fijo	37	6.57
desnudo	1	s-level	fijo	152	27.00
disponible	1	s-level	fijo	46	8.17
quieto	1	s-level	fijo	81	14.39
ausente	1	s-level	fijo	99	17.59
caliente	1	s-level	fijo	223	39.61

Tabla 2. Media y desviación estándar (entre paréntesis) de la longitud, de las frecuencias absoluta y relativa y de la proporción de respuestas con *estar* de las cuatro categorías de adjetivos. Las dos últimas columnas recogen el valor de χ^2 y el valor de significación de *p*.

	I/Fijos	I/Variables	S/Fijos	S/Variables	$\chi^2(3)$	*p*
Longitud	7.41 (2.42)	7.25 (1.95)	7.33 (1.37)	7.00 (1.47)	0.79	.85
Frecuencia absoluta	80.25 (61.15)	80.91 (57.3)	82.00 (59.72)	88.58 (64.11)	0.4	.94
Frecuencia relativa	14.25 (10.86)	14.37 (10.17)	14.56 (10.61)	15.73 (11.38)	0.4	.94
Proporción de respuestas con *estar*	0 (0)	0.12 (0.06)	0.72 (0.13)	1 (0)		

3.1.2 Estudio 2: juicio de preferencia

3.1.2.1 Método

A partir de los resultados del primer estudio, realizamos un segundo trabajo, cuyo objetivo era confirmar la preferencia de los hablantes a la hora de combinar los adjetivos *i/s-level* seleccionados con *ser* o *estar*. Como es de suponer, aquellos adjetivos que presentan una combinatoria fija deberían mostrar una clara preferencia por una de las cópulas; en cambio, los adjetivos con una combinatoria variable o alternante admitirían las dos cópulas en una mayor proporción. Pese a ello, es probable que estos adjetivos variables, debido a su naturaleza como *i-level* o *s-level*, puedan mostrar cierta tendencia hacia una u otra de las cópulas.

Para analizar esta preferencia, se creó un cuestionario en el que los participantes debían leer oraciones como (13) y completar el hueco con el verbo *ser* o *estar* a partir de una escala de 1 a 6 puntos, en la que 1 significa *ser* y 6, *estar*.

(13) El tratamiento de esta dolencia ____ barato porque se aplica sin anestesia.

1 = ser 6 = estar

Se crearon 3 versiones, de tal forma que en cada una de esas versiones se mostraron 16 adjetivos: 4 adjetivos de cada categoría (es decir, 4 adjetivos *i-level*/fijo, 4 *i-level*/variable, 4 *s-level*/fijo y 4 *s-level*/variable).

El cuestionario se realizó a través de la plataforma Google Forms y en él participaron 90 hablantes nativos de español europeo (30 hablantes por versión), de los cuales 51 eran mujeres, 26 hombres y 13 prefirieron no identificarse.

3.1.2.2 Resultados

La Figura 1 muestra los resultados obtenidos en el segundo cuestionario. Para examinar los datos, se llevó a cabo un análisis de varianza[13] con el objetivo de determinar si la preferencia a favor de una u otra cópula provocaba diferencias significativas. Para ello, se emplearon como factores aleatorios los sujetos y los ítems y como factores fijos las dos variables independientes: el tipo de adjetivo (*i-level* vs. *s-level*) y su combinatoria (fija vs. variable). Como variable dependiente se analizó la preferencia con la que los 48 adjetivos se combinan con *ser* o con *estar* a partir de los valores obtenidos en la escala de 1 a 6.

Los resultados del análisis mostraron una interacción del tipo de adjetivo x combinatoria (F1(1,89)=342.24, p<0.001; F2(1,11)=23.93, p<0.001): mientras los adjetivos fijos de ambas clases muestran una preferencia generalizada por la cópula prototípica, los adjetivos variables de tipo *s-level* se muestran más proclives que los variables de tipo *i-level* a tomar la cópula alternativa (véase figura 1).

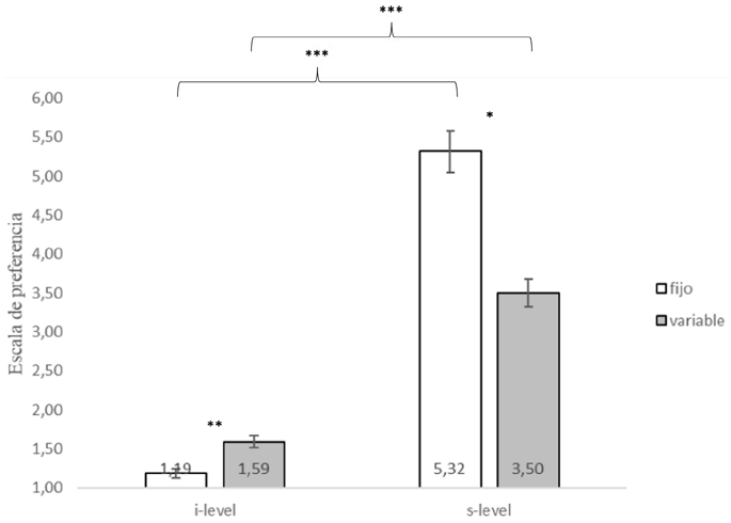


Figura 1. Nivel de preferencia a la hora de combinar adjetivos *i-level/s-level*, fijos y variables, con las cópulas *ser*, representada con el valor 1, o *estar*, representada con el valor 6. Los asteriscos indican que el efecto es significativo para los siguientes niveles: * = p < .05; ** = p < .01; *** = p < .001.

También se registró un efecto principal del tipo de adjetivo (F1(1,89)=1651.41, p<0.001; F2(1,11)=165.2, p<0.001), por lo que los adjetivos *i-level* muestran una mayor preferencia por la cópula *ser* que los adjetivos *s-level* (1.39 vs. 4.41). Los contrastes *post hoc*[14] revelan que esta diferencia es significativa a la hora de comparar los adjetivos con una combinatoria fija (t(89)=-42.68, p<0.001; t(11)=-15.84, p<0.001), así como aquellos con una combinatoria variable (t(89)=-20.25, p<0.001; t(11)=-5.01, p<0.001). Esta última diferencia

[13] El análisis estadístico de los datos de este estudio, así como de los subsiguientes, se realizó con el programa SPSS.

[14] Para los contrastes *post hoc* de este análisis, así como de los subsiguientes, se emplearon los sujetos y los ítems como factores aleatorios: el primer valor de t que se recoge en los resultados de estos contrastes alude siempre al análisis por sujetos, mientras que el segundo valor de t, al análisis por ítems.

resulta especialmente interesante, pues indica que, aunque los adjetivos variables pueden combinarse con ambas cópulas, su comportamiento no es homogéneo, lo que justifica su clasificación dentro de una u otra categoría: así, los adjetivos *i-level* variables, aunque admitan las dos cópulas, tienden a combinarse con mayor frecuencia con *ser*, lo que acredita su categorización como *i-level*; en cambio, los *s-level* variables presentan una mayor preferencia por combinarse con *estar*, justificando su clasificación como *s-level*.

Por último, se registró un efecto principal de la combinatoria ($F1(1,89)=109.79$, $p<0.001$; $F2(1,11)=6.24$, $p<0.05$), de tal forma que existen diferencias en el comportamiento de los adjetivos fijos vs. variables. Concretamente, los contrastes *post hoc* reflejaron diferencias significativas entre los adjetivos *i-level* fijos vs. variables ($t(89)=-5.42$, $p<0.001$; $t(11)=-4.23$, $p<0.01$), de tal forma que, aunque tanto los fijos como los variables muestran una clara preferencia por combinarse con *ser*, esta tendencia es mayor para los adjetivos *i-level* fijos que para los variables (1.19 vs. 1.59). Asimismo, los contrastes *post hoc* mostraron diferencias significativas entre los adjetivos *s-level* fijos vs. variables ($t(89)=17.6$, $p<0.001$; $t(11)=3.61$, $p<0.01$), por lo que los adjetivos *s-level* fijos presentan una mayor preferencia a la hora de combinarse con *estar* que los adjetivos *s-level* variables (5.32 vs. 3.5). Estos resultados indican que no todos los adjetivos *i-level* o *s-level* presentan un comportamiento homogéneo, sino que, en ambos casos, podemos encontrar diferencias significativas entre aquellos que solo pueden interpretarse dentro de una determinada categoría (y que, por tanto, no admiten un reanálisis) y aquellos que son ambivalentes y admiten la reinterpretación en la categoría opuesta.

Más allá del análisis global de las cuatro categorías de adjetivos, resulta también interesante examinar su comportamiento individual. La Tabla 3 recoge el valor medio obtenido por cada uno de los 48 adjetivos en esa escala de preferencia a favor de *ser* o *estar* (1 o 6, respectivamente) y, en ella, se puede observar que algunos de los adjetivos que en el estudio anterior fueron clasificados como *i-level*/fijos presentan, en este segundo trabajo, una puntuación más alta en su combinación con *estar* que ciertos adjetivos clasificados como *i-level* variables. Por ejemplo, *admirable*, pese a haber sido considerado como un adjetivo *i-level*/fijo, presenta una puntuación de 2.27 puntos en la escala de preferencia por *ser* o *estar*, mientras que un adjetivo *i-level*/variable como *bonito* presenta una puntuación más baja en dicha escala de preferencia: 1.07. Podemos hallar un comportamiento similar en los adjetivos *s-level*: por ejemplo, un adjetivo *s-level*/fijo como *vacía* presenta una puntuación más baja que un adjetivo *s-level*/variable como *pálido* (3.03 vs. 5.6). Estos resultados parecen indicar que, pese a las diferencias significativas halladas en el análisis anterior, la combinación de estos adjetivos con *ser* o *estar* no es categórica, sino más bien gradual, es decir, estos adjetivos se situarían en un *continuum* en el que su lectura como *i-level* o *s-level*, así como su combinatoria fija o variable, puede verse modificada (quizá a través del proceso de coerción mencionado anteriormente).

Tabla 3. Valor medio en la escala de preferencia por *ser* o *estar* de los adjetivos *i-level/s-level*, fijos y variables. 1 significa preferencia por *ser* y 6, por *estar*.

	I-Level	Preferencia Con *Ser/Estar*	S-Level	Preferencia Con *Ser/Estar*
Fijo	*ambiciosa*	1.00	*perplejo*	6.00
	doloroso	1.00	*ausente*	5.93
	inexplicable	1.00	*furioso*	5.87
	lógico	1.00	*oculto*	5.87
	ingenua	1.03	*desnudo*	5.83
	voluntaria	1.07	*intacto*	5.83
	útil	1.10	*disponible*	5.80
	falso	1.10	*contenta*	5.43
	crucial	1.17	*quieto*	4.93
	decisivo	1.17	*caliente*	4.80
	ateo	1.33	*pensativa*	4.47
	admirable	2.27	*vacía*	3.03
Variable	*bonito*	1.07	*pálido*	5.60
	simpática	1.08	*orgullosa*	4.62
	ingenioso	1.35	*atento*	4.43
	elegante	1.38	*serena*	4.33
	barato	1.46	*tierno*	4.12
	gracioso	1.53	*tranquilo*	4.05
	optimista	1.60	*sonriente*	3.67
	guapo	1.65	*nervioso*	3.55
	perfecta	1.73	*blanda*	3.18
	repugnante	1.85	*hueca*	1.83
	lindo	2.03	*completo*	1.35
	caro	2.38	*rígida*	1.32

3.1.3 Estudio 3: juicio de aceptabilidad

3.1.3.1 Método

Teniendo en cuenta los resultados de los estudios anteriores, se planteó un tercero en el que se buscaba valorar el nivel de aceptabilidad de las combinaciones de los adjetivos *i/s-level* variables con *ser* y *estar*. En este caso, los participantes debían evaluar oraciones como (14) y (15) en una escala de 1 a 6 en la que 1 significa "nada aceptable" y 6, "totalmente aceptable". Estas oraciones variaban en el tipo de adjetivo (*i-level* vs. *s-level*), así como en la

cópula (*ser* vs. *estar*), por lo que la combinación de estas dos variables permite establecer cuatro condiciones experimentales: *i-level*/ser (14a), *i-level*/estar (14b), *s-level*/ser (15a) y *s-level*/estar (15b).

(14) a. El tratamiento de esta dolencia es barato porque se aplica sin anestesia

b. El tratamiento de esta dolencia está barato porque se aplica sin anestesia

(15) a. El rey de los zulúes es atento cuando dialoga con sus súbditos

b. El rey de los zulúes está atento cuando dialoga con sus súbditos

Es importante señalar que, a diferencia de los estudios anteriores, los ítems experimentales solamente incluían adjetivos con una combinatoria variable mientras que los adjetivos *i/s-level* fijos junto con su cópula prototípica se incluyeron como condiciones de control (16a y 16b, respectivamente).

(16) a. El tratamiento de esta dolencia es doloroso porque se aplica sin anestesia

b. El rey de los zulúes está oculto cuando dialoga con sus súbditos

Se crearon 24 ítems experimentales que variaban en el tipo de adjetivo (12 con adjetivos *i-level* variables y 12 con adjetivos *s-level* variables), así como en la cópula con la que se combinaban (12 con *ser* y 12 con *estar*). Asimismo, se crearon 24 oraciones de control con adjetivos fijos: 12 con *i-level* y 12 con *s-level*. Por tanto, cada participante debía valorar 24 ítems experimentales y 24 ítems de control.

El cuestionario se realizó de nuevo a través de la plataforma Google Forms. Se crearon cuatro versiones del cuestionario y los participantes podían responder una u otra versión de forma aleatoria. En total, participaron 120 hablantes nativos de español europeo (30 hablantes por versión), de los cuales 77 eran mujeres, 30 hombres y 13 prefirieron no identificarse.

3.1.3.2 Resultados

La Figura 2 muestra el nivel de aceptabilidad que los participantes atribuyeron a las oraciones en sus diferentes condiciones, tanto de control (adjetivos *i/s-level* fijos) como experimentales: adjetivos *i/s-level* variables combinados bien con *ser*, bien con *estar*. A partir de los datos de este trabajo, se llevó a cabo un análisis de varianza con el objetivo de determinar si existían diferencias significativas en el nivel de aceptabilidad de las diversas condiciones. Para ello, se emplearon los sujetos y los ítems como factores aleatorios y las dos variables independientes (el tipo de adjetivo y la cópula) como factores fijos. Como variable dependiente se tuvo en cuenta el nivel de aceptabilidad de las oraciones en la escala de 1 a 6. Las condiciones de control fueron excluidas para este primer análisis.

Los resultados mostraron una interacción del tipo de adjetivo x cópula (F1(1,29)=130.35, p<0.001; F2(1,11)=50.26, p<0.001), de tal forma que los *i-level* variables se perciben como más aceptables cuando se combinan con *ser* vs. *estar* (5.55 vs. 3.06), mientras que los *s-level* variables se consideran igualmente aceptables, con independencia de la cópula con la que se combinen: *ser* o *estar* (4.93 vs. 4.74) .

Asimismo, se registró un efecto principal del tipo de adjetivo (F1(1,29)=23.58, p<0.001; F2(1,11)=7.72, p<0.05), que indica que, de forma global, las oraciones con los adjetivos *s-level* variables son consideradas como más aceptables que aquellas con los *i-level* variables (4.31 vs. 4.83). No obstante, los contrastes *post hoc* revelan ciertas diferencias. Los adjetivos *s-level* variables se perciben como más aceptables cuando se combinan con *estar* en comparación con los *i-level* variables (t(29)=-8.71, p<0.001; t(11)=-2.85, p<0.05; 4.74 vs. 3.06). Ello resulta lógico, ya que la cópula *estar* es propia de los adjetivos *s-level* y no así de los *i-level*. En cambio, cuando ambos tipos de adjetivos se combinan con el verbo *ser*, se registra un mayor nivel de aceptabilidad con los adjetivos *i-level* variables vs. *s-level* variables (t(29)=12.87, p<0.001; t(11)=7.29, p<0.001; 5.55 vs. 4.93). De nuevo, este resultado resulta esperable, ya que, a diferencia de los adjetivos *s-level*, los *i-level* suelen combinarse con la cópula *ser*. Los contrastes *post hoc* confirman así la interacción hallada previamente.

Por último, se registró un efecto principal de la cópula (F1(1,29)=208.12, p<0.001; F2(1,11)=40.9, p<0.001), de tal forma que tanto los adjetivos *i-level* como los *s-level* variables reciben un mayor nivel de aceptabilidad con *ser* vs. *estar* (5.24 vs. 3.9). No obstante, los contrastes *post hoc* confirman que este efecto solamente es significativo para los adjetivos

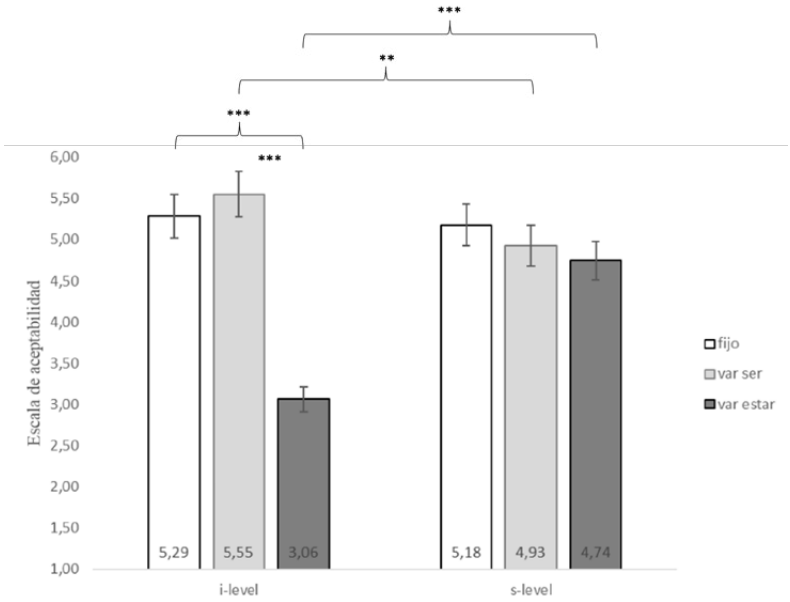


Figura 2. Nivel de aceptabilidad de las oraciones con adjetivos *i-level/s-level* fijos (condiciones de control) y adjetivos *i-level/s-level* variables combinados con la cópula *ser* o *estar*. Los asteriscos indican que el efecto es significativo para los siguientes niveles: ** = p < .01; *** = p < .001.

i-level variables ($t(29)=18.25$, $p<0.001$; $t(11)=10.4$, $p<0.001$), pero no para los *s-level* variables ($p>0.05$). Estos resultados parecen mostrar que los adjetivos *i-level* variables presentan un comportamiento más categórico en tanto que su combinación con *ser* se percibe como más aceptable que con *estar* (5.55 vs. 3.06); en cambio, los adjetivos *s-level* variables resultan más versátiles, de tal forma que su combinatoria con ambas cópulas se percibe como igualmente aceptable (4.93 con *ser* vs. 4.74 con *estar*). Ello indicaría que la reinterpretación de los adjetivos *s-level* variables como *i-level* cuando se combinan con *ser* es más sencilla, hasta el punto de que no muestran diferencias respecto de la cópula prototípica (*estar*); por el contrario, la combinatoria de los adjetivos *i-level* variables con *estar* resulta menos aceptable, indicativo de que su reinterpretación como *s-level* parece más costosa.

Tras este primer análisis, se contrastó mediante la prueba *t* de *Student* el nivel de aceptabilidad de las condiciones experimentales con las condiciones de control, empleando los sujetos y los ítems como factores aleatorios. En primer lugar, los adjetivos *i-level* variables con el verbo *ser* no muestran diferencias significativas respecto de su condición de control (*i-level* fijos con *ser*), por lo que ambas condiciones se perciben como igualmente aceptables ($p>0.05$). No obstante, los adjetivos *i-level* variables con *estar* sí registran diferencias significativas respecto de la condición de control ($t(29)=15.3$, $p<0.001$; $t(11)=10.23$, $p<0.001$), de tal forma que su combinación con la cópula *estar*, aunque posible, hace que se perciban como menos aceptables (5.29 vs. 3.06).

Por su parte, los adjetivos *s-level* variables no mostraron diferencias significativas respecto de su condición de control (*s-level* fijos con *estar*), independientemente de combinarse con *estar* ($p>0.1$) o con *ser* ($p>0.05$). Esta ausencia de diferencias significativas confirma lo señalado previamente: los adjetivos *s-level* variables presentan una mayor flexibilidad, de tal forma que su combinación con la cópula prototípica (*estar*) o con la opuesta (*ser*) se percibe como igualmente aceptable.

3.2 Nombres eventivos y no eventivos

3.2.1 Estudio 1: tarea de categorización

3.2.1.1 Método

De manera similar al trabajo sobre los adjetivos, el primer estudio sobre los sustantivos eventivos/no eventivos buscaba realizar una categorización de este tipo de palabras para emplearlas en los siguientes estudios. Para ello, se seleccionaron a partir de trabajos previos y de la propia intuición de los investigadores 84 sustantivos que podían ser considerados como eventivos o no eventivos (es decir, como objetos). Se creó un formulario en el que los participantes debían leer los sustantivos y clasificarlos en una escala de 1 a 6, en la que 1 significa "eventivo" y 6, "no eventivo".[15]

[15] Dada la especialización de términos como "sustantivo eventivo" o "sustantivo no eventivo", en el formulario se emplearon otras palabras que denotasen su interpretación en un sentido u otro. Por ejemplo, con el sustantivo *café* aparecían, en un extremo de la escala, "reunión" para marcar el sentido eventivo y, en el otro extremo, "bebida" para señalar su sentido no eventivo. Para cada uno de los 84 sustantivos se buscaron diferentes palabras que los participantes pudiesen asociar fácilmente con el sentido eventivo o no eventivo.

El cuestionario fue administrado a través de la plataforma Google Forms y contó con la participación de 62 hablantes nativos de español europeo, de los cuales 36 eran mujeres, 19 hombres y 7 prefirieron no identificarse.

3.2.1.2 Codificación y resultados

Los 84 sustantivos fueron clasificados manualmente como eventivos o no eventivos teniendo en cuenta su valor medio en la escala: aquellos sustantivos que presentaban un valor medio menor a 2.5 eran catalogados como eventivos, mientras que aquellos con un valor igual o superior a 2.5 eran considerados como no eventivos (anexo 2).

Al igual que en el caso de los adjetivos, este primer estudio perseguía seleccionar el material para los dos siguientes, por lo que, a partir de la clasificación de los 84 sustantivos, se recopiló un grupo menor de cada tipo que permitiese mantener constantes la longitud y la frecuencia entre los dos grupos. La Tabla 4 recoge el resultado de esta selección que, concretamente, incluye 19 sustantivos de cada tipo, así como su valor medio en la escala de 1 a 6. Los resultados estadísticos de la Tabla 5 muestran que no existen diferencias significativas en la longitud (z=-0.37, p>0.05) ni en la frecuencia absoluta (z=-0.8, p>0.05) o relativa (z=-0.8, p>0.05) entre los sustantivos eventivos y no eventivos.

Tabla 4. Promedio y desviación estándar (entre paréntesis) del valor de eventualidad otorgado a los 38 sustantivos seleccionados a partir del primer cuestionario. La tercera columna recoge su clasificación como sustantivo eventivo o no eventivo. Las últimas dos columnas muestran la frecuencia, absoluta y relativa, asociada a cada sustantivo.

			Frecuencia	
Sustantivo	**Promedio**	**Clasificación**	**Absoluta**	**Relativa**
boda	1.26 (0.51)	eventivo	128	22.74
debate	1.29 (0.46)	eventivo	214	38.02
excursión	1.35 (0.66)	eventivo	49	8.70
ceremonia	1.45 (0.99)	eventivo	161	28.60
certamen	1.45 (0.77)	eventivo	23	4.09
concurso	1.52 (0.63)	eventivo	122	21.67
conferencia	1.52 (0.89)	eventivo	119	21.14
desfile	1.58 (0.72)	eventivo	61	10.84
eclipse	1.65 (1.08)	eventivo	7	1.24
espectáculo	1.81 (1.11)	eventivo	337	59.87
festival	1.84 (1.27)	eventivo	27	4.80
baile	1.87 (0.92)	eventivo	128	22.74
recital	1.87 (1.23)	eventivo	10	1.78
nombramiento	1.90 (1.49)	eventivo	80	14.21
cita	2.06 (1.5)	eventivo	211	37.48
apuesta	2.16 (1.32)	eventivo	70	12.44

Tabla 4, continúa en la página siguiente.

Tabla 4, continúa de la página anterior.

Sustantivo	Promedio	Clasificación	Frecuencia	
			Absoluta	Relativa
biopsia	2.17 (1.65)	eventivo	12	2.13
sorpresa	2.21 (1.47)	eventivo	366	65.02
entrevista	2.38 (1.47)	eventivo	170	30.20
historia	2.52 (1.52)	no eventivo	1864	331.13
discurso	2.61 (1.5)	no eventivo	382	67.86
exposición	2.61 (1.56)	no eventivo	178	31.62
cena	3.23 (1.69)	no eventivo	208	36.95
película	3.29 (2.08)	no eventivo	602	106.94
aviso	3.68 (2.04)	no eventivo	104	18.48
grabación	3.90 (1.85)	no eventivo	29	5.15
embalaje	3.94 (1.97)	no eventivo	4	0.71
notificación	3.94 (1.84)	no eventivo	3	0.53
merienda	4.10 (1.76)	no eventivo	50	8.88
cuento	4.32 (1.76)	no eventivo	275	48.85
test	4.39 (1.73)	no eventivo	65	11.55
aperitivo	4.55 (1.55)	no eventivo	30	5.33
muestra	4.94 (1.39)	no eventivo	383	68.04
inventario	5.03 (1.38)	no eventivo	30	5.33
convocatoria	5.06 (1.44)	no eventivo	67	11.90
documental	5.32 (1.11)	no eventivo	28	4.97
café	5.39 (0.88)	no eventivo	434	77.10
bocadillo	5.90 (0.4)	no eventivo	34	6.04

Table 5. Media y desviación estándar (entre paréntesis) de la longitud, de las frecuencias absoluta y relativa y del valor otorgado en la escala de eventividad de los 38 sustantivos eventivos y no eventivos seleccionados. Las dos últimas columnas recogen el valor de *z* asociado a la prueba de Wilcoxon y el valor de significación de *p*.

	Eventivos	No Eventivos	*z*	*p*
Longitud	7.79 (2.23)	7.95 (2.46)	-0.37	.7
Frecuencia absoluta	120.79 (104.41)	251.05 (428.02)	-0.8	.42
Frecuencia relativa	21.46 (18.55)	44.6 (76.03)	-0.8	.42
Valor en la escala de eventividad	1.75 (0.34)	4.14 (0.99)		

3.2.2 Estudio 2: juicio de preferencia

3.2.2.1 Método

A partir de los resultados y la clasificación del primer estudio, planteamos un segundo trabajo cuyo objetivo era determinar el nivel de preferencia de los hablantes a la hora de combinar estos 38 sustantivos con *ser* o *estar*. De acuerdo con estudios previos, los sustantivos eventivos tienden a combinarse con *ser*, mientras que los no eventivos suelen aparecer con *estar*. No obstante, unos y otros pueden resultar ambivalentes en ciertos contextos y, por ende, recibir la lectura opuesta cuando se combinan adecuadamente con un sintagma preposicional que indica una localización.

Teniendo en cuenta esta situación, se creó este cuestionario en el que los participantes debían leer oraciones como (17) y (18) y completar el hueco con una de las cópulas a partir de una escala en la que 1 significa *ser* y 6, *estar*. Estas oraciones diferían en relación con dos variables: por un lado, el sujeto de la oración podía incluir un sustantivo eventivo (17) o no eventivo (18) y, por otro, el sintagma detrás de la cópula hacía referencia a una localización que podía ser entendida como una coordenada espacio-temporal (17a y 18a) o como un contenedor (17b y 18b). La combinación de estas dos variables permite establecer cuatro condiciones experimentales: eventivo/localización espacio-temporal (17a), eventivo/contenedor (17b), no eventivo/localización espacio-temporal (18a), no eventivo/contenedor (18b). Así pues, sería de esperar que tanto los sustantivos eventivos como la localización espacio-temporal favoreciesen el uso de *ser*, mientras que los no eventivos y la localización de contenedor mostrasen una preferencia por combinarse con *estar*.

(17) a. La boda de mi sobrina ____ en una ermita de un pueblo de la sierra.

b. La boda de mi sobrina ____ en este vídeo familiar de mi hermano.

(18) a. La merienda de los niños ____ en un parque de juegos infantiles de nuestro barrio.

b. La merienda de los niños ____ en unas bolsas de plástico dentro de la nevera.

1 = ser 6 = estar

Se crearon dos versiones de este cuestionario con 38 ítems experimentales, de los cuales 19 incluían sustantivos eventivos y 19, no eventivos. Dado el número impar de sustantivos, las cuatro condiciones experimentales diferían en el número de ítems: los participantes de la primera versión leían 10 ítems en la condición eventivo/localización espacio-temporal y 9 en la condición eventivo/contenedor y, de manera paralela, 9 ítems en la condición no eventivo/localización espacio-temporal y 10 en la condición no eventivo/contenedor; en cambio, en la segunda versión se presentaba la opción inversa de estos ítems. Los ítems experimentales fueron aleatorizados junto con 22 ítems de relleno, por lo que los participantes leyeron un total de 60 oraciones.

El cuestionario se administró a través de Google Forms y en él participaron 70 hablantes nativos de español europeo (35 participantes por versión), de los cuales 51 eran mujeres y 19 hombres.

3.2.2.2 Resultados

La Figura 3 muestra los resultados obtenidos en el segundo estudio sobre la preferencia de combinar los sustantivos eventivos y no eventivos con *ser* o *estar* en función del tipo de locativo que aparece tras estos verbos. Se llevó a cabo un análisis de varianza en el que se tuvieron en cuenta los sujetos y los ítems como factores aleatorios, mientras que las dos variables independientes (tipo de sustantivo y tipo de locativo) se emplearon como factores fijos. Por su parte, como variable dependiente se analizó la preferencia por combinar los 38 sustantivos eventivos/no eventivos con *ser* o *estar* a partir del valor obtenido en la escala de 1 a 6.

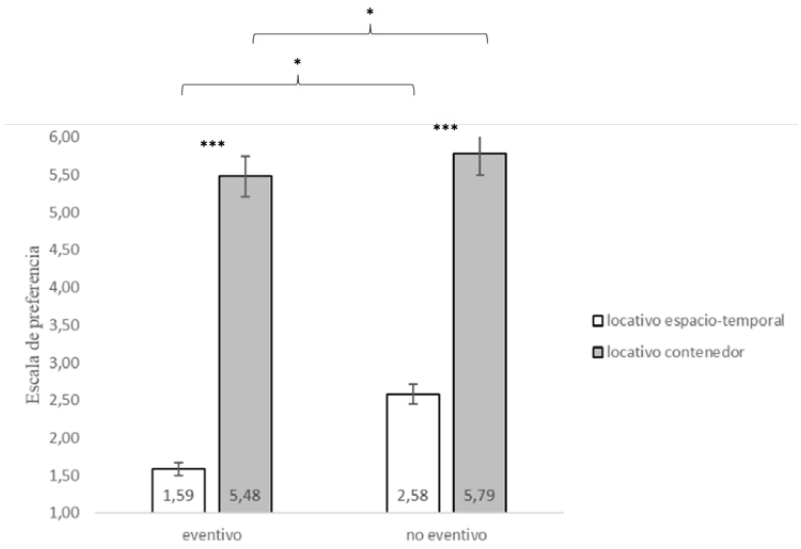


Figura 3. Nivel de preferencia a la hora de combinar sustantivos eventivos/no eventivos con *ser*, representada con el valor 1, o *estar*, representada con el valor 6, cuando el locativo pospuesto indica un espacio-temporal o un contenedor. Los asteriscos indican que el efecto es significativo para los siguientes niveles: * = $p < .05$; *** = $p < .001$.

Los resultados registraron una interacción entre las dos variables independientes para el análisis por sujetos (F1(1,34)=12,91, $p<0.01$), pero no así para el análisis por ítems ($p>0.05$). Esta interacción —aunque solo significativa para los sujetos— indica que tanto los sustantivos eventivos como los no eventivos tienden a combinarse con *ser* cuando el locativo indica una localización espacio-temporal y con *estar* cuando el locativo alude a un contenedor; sin embargo, la diferencia entre un tipo de locativo y otro es mayor para los sustantivos eventivos (1.59 vs. 5.48) que para los no eventivos (2.58 vs. 5.79). Esta mayor diferencia para los eventivos muestra que estos sustantivos admiten con cierta facilidad tanto la combinación con *ser* (cuando el locativo es una coordenada espacio-

temporal) como con *estar* (cuando el locativo es un contenedor); sin embargo, los no eventivos, aunque se puedan combinar con ambas cópulas, no presentan una preferencia tan marcada por *ser* cuando el locativo indica una coordenada espacio-temporal (2.58).

Asimismo, se registró un efecto principal del tipo de sustantivo (F1(1,34)=97.52, p<0.001; F2(1,18)=13.45, p<0.01), de tal forma que los sustantivos no eventivos se combinan con mayor frecuencia con *estar* que los sustantivos eventivos (4.18 vs. 3.53). Los contrastes *post hoc* reflejaron que este patrón se repite con independencia del tipo de locativo que aparezca tras la cópula: así, los sustantivos no eventivos aparecen en un mayor número de casos con *estar* en comparación con los eventivos tanto si el locativo posterior indica una coordenada espacio-temporal (t(34)=-7.03, p<0.001; t(18)=-2.89, p<0.05; 2.58 vs. 1.59) como un contenedor (t(34)=-6.06, p<0.001; t(18)=-2.51, p<0.05; 5.79 vs. 5.48).

De manera similar, se registró un efecto principal del tipo de locativo (F1(1,34)=1790.44, p<0.001; F2(1,18)=412.69, p<0.001), por lo que existe una mayor preferencia por combinar los locativos que indican un contenedor con *estar* que aquellos que se refieren a una coordenada espacio-temporal (5.63 vs. 2.08). Los contrastes *a posteriori* indican que esta preferencia por combinar los locativos contenedores con *estar* es común a los sustantivos eventivos (t(34)=-32.93, p<0.001; t(18)=-25.5, p<0.001; 5.48 vs. 1.59), así como no eventivos (t(34)=-32.26, p<0.001; t(18)=-9.75, p<0.001; 5.79 vs. 2.58).

Los resultados obtenidos en este segundo cuestionario confirman las hipótesis establecidas previamente acerca de la preferencia del uso de las cópulas *ser* y *estar* con sustantivos eventivos/no eventivos, así como en función del tipo de locativo: espacio-temporal o contenedor. No obstante, es interesante remarcar la interacción obtenida entre las dos variables independientes en el análisis por sujetos, ya que muestra que los eventivos admiten con mayor facilidad la cópula no prototípica (*estar*) cuando el locativo se refiere a un contenedor (5.48) en comparación con los no eventivos, que admiten la cópula no prototípica (*ser*) con un locativo espacio-temporal en menor medida (2.58).

3.2.3 Estudio 3: juicio de aceptabilidad

3.2.3.1 Método

Por último, y al igual que para los adjetivos, se realizó un tercer estudio cuyo objetivo era analizar el nivel de aceptabilidad de oraciones con sustantivos eventivos/no eventivos combinados con las cópulas *ser* y *estar* seguidas de un sintagma locativo una vez determinadas sus preferencias combinatorias. Así pues, los participantes debían valorar el nivel de aceptabilidad de oraciones como (19) y (20) en una escala de 1 a 6 en la que 1 significa “nada aceptable” y 6, “totalmente aceptable”. Las oraciones diferían, por un lado, en el sustantivo del sujeto (eventivo vs. no eventivo) y, por otro, en la cópula (*ser* vs. *estar*). Estas variables conllevaban, como vimos previamente, una diferencia en el sintagma posterior a la cópula, pues este hace referencia a una localización a partir de sus coordenadas espacio-temporales cuando se combina con *ser*, mientras que con *estar* el

locativo denota un contenedor. La combinación de estas dos variables dio lugar a cuatro condiciones experimentales: eventivo/*ser* (19a), eventivo/*estar* (19b), no eventivo/*ser* (20a), no eventivo/*estar* (20b).

(19) a. La boda de mi sobrina es en una ermita de un pueblo de la sierra.

b. La boda de mi sobrina está en este vídeo familiar de mi hermano.

(20) a. La merienda de los niños es en un parque de juegos infantiles de nuestro barrio.

b. La merienda de los niños está en unas bolsas de plástico dentro de la nevera.

El tercer estudio presentaba la misma estructura que el anterior, de tal forma que se crearon dos versiones con 38 ítems experimentales. De estos, 19 ítems incluían sustantivos eventivos (en la primera versión, 10 en la condición de localización espacio-temporal y 9 en la condición de contenedor y, en la segunda, viceversa) y 19, sustantivos no eventivos (en la primera versión, 9 en la condición de localización espacio-temporal y 10 en la condición de contenedor y, en la segunda, viceversa). De esta forma, se obtuvo el mismo número de respuestas para cada una de las cuatro condiciones experimentales entre las dos versiones del experimento. Los 38 ítems experimentales se aleatorizaron junto con 12 ítems de relleno, por lo que los participantes leyeron un total de 50 oraciones.

El cuestionario fue administrado a través de Google Forms y contó con la participación de 60 hablantes nativos de español europeo (30 por versión), de los cuales 46 eran mujeres, 12 hombres y 2 prefirieron no identificarse.

3.2.3.2 Resultados

La Figura 4 muestra los resultados del tercer estudio sobre la aceptabilidad de los sustantivos eventivos/no eventivos a la hora de combinarse con *ser* y *estar*. Estos datos fueron analizados a partir de una prueba de varianza en la que se tuvieron en cuenta los sujetos y los ítems como factores aleatorios y las variables independientes (tipo de sustantivo y cópula) como factores fijos. Por su parte, se empleó como variable dependiente el nivel de aceptabilidad obtenido en la escala de 1 a 6.

En primer lugar, se registró una interacción entre el tipo de sustantivo x cópula ($F1(1,29)=126$, $p<0.001$; $F2(1,18)=34.37$, $p<0.001$), de tal forma que los participantes valoraron como más aceptables aquellas oraciones en las que los sustantivos eventivos se combinan con *ser* vs. *estar* (5.11 vs. 4.81) mientras que los sustantivos no eventivos eran considerados como más aceptables cuando aparecen con *estar* vs. *ser* (5.65 vs. 4.01).

Asimismo, se registró un efecto principal del tipo de cópula ($F1(1,29)=52.26$, $p<0.001$; $F2(1,18)=15.64$, $p<0.01$), por lo que, en general, las oraciones con *estar* se valoraron como más aceptables que aquellas con *ser* (5.23 vs. 4.55). No obstante, los contrastes *a posteriori* mostraron que este patrón solo es significativo para los sustantivos no eventivos

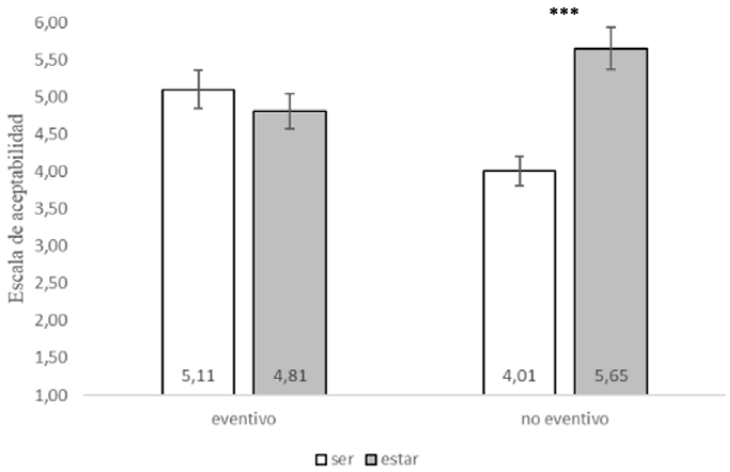


Figura 4. Nivel de aceptabilidad de los sustantivos eventivos/no eventivos combinados con las cópulas *ser* o *estar*. Los asteriscos indican que el efecto es significativo para los siguientes niveles: *** = $p < .001$.

($t(29)$=-13.26, p<0.001; $t(18)$=-6.13, p<0.001), pero no así para los eventivos, para los que solo se obtuvieron diferencias en el análisis por sujetos ($t(29)$=2.21, p<0.05), pero no por ítems (p>0.1). Por último, no se obtuvo ningún efecto principal del tipo de sustantivo (p>0,05).

Estos resultados reflejan que los sustantivos no eventivos son valorados como más aceptables cuando se combinan con *estar* vs. *ser* (y, por tanto, cuando se combinan con un locativo contendor vs. un locativo espacio-temporal); sin embargo, los sustantivos eventivos no muestran un comportamiento tan categórico. De hecho, aunque los sustantivos eventivos son evaluados como más aceptables cuando se combinan con *ser* vs. *estar*, esta diferencia no alcanza significación estadística (Figura 4). El comportamiento dispar de unos y otros sustantivos parece indicar que los eventivos pueden reinterpretarse como no eventivos cuando se combinan con *estar* con cierta facilidad en tanto que no muestran diferencias significativas respecto de la cópula prototípica (*ser*). En cambio, los sustantivos no eventivos resultan menos aceptables cuando se combinan con la cópula opuesta (*ser*), lo que indicaría que su reinterpretación como sustantivos eventivos es más compleja. En consecuencia, parece que los sustantivos no eventivos presentan un comportamiento más rígido en comparación con los eventivos, lo que, como veremos en la próxima sección, puede interpretarse de diverso modo dada la naturaleza —en cierto sentido, limitada— de nuestros datos.

4. Discusión

A continuación revisaremos los principales resultados obtenidos en los estudios previos y, tras ello, los interpretaremos en relación con aquellas cuestiones teóricas que consideramos más relevantes a la luz de nuestros datos, esto es, (i) la relación entre las dos categorías estudiadas (adjetivos y sustantivos) y (ii) la naturaleza de las cópulas *ser* y *estar*.

Por un lado, los tres primeros estudios versaban sobre la combinatoria de los adjetivos *i/s-level* con las cópulas del español: *ser* y *estar*. Los resultados del primer y segundo estudio han permitido clasificar estas unidades en adjetivos *i-level* o *s-level* con una combinatoria fija o variable con *ser* y *estar*; sin embargo, estos resultados también han permitido observar que esta clasificación no se basa en una diferencia categórica, sino más bien gradual. Así pues, es cierto que los adjetivos *i-level* muestran una preferencia por combinarse con la cópula *ser* mientras que los adjetivos *s-level* optan con mayor frecuencia por *estar*; sin embargo, tanto unos como otros, especialmente aquellos definidos como variables, admiten en determinados contextos la cópula opuesta y, por tanto, su reinterpretación como *s-level* o *i-level*, respectivamente.

A este respecto, los resultados del tercer estudio muestran que ese proceso de reinterpretación no es homogéneo en todos los casos. Concretamente, los adjetivos *i-level* variables son valorados como más aceptables cuando se combinan con *ser* vs. *estar*; sin embargo, los adjetivos *s-level* variables no muestran diferencias en su grado de aceptabilidad independientemente de la cópula con la que se combinen (ni tampoco respecto de la condición de control). Estos resultados indican que los adjetivos s-*level* son más flexibles y, por tanto, más fáciles de reinterpretar como *i-level* cuando se combinan con la cópula *ser*; mientras que el reanálisis de estos últimos como *s-level* resulta más complejo, como demuestra su menor nivel de aceptabilidad en combinación con la cópula no prototípica (*estar*).

Estos resultados apuntan en la misma dirección que los obtenidos en trabajos experimentales previos acerca de los adjetivos *i/s-level* (Alquézar, 2016; Horno-Chéliz e Igoa, 2017; Soler, 2021) y, por tanto, apoyarían la tesis de Chierchia (1995). Es decir, los adjetivos *i-level* parecen mostrar el argumento <e> saturado desde el lexicón y, por ende, una combinatoria sintáctica más rígida, lo que dificulta su reinterpretación como *s-level* cuando se combinan con la cópula no prototípica. Por el contrario, los adjetivos *s-level*, al no presentar <e> saturado, son más flexibles, como demuestra el hecho de que su combinación con la cópula prototípica (*estar*) o con la opuesta (*ser*) sea valorada como igualmente aceptable.

En cuanto a los sustantivos eventivos/no eventivos (analizados en los tres últimos trabajos), los resultados de los dos primeros estudios muestran que los eventivos presentan una clara preferencia por la cópula *ser* mientras que los no eventivos se combinan con mayor frecuencia con *estar*. Sin embargo, y como se observa en el segundo estudio, estas preferencias están condicionadas de manera significativa por el locativo que completa estas oraciones: así, los locativos que denotan una coordenada espacio-temporal optan por la cópula *ser* con independencia de que el sustantivo que funciona como sujeto sea o no eventivo, mientras que los locativos contenedores prefieren la combinatoria con *estar*. Por tanto, nuestros datos apuntan a que el carácter eventivo/no eventivo de los sustantivos parece estar modulado en parte por el tipo de complemento que lo

acompaña, lo que *a priori* podría indicar que estos rasgos vendrían determinados por la semántica composicional: es decir, sería la combinación con unos u otros predicados lo que determinaría la interpretación de los sustantivos como eventivos o no eventivos.

No obstante, los resultados del tercer estudio —y, en parte, también los del segundo— muestran que estas preferencias combinatorias tampoco están exentas de diferencias, por lo que la semántica composicional no podría explicar por completo nuestros resultados. Así, los sustantivos eventivos parecen ser más fáciles de reinterpretar como no eventivos cuando se combinan con *estar*, como demuestra el hecho de que presenten el mismo nivel de aceptabilidad con ambas cópulas; sin embargo, los sustantivos no eventivos presentan un menor nivel de aceptabilidad cuando se combinan con la cópula no prototípica (*ser*), lo que indicaría que su reanálisis como eventivos es más costoso.

El conjunto de estos resultados puede interpretarse en dos direcciones: o bien los sustantivos no eventivos (en comparación con los eventivos) presentan una mayor restricción léxico-semántica que dificulta su reinterpretación como eventivos cuando se combinan con la cópula no prototípica (*ser*); o bien ninguno de estos sustantivos presenta restricciones léxico-semánticas en lo que respecta a su interpretación como eventivos o no eventivos y, en consecuencia, es su combinatoria con la cópula *ser* o *estar*, respectivamente, (y quizá también con uno u otro locativo) la que condiciona su interpretación en un sentido u otro. Dados nuestros resultados, esta segunda hipótesis solamente sería posible si se acepta la propuesta de Fábregas et al. (2023), según la cual *estar* es la cópula no marcada en los predicados locativos:[16] así, *estar* se combina fácilmente con sustantivos eventivos y no eventivos, mientras que *ser*, al ser la cópula marcada, no admite con tanta facilidad su combinación con los sustantivos no eventivos. Consideramos que la naturaleza de nuestros datos (juicios de preferencia y aceptabilidad) no nos permite discernir entre una u otra hipótesis, pues se basan en una reflexión consciente una vez que los participantes han leído la oración completa. Así pues, serán necesarios nuevos estudios experimentales con tareas de procesamiento *online* para poder esclarecer esta cuestión.

Los datos obtenidos en todos estos estudios pueden interpretarse en relación con dos cuestiones teóricas relevantes: (i) la relación entre los distintos tipos de adjetivos y de sustantivos y (ii) la naturaleza de las cópulas. Así, en primer lugar, podemos hallar cierto paralelismo en cómo las unidades aquí estudiadas admiten con mayor o menor facilidad una reinterpretación: por un lado, tanto los adjetivos *i-level* como los sustantivos no eventivos muestran un comportamiento más rígido en tanto son más difíciles de reinterpretar en el sentido opuesto (como *s-level* o eventivos, respectivamente) cuando se combinan con la cópula no prototípica; en cambio, los adjetivos *s-level* presentan un comportamiento similar al de los sustantivos eventivos, ya que unos y otros presentan el mismo nivel de aceptabilidad cuando se combinan con la cópula prototípica o con la opuesta. Este paralelismo lleva a plantearse cómo se especifica en el lexicón la mayor o menor

[16] Si no se aceptase esta propuesta, no se podrían explicar los resultados obtenidos en nuestros estudios por medio de esa segunda hipótesis, ya que, al considerar que es la propia combinación con una u otra cópula la que determina su sentido, no deberían observarse diferencias entre los sustantivos eventivos y no eventivos.

flexibilidad de estas unidades; en otras palabras, si las entradas léxicas de los sustantivos y de los adjetivos están lo suficientemente especificadas como para que la información que en ellas aparece lleve a que los hablantes se decanten por la selección de una cópula u otra o si, por el contrario, es la propia combinación con una u otra cópula la que lleva a darles la interpretación adecuada. Dado el carácter exploratorio de nuestro estudio, así como la naturaleza de nuestros datos, no podemos dar una respuesta satisfactoria a este interrogante, pero sí podemos ponerlos en conexión con ciertos modelos teóricos.

Así, desde los modelos lexicistas (Levin y Rappaport, 1995; Pustejovsky, 1995) se predice que la información almacenada en la entrada léxica condiciona el comportamiento sintáctico, de manera que los datos relativos a los adjetivos *i-level* y los sustantivos no eventivos irían en esta línea, pues el hecho de que su reinterpretación en el sentido opuesto sea más costosa podría indicar que, desde el lexicón, hay cierta información especificada. Sin embargo, los adjetivos *s-level* y los sustantivos eventivos, que muestran mayor flexibilidad en nuestros datos, no parecen encajar en esta propuesta, precisamente porque su interpretación en un sentido u otro no conlleva un mayor o menor coste y, por ende, su combinatoria sintáctica parece ser más libre. Por tanto, una explicación a partir de modelos sintactistas (Borer, 2005) sería más plausible para estas otras unidades: así, estas unidades no estarían almacenadas en el lexicón mental con tantas restricciones codificadas, sino que sería la propia combinatoria sintáctica la que determinaría su interpretación en un sentido u otro. Como señalamos previamente, la naturaleza de nuestros datos, mediados por la reflexión consciente, no nos permite discernir entre unos y otros modelos teóricos de manera satisfactoria, para lo cual será necesario realizar experimentos que permitan estudiar el procesamiento *online* de estas unidades.

Pese a ello, y más allá de la interpretación puramente teórica, estas distinciones en el almacenamiento léxico también pueden ponerse en relación con resultados experimentales que van más allá del fenómeno aquí estudiado: por ejemplo, que los adjetivos *i-level* y los sustantivos no eventivos estén restringidos desde el lexicón puede relacionarse con trabajos previos (López-Cortés, 2021, López-Cortés y Horno-Chéliz, 2022) que muestran que los sustantivos almacenan rasgos semánticos relevantes en el lexicón, lo que se refleja en diferencias en su procesamiento. Por su parte, que los adjetivos *s-level* y los nombres eventivos sean más flexibles en su combinatoria conecta con trabajos previos, como Horno-Chéliz e Igoa (2018), en los que se observa que otras categorías, como los verbos alternantes, también poseen un comportamiento flexible que parece indicar que no hay rasgos restrictivos impuestos desde el lexicón. En definitiva, al igual que no es posible discernir entre unos modelos teóricos y otros a partir de nuestros datos, los trabajos experimentales previos tampoco permiten encontrar un patrón de procesamiento generalizado que sirva para explicar nuestro objeto de estudio como un todo homogéneo.

Por otro lado, los resultados de nuestros estudios permiten reflexionar sobre la naturaleza de las cópulas *ser* y *estar* en español. Así, los datos relativos a los adjetivos sí parecen encajar con la interpretación clásica de que *ser* es la cópula más simple en tanto que parece tener menos restricciones combinatorias que *estar* (Escandell-Vidal y

Leonetti, 2002), mientras que, en el caso de la localización de sustantivos, los datos se invierten y *estar* es la cópula que admite con mayor facilidad sustantivos tanto eventivos como no eventivos; es decir, *estar* es la cópula que exhibe un comportamiento menos marcado que *ser*. Estos resultados enlazan con la cuestión teórica acerca de la naturaleza de las cópulas en español: así, algunos autores abogan por una explicación conjunta del comportamiento de *ser* y *estar* en combinación con adjetivos y sustantivos (García-Pardo y Menon, 2020; Leonetti, 1994), mientras que otros defienden un análisis diferenciado en el que el uso de estos verbos da cuenta de estructuras subyacentes distintas para cada tipo de predicado (Fábregas et al. 2023). Los datos obtenidos en nuestros estudios van en línea con esta segunda hipótesis, aunque, a diferencia de lo postulado por Fábregas et al., no podemos afirmar que sean las cópulas las que impongan cierta lectura sobre los adjetivos o sustantivos, pues, para ello, necesitaríamos datos más precisos sobre su procesamiento.

5. Conclusiones

El objetivo principal del presente trabajo era analizar las preferencias de uso y la aceptabilidad de hablantes nativos de español acerca de las posibilidades combinatorias de las cópulas *ser* y *estar* con los adjetivos *i/s-level*, por un lado, y los sustantivos eventivos/no eventivos en contextos locativos, por otro. Para ello, se realizaron seis estudios (tres para cada categoría) que, pese a mostrar ciertas diferencias de formato, perseguían objetivos similares. Los resultados principales de estos estudios muestran, en primer lugar, que los adjetivos y sustantivos presentan un comportamiento dispar en lo que respecta a su interpretación en el sentido opuesto al prototípico, de tal forma que los adjetivos *s-level* y los sustantivos no eventivos pueden recibir dicha interpretación sin que ello suponga un coste adicional; por el contrario, los *i-level* y los eventivos no admiten con tanta facilidad la interpretación no prototípica. Ello indicaría que unas y otras unidades se procesan de forma diferente, debido quizá a una representación en el lexicón también distinta. Por su parte, nuestros resultados también parecen apoyar la hipótesis de un comportamiento diferenciado de las cópulas *ser* y *estar* en combinación con unos y otros predicados: así, con los adjetivos *ser* es la cópula no marcada, mientras que con los sustantivos en contextos locativos *estar* se comporta como la cópula no marcada.

En definitiva, este trabajo ofrece diversas evidencias sobre el comportamiento de las cópulas *ser* y *estar* en combinación con distintos tipos de adjetivos y de sustantivos y cómo tanto unos como otros podrían agruparse en entidades mayores en tanto que su representación en el lexicón mental parece ser diferente. No obstante, y como hemos señalado a lo largo del presente trabajo, nuestros datos se basan en juicios de preferencia y aceptabilidad por parte de hablantes nativos de español, por lo que su naturaleza es, en cierto sentido, limitada para poder establecer conclusiones definitivas acerca de la representación y procesamiento de estas unidades. Es por ello por lo que son necesarios nuevos estudios de corte experimental que permitan analizar su procesamiento *online* y, por tanto, esclarecer algunas de las cuestiones teóricas planteadas a lo largo de este trabajo.

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Assessing factuality in Spanish: do experts and non-experts agree?

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Abstract: Event veridicality and factuality are key to natural language understanding. Deciding whether the events mentioned in a text are viewed as happening or not is one of the key features in fake news detection. That is one of the reasons why factuality has been widely studied and enormous efforts have been made to annotate corpora and develop tools that automatically identify factuality and veridicality. Most of the studies carried out use English corpora annotated by non-experts; however, little has been said about factuality in Spanish and on how appropriate the use of non-expert annotators is. Based on the discussion above, this study aims to a) shed some light on how non-expert Spanish speakers interpret the various factuality markers, b) determine if the age of the informants is a relevant factor when assessing the degree of factuality, and c) explore whether the experts and the non-experts' interpretations differ.

Keywords: *corpus, factuality markers, polarity, news, Spanish.*

Evaluación de la factualidad en español: ¿hay acuerdo entre expertos y no expertos?

Resumen: La vericidad y factualidad de un hecho o situación son vitales para la comprensión del lenguaje natural. Decidir si se considera que los hechos o situaciones de un texto ocurren o no es una de las características principales en la detección de noticias falsas. Esta es una de las razones por las que la factulidad ha sido ampliamente estudiada y se han realizado muchos esfuerzos para anotar corpus y desarrollar herramientas que detecten automáticamente la factualidad y vericidad. La mayoría de estudios realizados usan corpus en inglés anotados por informantes no expertos; sin embargo, la factualidad en español y cómo de apropiado es el uso de anotadores no expertos se ha estudiado muy poco. Teniendo en cuenta lo anterior, el objetivo de este estudio es: a) arrojar algo de luz sobre cómo hablantes de español no expertos interpretan los diferentes marcadores de factualidad; b) determinar si la edad de los informantes es un factor relevante para evaluar el grado de factualidad; y c) explorar si las interpretaciones de informantes expertos y no expertos difieren.

Palabras clave: *corpus, marcadores de factualidad, polaridad, noticias, español.*

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1. Introduction

Factuality is a widely studied phenomenon, especially in Natural Language Processing (NLP), given that determining whether a given event is perceived as having happened or not is one of the key features in fake news detection. There is a vast body of literature about factuality in English (Saurí & Pustejovsky, 2009, 2012; De Marneffe et al., 2012; Soni et al., 2014; van Son et al., 2014; Lee et al., 2015; Prabhakaran et al., 2015; White et al., 2016; Stanovsky et al., 2017; Rudinger et al., 2018; Miller, 2020), but just a few studies about Spanish (Wonsever et al., 2016; Tracey et al., 2019; Fernández-Montraveta et al., 2020; Rosá et al., 2020; Barrios, 2022).

The study presented in this paper is part of the TAGFACT project (Alonso et al., 2018; Fernández-Montraveta et al., 2020), which studied the expression of factuality in Spanish newspaper articles. Within this project factuality is understood as the degree of commitment with which the author of a text presents the events (from now on used to include all kinds of situations) narrated, which is the approach generally used in NLP. In texts, and more specifically in journalistic texts, authors present events with varying degrees of commitment towards their certainty (from totally certain to totally uncertain), which may influence the readers' perceptions. Obviously, the author's attitude towards the truth value of the events presented in texts cannot be accessed. What can be accessed, though, is how the degree of certainty is perceived by readers. In this regard, the aims of this paper are: 1) observing how factuality markers in Spanish affect the participants' interpretation of factuality; 2) checking whether experts and non-experts agree on the assessment of factuality; and 3) determining if age difference plays a role when assessing the factuality of an event.

This paper is organised as follows: first, a literature review on the concept of factuality and factuality-related studies is provided; secondly, the methodological approach followed to carry out this study is described; thirdly, the results of both the quantitative and qualitative studies carried out are presented and discussed; finally, some conclusions on the results obtained are drawn.

2. Theoretical framework

The approach to factuality used in this paper (and in the TAGFACT project), as explained above, is the one typically followed in NLP: the degree of commitment of the author towards the truth of the event narrated. In the TAGFACT project, various factors were taken into account in order to determine the factuality of events narrated by verbs: event type, reference time, tense and polarity, together with sources beyond the author of the piece of news.

Languages have different kinds of factuality markers, at various levels, which can co-occur and interact in the same sentence. In Spanish, at the morphosyntactic level, we find verb tense forms (infinitive, past participle, present, future, present perfect, perfective past, imperfective past, subjunctive, conditional), constructions (conditional, purpose) and

verb periphrases, especially modal ones, such as *poder* 'can' + infinitive. Lexically, there are adverbs (*quizás* 'maybe'), adjectives (*posible* 'possible') and nouns (*certeza* 'certainty'), together with negative polarity expressions such as *no* 'no', *nadie* 'nobody', or *nunca* 'never'. At the discourse level, voices other than the author and evidentiality also play a role. All texts are created by an author, obviously, but other sources of information can also appear in sentences, which is quite frequent in the news. This allows the journalist to express a distance (lack of commitment) from the events narrated in the news item. As for evidentiality, specifying whether a given event has been directly witnessed or heard from someone also indicates how committed the speaker is towards what is being explained.

Several studies have been carried out to annotate and assess the factuality of texts, although most of them have focused on the annotation of factuality in English. The best known work on factuality annotation and detection is Saurí (2008), where the author presents FactBank, a factuality corpus that consists of 208 documents and 8,837 events manually annotated by two experts. In Saurí (2008), the annotators had to choose from a set of values that combined the probability of an event and its polarity. These values included six fully committed values that ranged from possibly not (PS-) to certainly (CT+), and two underspecified values (i.e., partially underspecified and fully underspecified). In addition, she also allowed for non-applicable.

Saurí's work reinforced the interest of the NLP community in this area and boosted the research on factuality. Following Saurí's study, De Marneffe et al. (2012) used a subset of 642 sentences from FactBank and recruited 10 "linguistically naive annotators" (De Marneffe et al., 2012, p. 303) located in the USA. The annotators were asked to decide if the event in bold described in the sentence did or will happen, using the set of values in FactBank. This study differs from Saurí's in that annotators were allowed to use their knowledge of the world when assessing the sentences. The results of their study show that lexical markers interact with pragmatic context, especially in the case of "absolutism".[1] Later on, Soni et al. (2014) studied how factuality is perceived in social media, namely in Twitter. They compiled a corpus of 1,170 tweets that were rated using a 5-point Likert scale ranging from "[-2] Certainly False" to "[+2] Certainly True". They allowed for "[0] Uncertain" and "Not Applicable". Ratings were gathered by means of Amazon Mechanical Turk. The authors conclude that the perceptions of factuality were influenced by the source-introducing predicates (i.e., cue), while extra-linguistic factors (e.g., source, author, etc.) did not seem to be relevant. Lee et al. (2015) performed an experiment where non-expert annotators were asked to first annotate events in a sentence, and secondly annotate factuality using a 7-point Likert scale ranging from -3 (certainly did not happen according to the author) to 3 (certainly happened according to the author). 0 meant that the author was neutral and did not express any bias towards the factuality of the event. Data were gathered using Crowd-Flower and for each example 5 judgements were collected and aggregated. The

[1] De Marneffe et al., 2012 use this term to refer to the fact that "too many lexical markers conveying certainty might in some cases undermine the speaker's credibility (e.g., in a car salesman pitch) and actually incite mistrust in the hearer/reader. In such instances, lexical markers only are not good indicators of the veridicality of the event, but the pragmatic context of the utterance needs to be taken into account to fully appreciate the interpretation people assign to it." (De Marneffe et al., 2012, p. 330).

corpus annotated consisted of 4,243 sentences from TempEval-3 (Uzzaman et al., 2013). The factuality ratings obtained were compared to FactBank annotations for overlapping events and results showed a strong correlation between the non-experts' ratings and FactBank ratings. More recently, Miller (2020) studied how 227 readers decided on the credibility and factuality of a statement about an event. The corpus used consisted of a total of approximately 4,000 events taken from a collection of witness testimony. Based on the results obtained, the author proposed a new schema to assess veridicality, with more gradations of certainty and positive evidence, and more allowances for counterfactual or uncertain statements.

Although factuality has been widely explored in English, the research on factuality in Spanish is rather scarce and can be reduced to the studies carried out by Wonsever et al. (2016), Tracey et al. (2019), Alonso et al. (2018), and most recently Tracey et al. (2022) and Barrios (2022). Wonsever et al. (2016) adopted Saurí's (2008) model with some adaptations and compiled a corpus of 875 events annotated by two experts using using a set of 6 values that indicate the occurrence (R) or non-occurrence of the event (NR), scheduled future (FP), denied future (FN), possible occurrence of the event (POS) and undefined (IND). The global inter-annotator agreement was quite high, reaching 90.4%.

Tracey et al. (2022) present the BeSt corpus, which consists of English, Chinese and Spanish data annotated for belief and sentiment. The Spanish subcorpus is composed of a total of 262 documents that come from two genres (news and forum discussions). The data were annotated by trained annotators with native fluency in Spanish. Events, the participation of an entity in an annotated event, and relations were annotated using four degrees of belief annotation: committed belief, non-committed belief, reported belief, and not applicable. Authors found that non-committed beliefs were very rare and that news had more reported belief than discussion forums. The BeSt corpus was used in 2016 and 2017 as a basis for evaluation in the DARPA DEFT program.

Most of the few studies carried out in Spanish have relied on trained annotators, showing a clear difference with those in English, in which the use of non-experts is rather common. In our study, we try to bridge this gap and explore how reliable non-experts are to annotate factuality in Spanish, as well as examine how they interpret factuality markers.

3. Methodology

In order to carry out this experiment, a survey was passed to 90 native Spanish speakers organized in two groups (G1 and G2). Group G1 consists of 60 university students under 30, whereas G2 consists of 30 informants above 30. The survey is composed of 29 simplified sentences extracted from the TAGFACT project corpus (Alonso et al., 2018), a corpus of Spanish news compiled within the framework of the TAGFACT project. The sentences were simplified (or "normalized", according to Saurí's terminology) to make syntactically complex sentences easier to understand and to reduce syntactic ambiguity, which may affect the participants' assessment of the sentences. This process was performed following

Saurí's guidelines (Saurí, 2008). The degrees used to annotate and range factuality in previous studies varies rather widely, from 9 in Saurí & Pustejovsky (2009, 2012) and 8 in Miller (2020) to 3 in Tonelli et al. (2014), Prabhakaran et al. (2015), and Colomer et al. (2016). For the purposes of this paper, a scale of 5 was chosen, because it allowed us to capture subtle differences in how factuality is perceived by readers. Thus, every sentence presented to the informant was followed by an associated question that the informant had to answer by a 5-point Likert scale, ranging from 1 [factual] to 5 [counterfactual] (see Figure 1). In addition, a distractor was added after every 5 questions in order to prevent informants from being aware of the purpose of the survey.

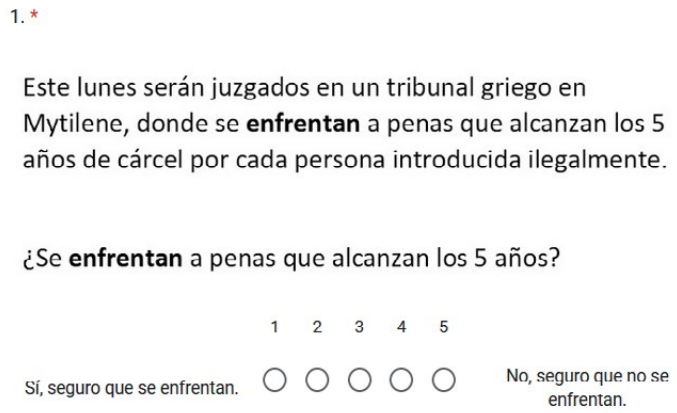


Figure 1. An example of a question in google forms.

The survey started with some brief instructions for the participants (see Figure 2), who were also asked to provide their age and proficiency in Spanish.

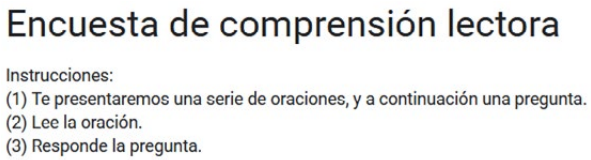


Figure 2. Survey instructions.

The following steps were taken to create the survey:

(1) Selection of the sentences for the experiment. A total of 70 sentences containing factual markers were initially extracted from the TAGFACT project. corpus. The factual markers included traits such as verb tenses (past, present, future, conditional, etc.), adverbial negation (*no* 'no', *nunca* 'never', *jamás* 'never') or negative indefinite pronouns (*nadie* 'nobody', *nada* 'nothing', *ninguno* 'none', *ninguna* 'none'), verbs (*parecer* 'seem', *intentar* 'try', *querer* 'want'), and adverbs (*seguramente* 'probably') among others.

(2) Selection of 29 candidate sentences out of the 70 initial sentences chosen. The final 29 sentences were selected to ensure the presence of a variety of polarity and commitment values, as well as a range of factuality-related traits (e.g., verb tenses, modality, and certainty markers).

(3) Simplification of the 29 sentences. The 29 selected sentences were simplified and tweaked following Saurí's guidelines (Saurí, 2008). This process consisted in:

- Highlighting the predicate (boldface) to be assessed by the informants. For each sentence, a single predicate was assessed.
- Shortening the sentences that were excessively long. Lengthy syntactically complex sentences were transformed into simple sentences. For example, sentence (a) in (1) was reduced to sentence (b).

1.[2] a. *Que su comparecencia como presidenta en la Asamblea regional no iba a dar mucho de sí, se enfundaba una camiseta de Juego de Tronos en la que se autoproclama la Khaleesi del PP y triunfaba en las webs que jamás* ***reservarían*** *un párrafo a ese debate parlamentario.*

b. *Las webs jamás* ***reservarían*** *un párrafo al debate parlamentario de la Asamblea regional.*

- Creating the question. Every sentence was followed by an associated positive question that the participants had to answer (see example (2)).

2. *A su alrededor todo es misterio y nadie quiere* ***aventurar*** *la posibilidad de que renuncie.*

¿Alguien aventura que el diputado puede renunciar?

- Avoiding certainty markers in the associated question. If the predicate included certainty markers, they were removed from the associated question. This may also involve changing the verb tense (see example (3)).

3. *Garrido fue el encargado de anunciar que el trabajo de fin de carrera de Cifuentes no se* ***haría*** *público "para no seguir estirando el chicle".*

¿El trabajo de Cifuentes se ***hará*** *público?*

- Avoiding the use of infinitives in the associated question. If the predicate assessed was an infinitive, the verb in the associated question was conjugated. Some strategies to do so involved introducing a subject, using an impersonal pronoun or a reflexive passive construction (see example (4)).

4. *"En manos del PNV. ¿En serio? ¡Vaya con la gran nación española, qué incapacidad de* ***llegar a acuerdos****!", reprochó.*

¿Se ***ha llegado*** *a acuerdos?*

[2] The English translation of all the examples has been included in Appendix 1.

- Anonymizing both sentence and question. If the sentence contained some proper names easily identifiable by the reader, they were changed for another one in order to reduce the speaker's world knowledge, which could influence the assessment of the factuality (see example (5)).

    5. *Garrido fue el encargado de anunciar que el trabajo de fin de carrera de Cifuentes no se* ***haría*** *público "para no seguir estirando el chicle"*

       ¿El trabajo de Cifuentes se ***hará público****?*

       Larson fue el encargado de anunciar que el trabajo de fin de carrera de Rosell no se ***haría público*** *"para no seguir estirando el chicle"*

       ¿El trabajo de Rosell se ***hará público****?*

The survey was developed using Google Forms and conducted in two phases: first, a total of 60 university students aged 20 to 25 were asked to complete the survey monitored by one of the researchers (G1); secondly, the survey was published in social networks and a sample of 30 individuals over 30 was chosen (G2). In addition, a hypothesis for each question was agreed upon by the researchers using the same 5-point Likert scale that the participants were asked to use. This was done in order to compare the answers provided by the participants (non-experts) to those agreed by the 4 experts. These values can be found in Appendix 1 (see hypothesis value).

Finally, both a quantitative and a qualitative analysis were conducted. The statistical analysis of the two samples (G1 and G2) was aimed at: a) checking whether there was any difference between the assessments provided by the two groups of participants (Chi-squared distribution); and b) comparing if the experts and non-experts assessments differed (Pearson Correlation Coefficient). The qualitative analysis focused on how non-experts interpret factuality markers, and examined in detail those aspects in which experts and non-experts differ.

4. Quantitative analysis

4.1 Chi-squared distribution

In terms of statistical techniques, we followed Peña (1988), Martín and Ruíz-Maya (2001), Monge and Juan (2002), and Box et al. (2008) for non-parametric statistics, and used the χ2 distribution (1).

$$\chi^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i} \quad (1)$$

This value will be the sum of non-negative numbers. The numerator of each term is the difference between the observed frequency (Oi) and the expected frequency (Ei). Therefore, the closer both values are to each other, the smaller the numerator will be, and vice versa. The denominator allows the size of the numerator to be relativized.

The previous ideas suggest that the lower the value of the statistic, the more coherent the observations obtained will be with the expected values. On the contrary, large values of this statistic will indicate a lack of agreement between the observations and what is expected. In this type of contrast, the null hypothesis is usually rejected (the observed values are consistent with the expected ones) when the statistic is higher than a certain critical value.

We applied the tests of Goodness of Fit, Homogeneity between two samples and Independence between two variables.

- The Goodness-of-Fit test consists in determining whether the data of a certain simple random sample of size n correspond to a certain theoretical distribution. In other words, this test checks if the distribution of possible answers is a random distribution (uniform distribution) (H_0) or whether the reader shows a preference for a certain value (H_1).
- The Homogeneity test checks whether the data corresponding to two or more samples are homogenous, that is, if they belong to the same population. The null hypothesis (H_0) states that they are not homogenous, whereas the alternative hypothesis (H_1) states that they are. This methodology is very useful to compare different samples and draw conclusions on the equality of their population distribution.
- The test of independence determines whether two variables referring to individuals in a population, in this case the age of individuals and the choice of answers, are related. Unlike the previous tests, this test checks the relation between two variables (i.e., age and the value of the answers). The null hypothesis (H_0) states that the two variables are dependent, whereas the alternative hypothesis (H_1) claims that they are independent.

In order to apply the Goodness-of-Fit test, we carried out two experiments. In the first one, we considered sample (G1) and, in the second, we considered sample (G2). In these cases, it is necessary that the variable under study (i.e., the choice of answers by the participants) is categorised into classes or groups (i.e., 1, 2, 3, 4 and 5 in our case).

The experiment consists in:

(1) answering 29 questions.

(2) for each question, there is a k number of possible answers (i.e., 1, 2, 3, 4, and 5).

(3) each of the k possible answers has an associated probability of occurrence p_i ($p_1 + p_2 + \ldots + p_k = 1$), which remains constant during the development of the experiment.

(4) the experiment will result in a set of observed frequencies (O_1, O_2,..., k) for each question. Obviously, $O_1 + O_2 + \ldots + O_k = n$.

(5) n = 60 in G1

(6) n = 30 in G2

The expected frequencies (Ei) for each answer must be calculated under the hypothesis of uniformity between the values. If the distribution of answers were uniform, all answers would have the same probability of selection and therefore the expected frequency would be approximately the same.

Each expected frequency (Ei) can be calculated by multiplying the total number of participants (n) by the associated probability of occurrence (pi), that is:

(G1) As there is a total of 60 participants, the expected frequency for each answer is:
$E_i = n * p_i = 60* 1/5 = \mathbf{12}$ i = 1, ..., k

(G2) As there is a total of 30 participants, the expected frequency for each answer is:
$E_i = n * p_i = 30* 1/5 = \mathbf{6}$ i = 1, ..., k

The results of the Goodness-of-Fit test lead to the following typology of answers, according to their dominant value:

- A single dominant value in both G1 and G2 [18 sentences].
  - The dominant value is 1 (factual) in 6 sentences [1, 4, 7, 17, 20, 22].
  - The dominant value is 3 in 2 sentences [6, 13].
  - The dominant value is 5 (counterfactual) in 10 sentences [3, 5, 8, 9, 12, 18, 21, 23, 24, 25].

  In all these cases there are statistically significant differences with the rest of possible answers, as shown in the distribution of sentence 17, being its dominant value 1 (see Figure 3).

  Sentence 17: *Pero no fueron los únicos. Otros dos voluntarios daneses* ***fueron arrestados*** *aquel día.*

  Question: *¿****Fueron arrestados*** *dos voluntarios más?*

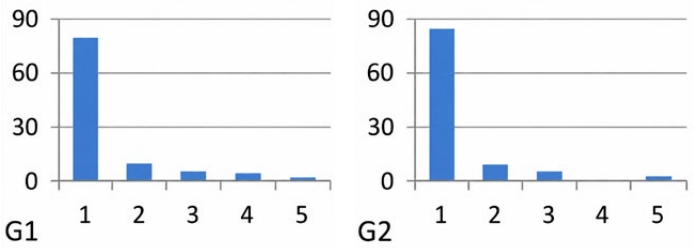


Figure 3. Distribution of sentence 17 in G1 and G2, respectively.

- 2 dominant values in both G1 and G2 [4 sentences].
  - The dominant values are 4 and 5 in two sentences [19, 28].
  - The dominant values are 3 and 2 in one sentence [11].
  - The dominant values are 5 and 3 in one sentence [14].

In all the cases above, the difference with the rest of possible answers is statistically significant, as can be seen in Figure 4, where the two possible values (4 and 5) for sentence 19 are shown.

Sentence 19: *"No voy a permitir que este tipo de cosas me* ***separen*** *de mi camino", dijo al periodista David del Cura.*

Question: *¿Este tipo de cosas le* ***separan*** *de su camino?*

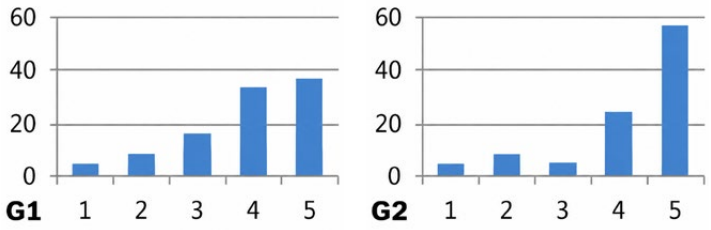


Figure 4. Distribution of sentence 19 in G1 and G2, respectively.

- 3 dominant values in both G1 and G2 [4 sentences - 10, 15, 16, 26].
  - The set of combinations varies across 3, 4, and 5; 1, 2, and 3; or 2, 3, and 5. However, in all those cases, the difference with the rest of possible answers is statistically significant. Figure 5 shows the distribution of sentence 26, being its dominant values 3, 4, and 5.

    Sentence 26: *"A los países puede no* ***gustarles*** *lo que hacemos, pero respetan lo que hacemos", ha dicho.*

    Question: *¿Les* ***gusta*** *a los países lo que hacemos?*

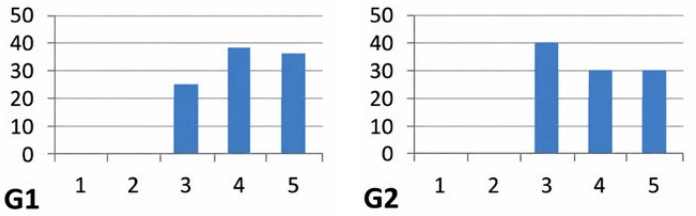


Figure 5. Distribution of sentence 26 in G1 and G2, respectively.

  - Contradictory value in both G1 and G2. In one sentence, the result in both G1 and G2 is contradictory, since the dominant values are 5 (counterfactual) and 1 (factual), showing a statistically significant difference with the rest of the answers (see Figure 6).

    Sentence 2: *En ese tiempo, nadie más* ***ha sido acusado*** *ni detenido por ese motivo en Lesbos.*

Question: *¿**Ha sido** alguien **acusado** por ese motivo?*

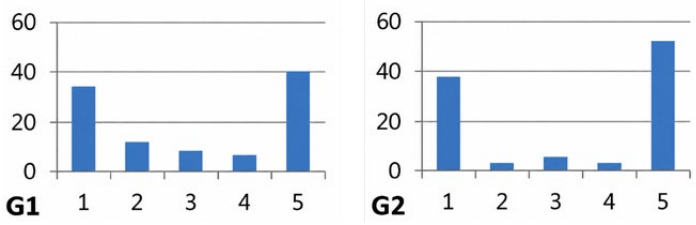


Figure 6. Distribution of sentence (2) answers in both G1 and G2, respectively.

- Random distribution of values. Two sentences show a random distribution, sentence 29 in G1 and sentence 27 in G2 (see Figure 7).

  Sentence 29: *"Han intentado **forzar** traer al presidente a rastras y de las orejas", ha llegado a decir el portavoz socialista.*

  Question: *¿**Han forzado** traer al presidente?*

  Sentence 27: *Paco, vas a volver a ganar con mayoría absoluta porque estoy seguro de que todos en Castilla-La Mancha **saben** que solo pueden depender de ti.*

  Question: *¿**Saben** todos que dependen de Paco?*

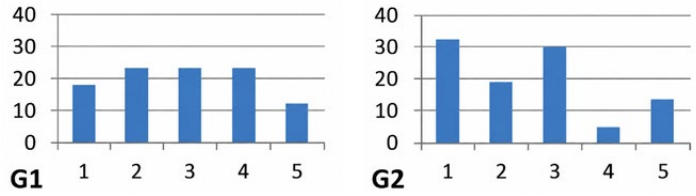


Figure 7. Random distribution of answers in sentences (29) in G1 and (27) in G2.

Once analysed the typology of answers, we can conclude that, from all the set of answers, only those corresponding to sentences 29 in G1 and 27 in G2 show a statistical test lower than the critical value for a significance level of 95%, which indicates that the answer values assigned by the informants were selected randomly. However, in the rest of sentences analysed the statistical test is higher than the critical value, thus indicating that there is a preference in the answers selected by the informants (H_1) and rejecting the null hypothesis (H_0).

Next, the Homogeneity test between the two samples was conducted. As mentioned above, this test consists of checking if several samples come from the same population. In our case, to check if group G1 (60 university students under 30) and G2 (30 participants above 30) present the same distribution in the choice of answers. For this, it is necessary

that the two measurable variables (i.e., age and the choice of answers) are represented by categories with which we will build a contingency table. Our starting point is the data obtained in the experiments we carried out for the Goodness-of-Fit test.

The distribution of answers between G1 and G2 is homogeneous in all the sentences examined, except for 3 of them, which are discussed below.

- In sentence 3, the most voted value in both G1 and G2 is 5; however, there is a remarkable difference in the percentage of informants that opted for this value in each group. In G1 this value was chosen by 55% of the informants, whereas in G2 the percentage of informants that opted for this value rises to 86%, resulting in a statistically significant difference with the rest of values (see Figure 8).

  Sentence 3: *Pero al ser acusados en grado de tentativa, porque durante su detención no iba ningún inmigrante con ellos, no* ***saben*** *realmente qué les espera.*

  Question: *¿Los acusados* ***saben*** *qué les espera?*

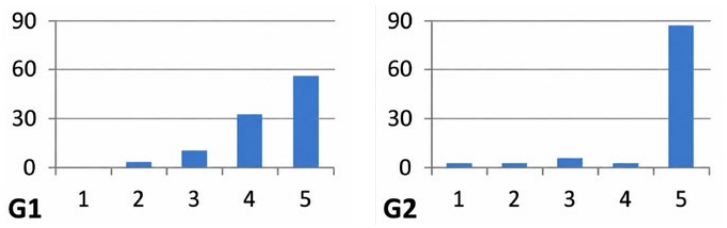


Figure 8. Distribution of answers in sentence (3) in G1 and G2, respectively.

- In sentence 13, the distribution of answers and their corresponding percentages are different in both samples. In G1 values are ranked as 3>4>2, with percentages being 46%, 33% and 11%, respectively, whereas in G2 values are ranked as 3>2>5, with percentages being 57%, 22% and 13%, respectively (see Figure 9).

  Sentence 13: *En la madrugada del mismo jueves llegó al entorno del candidato que la moción decaería por la dimisión de Montoya, y los socialistas aún no se fían de que pueda* ***dimitir*** *este viernes.*

  Question: *¿Montoya* ***dimitirá****?*

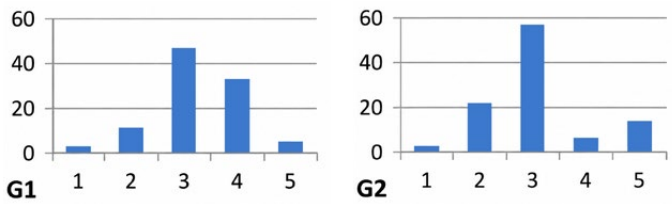


Figure 9. Distribution of answers in sentence (13) in G1 and G2, respectively.

- In sentence 29, G1 shows a random distribution of answers, while G2 presents a clear preference for values 5>3, as shown in Figure 10.

  Sentence 29: *"Han intentado **forzar** traer al presidente a rastras y de las orejas", ha llegado a decir el portavoz socialista.*

  Question: *¿**Han forzado** traer al presidente?*

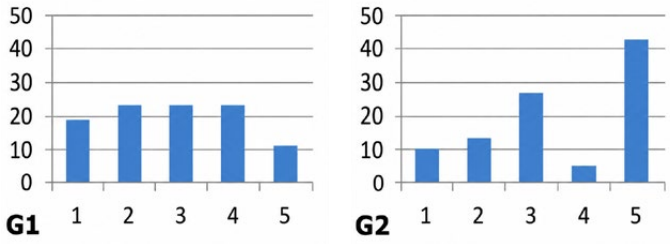


Figure 10. Distribution of answers in sentence (29) in G1 and G2, respectively.

In the three cases presented above, the chi-squared statistic is higher than the critical value for a significance level of 95%; thus, there is no homogeneity, given the statistically significant differences between the two samples. In the other 26 sentences analysed, the statistic is lower than the critical value, so the null hypothesis (H_0) is rejected and the alternative hypothesis is accepted: there is homogeneity between the two samples (H_1), that is, both samples belong to the same population.

Finally, the Independence test was conducted between two variables (i.e., the informants' age and the answer values). Our aim is to check if these variables are related to each other (we did not take into account the level of study of the participants as a variable). Although the independence test conceptually differs from the previous test (homogeneity), operationally it provides the same results.

In most of the sentences analysed the statistic is lower than the critical value, so the independence hypothesis between the two values is accepted (H_1). Only in 3 sentences (3, 13, and 29) (see Figures 8, 9, and 10), is the statistical test higher than the critical value for a significance level of 95%, so the independence hypothesis is rejected and we accept that there is a relation between age and answer values (H_0) in these three sentences. All in all, the results obtained seem to indicate that the age of the participants is independent from the answer values; in other words, age is not a factor when deciding on the factuality of an event.

4.2 Pearson Correlation Coefficient

In this section we present the results of the Pearson Correlation Coefficient (r), which was used to check the agreement between experts and non-experts. In order to calculate this correlation, the experts were asked to rate each sentence using the same 5-point Likert

scale as non-experts. In cases of disagreement, they were asked to discuss them and reach an agreed value. The experts' judgements were correlated with the non-experts' most voted value.

Correlations

		Experts	NonExperts
Experts	Pearson Correlation	1	,749**
	Sig. (2-tailed)		<,001
	N	29	29
NonExperts	Pearson Correlation	,749**	1
	Sig. (2-tailed)	<,001	
	N	29	29

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 11. Pearson Correlation Coefficient.

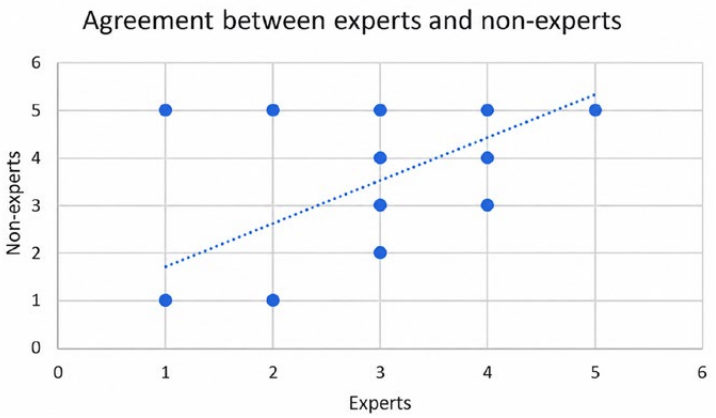


Figure 12. Agreement between experts and non-experts.

The correlation obtained between experts' and non-experts' judgements is strong (.749) and significant (see Figure 11), although there's considerable disagreement in some cases (see Figure 12).

5. Qualitative analysis

In the qualitative analysis, we first explore the relation between the answer values provided by the participants and the typology of markers. Later on, we carry out a detailed analysis of the sentences based on the agreement or disagreement between experts and non-experts, pointing out key linguistic features that trigger certain factuality values.

5.1 Participants' answers and typology of markers

The relation between the answer values provided by the participants and the various markers occurring in the sentences is shown in Table 1, where the higher the intensity of colour is, the higher the frequency of the marker. According to Table 1, the present and past tenses tend to 1 (Factual) with a different intensity, whereas the conditional and the prospective periphrasis *ir a* 'going to' + infinitive in the imperfective past tend to 5 (Counterfactual). Likewise, negative polarity shows a clear tendency towards 5 (Counterfactual), while "voice" (i.e., the presence of another speaker) is never rated as 1 (Factual).

Table 1. Relation between answer values and markers.

Markers	Answer Value				
	1	2	3	4	5
Past					
Present					
Future					
Imperfective past					
Conditional					
Infinitive					
Subjunctive					
Prospective periphrasis					
Modal verb					
Negative polarity					
Conditional construction					
Lexical verb					
ojalá 'hopefully'					
seguramente 'probably'					
Voice					

As regards multiple evidence of factuality, verb tenses combine with other markers, such as conditional *si* 'if' (e.g., sentence 6); in that sense, according to the participants' ratings, negative polarity prevails over verb tenses. Similarly, the combination of the prospective verb periphrasis (*ir a* 'going to' + infinitive) with the imperfective past results in a counterfactual interpretation (e.g., sentence 12).

> Sentence 6: *" En cualquier caso, **si** finalmente Palacín **dimite**, también es un triunfo para nosotros porque era lo que queríamos ", afirma el citado asesor.*
>
> '"In any case, if Palacín finally **resigns**, it also means a success/triumph to us because that's what we wanted", stated the aforementioned advisor.'

Sentence 12: *Lo que iba a ser una colaboración puntual acabó dando paso a una asociación, al apoyo de 10 voluntarios y a decenas de misiones.*

'What was meant to **be** a one-time collaboration eventually gave way to a partnership, the support of 10 volunteers and dozens of missions.'

As for the rest of markers, *parece* 'seems' clearly shows incompatibility with value 1 (Factual), (e.g., sentence 15), whereas s*eguramente* 'probably' is incompatible with 5 (Counterfactual) (e.g., sentence 10). On a different note, lexical verbs combine with markers such as negation and a variety of verb tenses (e.g., prospective periphrasis future, perfective past). Such lexical verbs (*querer* 'want', *creer* 'believe', *intentar* 'try', or *permitir* 'allow') are not usually placed in 1 (fact) (e.g., sentence 11).

Sentence 15: *Según el diputado catalán, parece que en la comisión **hay** barra libre.*

'According to the Catalan deputy, **there** seems to **be** a free-for-all in the Commission.'

Sentence 10: *Otros nombres que seguramente **integrarán** el Gabinete de Olivos son los de la actual portavoz en el Congreso, Josefa Céspedes y el número tres de el PSOE, Bernardo Lupo.*

'Other names that **will** probably **be part** of Olivos' Cabinet are the current spokeswoman in Congress, Josefa Céspedés and PSOE's number three, Bernardo Lupo.'

Sentence 11: *Sin embargo, en el entorno de Inocencio se cree que se puede **llegar** a acuerdos con el PNV en muchos temas, y que hay una buena sintonía inicial entre ambos partidos pese a las grandes diferencias políticas que los separan.*

'However, in Inocencio's entourage it is believed that agreements with PNV can **be reached** on other topics, and that there is initial good harmony between both parties, despite the great political differences that separate them.'

5.2 Agreement and disagreement between experts and non-experts

This section reports on a fine-grained analysis of the cases of agreement and disagreement between experts and non-experts. We will start our qualitative analysis with the twelve examples with a clear dominant value in which the informants and the researchers coincide. In six of them the dominant value is 1 (factual) and the tense and the time coincide (1 and 20 present; 4, 7, 17, and 22 past). This association between coincidence of tense and time and value 1 (factual) is so strong that even in a sentence like (7) *la organización no dejó la isla hasta* 'the organization did not leave the island until', which looks negative is correctly interpreted by all groups as positive, that is, the organization did leave the island.

In two other examples (6 and 13), the value is 3 (uncertain): (6) is a conditional sentence with *si* 'if', and in (13) a voice is present (the socialists) + *no* 'no' + *poder* 'can' in the subjunctive mood + *dimitir* 'resign'. (13) is interesting because the two groups (G1 - younger people and G2 - older people) did not behave in the same way, as shown by the homogeneity test: the second highest value in G1 is 2 (more factual) and in G2 it is 4 (less factual).

In four other sentences (3, 5, 9, and 12), the shared value is 5 (counterfactual). In (3) and (5), there is a match between tense and time (present and past respectively), together with a clear indicator of negation (*no* 'no' and *ni siquiera* 'not even'). In (3) we find again the same issue as in (13), that is, G1 shows a higher degree of factuality than G2, as signalled by the homogeneity test. In (9) there is *no* 'no' + infinitive, as a subordinate clause in the past tense referring to the past time. Curiously enough, though, some subjects assigned value 1 (factual) to this sentence, maybe because it is very long, and hence a little hard to process. In (12) there is a prospective verb periphrasis (*ir a* 'be going to'), which, in the imperfective past tends to express uncertainty. In this case, though, the uncertainty is overridden by the second part of the sentence, with a past tense expressing a past time (value 1).

The Pearson Correlation Coefficient showed that, in general, there is strong agreement between experts and non-experts; however, there are some cases with clear disagreement. We will deal now with the six examples with a single dominant value, in which the subjects and the researchers do not agree. In 5 of them (8, 18, 23, 24, and 25), the subjects' dominant score is 5 and the researchers' is 4. In three of these cases (8, 18, and 25), there is a clear negative expression (*no* 'no', *nadie* 'nobody', *jamás* 'never', and *incapacidad* 'inability'), together with other expressions that qualify the uncertainty (*no hicimos nada por* 'we didn't do anything to'; *nadie quiere aventurar la posibilidad* 'nobody wants to venture the possibility'; conditional tense). In (24) we have a quite complex sentence (*El portavoz ha deseado que ojalá toda la corrupción del PP fuera mentira* 'The spokesperson desired that he wished that all the corruption in the PP were a lie'), with a voice + desire + wish + verb in the subjunctive mood. In (21), the researchers' score is 3 and the informants' 5. Here again, there is a clear negative marker, *no* 'no', together with a verb in the conditional tense, in a clause subordinated to a saying verb. It seems to be the case that the informants grant more importance to the explicit negative markers, while the researchers pay more attention to other cues, such as verb tense.

We will continue by commenting on the four sentences with two dominant values indicating a tendency in the assessment of the factuality, although the values sometimes differ (11, 14, 19, and 28). Both groups of informants agree on the value assigned to three of them (11, 14, and 19), whereas for sentence 28 the values are swapped (see Appendix 1).

In sentence 11 (*Sin embargo, en el entorno de Inocencio se cree que se puede* ***llegar*** *a acuerdos con el PNV en muchos temas, y que hay una buena sintonía inicial entre ambos partidos pese a las grandes diferencias políticas que los separan. ¿Se* ***llega*** *a un acuerdo?*), the two dominant values assigned by both groups (3>2), as well as the experts (3), are clearly related to possibility/probability. A detailed analysis of the sentence shows

several elements that back those judgements. Firstly, although the source is explicit *en el entorno de Inocencio* 'in Inocencio's circle', the event *llegar a acuerdos* 'reach agreements' is embedded within two larger constructions *se cree que se puede* 'it is believed that agreements could be reached', which seems to diminish the effect of the explicit source. Secondly, the first predicate *se cree* 'it is believed' is a weak assertive predicate in the impersonal form, which contributes to the uncertainty value. Finally, the second predicate *se puede* 'could', also in the impersonal form, introduces an element of possibility that clearly affects the embedded infinitive *llegar* 'reach'. The combination of all the elements detailed above definitely helps convey the idea of possibility, which is also confirmed by both participants' and experts' judgements.

Both G1 and G2 also agree on the judgment of sentence 19 (*No voy a permitir que este tipo de cosas me* ***separen*** *de mi camino", dijo al periodista David Del Cura. ¿Este tipo de cosas le* ***separan*** *de su camino?*) (see Appendix 1). However, unlike the previous case, participants and experts do not agree on their evaluation. While the informants' two dominant values (5>4) show a tendency towards counterfactuality, the experts' evaluation opts for uncertainty (3). A closer look at the sentence, reveals that the event evaluated, *este tipo de cosas me separen de mi camino* 'this type of things keep me away from my path', is embedded within a bigger negative construction *no voy a permitir que* ('I won't allow that'), which in its turn is a direct quotation from the source *dijo al periodista David del Cura* ('(he) told the journalist David del Cura'). There are several characteristics that may have strongly influenced the participants' choice. First, the fact that the source is being quoted may account for the informants' trust in what the source says, hence the values heading towards counterfactuality (4>5). Secondly, the negative polarity of the predicate *no voy a permitir que* 'I won't allow that', together with the prospective verb periphrasis *ir a* 'be going to' seems to have a stronger influence than the deontic modality expressed by the verb *permitir* 'allow' itself. Although in Saurí's words "the fact that an event is allowed or required does not necessarily imply that it will ever take place in the world" (Saurí, 2008, p. 47), the combination of modality and polarity markers in this example seems to favour the participants' counterfactual interpretation of the sentence. On the other hand, the experts have opted for a more moderate interpretation, where the scope of *permitir* overtakes the role of the negative particle, thus showing a clear degree of uncertainty (3).

The role that negative particles and negative polarity play in determining the factuality of an event is also relevant in sentence 28 (*Ninguna de esas estrategias parece* ***haber funcionado****. ¿****Ha funcionado*** *alguna estrategia?*). In this case, although G1 and G2 do not coincide in their evaluation (see Appendix 1), the values assigned by both groups (G1 5>4 and G2 4>5) and the experts (4) do show a tendency towards counterfactuality. The event assessed, *haber funcionado* 'to have worked', is introduced by the predicate *parece* 'seems', which shows a slight degree of uncertainty, thus accounting for the experts' evaluation (4) as well as one of the dominant values in the evaluation performed by the participants. In addition, the polarity is negative, which matches the values 4 and 5 in the Likert scale. In this sentence, the negative polarity is expressed by the negative particle

ninguna 'none'. Similar to sentence 19, negative polarity seems to be decisive in the interpretation of the factuality of the event, especially considering the value assigned by group G1, which clearly shows a preference for the counterfactual interpretation. In that sense, the age factor seems to be relevant here, since younger participants show a more moderate tendency (see Appendix 1) that coincides with the experts' view.

The last sentence of this group, 14 (*Este jueves, Nuño pareció una dirigente* ***zarandeada*** *por la actualidad, llevada en andas por los suyos, nadie sabe hasta dónde como 'lideresa' y hasta dónde, quizá, como mártir. ¿Nuño* ***fue zarandeada****?*) is also assigned two dominant values, although it differs from previously analysed sentences in two aspects: first, the values provided by both groups of informants (see Appendix 1) are rather distributed along the Likert scale; and secondly, the two dominant values are not consecutive. Both groups of informants coincide in the dominant values assigned, being the most voted value 5 (counterfactual), and the second most voted value 3 (uncertain). It is also quite shocking that none of those scores agree with the experts' assessment, since the experts opt for a high degree of factuality (2), far from the counterfactuality score (5). The modality value of possibility expressed by the introducing predicate *pareció* 'seemed', explains values 3 (G1 and G2's second most voted value) and 2 (expert's judgment). The fact that the values are so distributed and distant seems to be related to the fact that *zarandeada* 'shaken' is clearly metaphorical in the statement, but can also have a literal reading in the question.

Now we will deal with several sentences that have provided results widely distributed among the different values (1-5). In some cases, there is coincidence in the distribution between the informants' and the researchers' hypotheses. In other cases, some values diverge between the two groups of informants, or they do not coincide with the hypothesis proposed by the experts.

In sentence 16 (*En la noche del domingo los analistas de los principales diarios coincidían en que solo un verdadero milagro político le permitiría a Haddad* ***revertir*** *lo que parece irreversible. ¿Haddad* ***revertirá*** *lo que era irreversible?*), all three groups (G1, G2, and researchers) agree on counterfactuality 4 (4>5>3), with a similar distribution. The variety of answers can be explained by the lexical elements that present the opinion of "the analysts"; words like *milagro* 'miracle', or expressions like *revertir lo irreversible* 'reversing the irreversible', together with a conditional tense.

An example of divergence between samples can be found in sentence 26 (*A los países puede no* ***gustarles*** *lo que hacemos, pero respetan lo que hacemos", ha dicho. ¿Les* ***gusta*** *a los países lo que hacemos?*). G1 informants propose value 4 (4>5>3) as the majority response, a value tending to counterfactuality, while in G2 the most voted value is 3 (3 >4=5), which coincides with the researchers' hypothesis (3), a value closer to uncertainty. In this sentence there are two factual markers, one of possibility (*puede* 'may') and one of negation (*no* 'no'). In G1 the negation marker is more relevant, whereas for both G2 and the researchers, the possibility marker is more influential in the determination of the factual value.

Something similar occurs in sentence 10 (*Otros nombres que seguramente **integrarán** el Gabinete de Olivos son los de la actual portavoz en el Congreso, Josefa Céspedes y el número tres de el PSOE, Bernardo Lupo.¿Josefa Céspedes y Bernardo Lupo **integrarán** el gabinete de Olivos?*). G1 and G2 coincide both in the most voted (2; almost factual), as in the other values (2>3>1). The researchers' hypothesis, on the other hand, is 3 (uncertain), due to the presence of an adverbial marker (*seguramente* 'probably') and the future tense, both of which indicate that it is not known whether the event will take place or not.

As for sentence 15 (*Según el diputado catalán, parece que en la comisión **hay** barra libre. ¿**Hay** barra libre?*), the values are highly distributed in all categories, ranging from factuality to counterfactuality. In addition, there are divergences between the samples, in G1 the majority value is 2 (2>3>5) and in G2 it is 3 (3>5>2). The researchers' hypothesis was 3, based on two pieces of evidence: the presence of a source (*el diputado catalán* 'the Catalan MP'), and of the verb *parecer* 'seem'. In this case, sample G2 coincides with the hypothesis, but not G1, which opts for a value closer to factuality. We also observe that option 4 is very poorly represented compared to 3 and 5 in both samples. Knowledge of the world may explain these differences between students and older adults: the data collection took place at a moment in which Catalan society was strongly polarised, which may have influenced the wide divergence of the answers.

Finally, we will deal with strange cases. In sentence 2 (*En ese tiempo, nadie más **ha sido acusado** ni detenido por ese motivo en Lesbos. ¿**Ha sido** alguien **acusado** por ese motivo?*), the two highest values in G1 and G2 are 4 (counterfactual) and 1 (factual). This contradiction is due to the fact the sentence and the question do not really match 'During that time, nobody else has been accused or arrested for that reason in Lesbos. Has somebody been accused for that reason?'. In the sentence, but not in the question, we have *else*, so that the question may be ambiguous. Sentence 27 (*Paco, vas a volver a ganar con mayoría absoluta porque estoy seguro de que todos en Castilla-La Mancha **saben** que solo pueden depender de ti. ¿**Saben** todos que dependen de Paco?*) is a direct quote, from an unknown speaker, in which an opinion is expressed (*estoy seguro* 'I'm sure') about a mental state of a third party (*todos saben* 'everybody knows'). The researchers' rating was 2 (quite sure that it happened), whereas G2's is random and G1s is very distributed. This might be related to the (lack of) confidence towards the utterer. Finally, sentence 29 (*"Han intentado **forzar** traer al presidente a rastras y de las orejas", ha llegado a decir el portavoz socialista. ¿Han **forzado** traer al presidente?*) is a very uncommon and convoluted sentence with two infinitives, one right after the other. G2 leans towards 5 (counterfactual) with 3 (uncertainty) as second value, while the answers in G1 are random, probably due to the syntactic complexity of the sentence together with the verb *intentar* 'try' in a past tense, which implies that we do not know whether it happened or not. The researchers' value is 3.

6. Conclusions

Factuality markers and how factuality is interpreted has been widely studied in English both from a theoretical and empirical perspective; however, the studies on factuality in Spanish are rather scarce and mainly focus on how experts understand factuality. This paper intends to help fill this gap by studying how factuality is interpreted by both experts and non-experts, exploring the type of factuality markers that favour the different readings/perceptions, and analysing if non-experts' judgements are a reliable source of information. In addition, we also examine if age is a key factor in the assessment of the factuality of an event.

The current study has followed both a quantitative and a qualitative approach. We first conducted a survey among two groups of non-experts (G1 - participants aged under 30 - and G2 - participants over 30) with a native or native-like proficiency in Spanish. The Chi-squared distribution was used to examine whether age plays a role in the interpretation of the factuality of an event. Later, the Pearson Correlation Coefficient was calculated to explore if experts and non-experts agree on their assessments of factuality. Finally, based on the results obtained by the statistical analysis, a fine-grained qualitative analysis was conducted to identify the linguistic traits that may affect the experts' and non-experts' decisions regarding factuality.

Results of the homogeneity and independence tests have shown that age does not seem to be relevant when assessing factuality. From all the sentences analysed, only in three of them was the test statistic higher than the critical value, indicating that there was a relation between age and the answers provided by the participants. On a different note, the results of the Goodness-of-Fit test have led to a classification of the sentence-answer sequences according to the dominant value provided by the participants. This typology has been the basis of the qualitative analysis of the factuality markers. This analysis has shown that those markers that are clearly factual include the past and present verb tenses, whereas those that show a tendency toward counterfactual values are negative polarity and other verb tenses such as the imperfect, the conditional, and the periphrastic future.

Regarding the comparative study between experts and non-experts, the results obtained after calculating the Pearson Correlation Coefficient show that there is a strong and significant correlation between experts and non-experts; thus, experts and non-experts tend to agree on how they interpret factuality. Interestingly, though, the qualitative analysis of those cases of disagreement has shown that informants seem to grant more importance to the explicit negative markers, while researchers pay more attention to other, more subtle cues, such as verb tenses. Finally, both quantitative and qualitative studies seem to indicate that knowledge of the world has an effect on the participants' answers, as shown by the wide divergence of answers in sentence 15.

The findings of this paper, although preliminary, may well be useful to other research studies seeking to use non-experts to annotate factuality. In addition, the classification of the factuality markers can be used to inform NLP systems aiming at automatically annotating texts with factuality values.

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Appendix 1

Sentence 1 (Hypothesis Value 1)

Este lunes serán juzgados en un tribunal griego en Mytilene, donde **se enfrentan** a penas que alcanzan los 5 años de cárcel por cada persona introducida ilegalmente.

¿**Se enfrentan** a penas que alcanzan los 5 años?

*On Monday they'll be judged in a Greek court in Mytilene, where **they face** up to 5-year prison sentences for every person smuggled.*

***Do** they **face** up to 5-year prison sentences?*

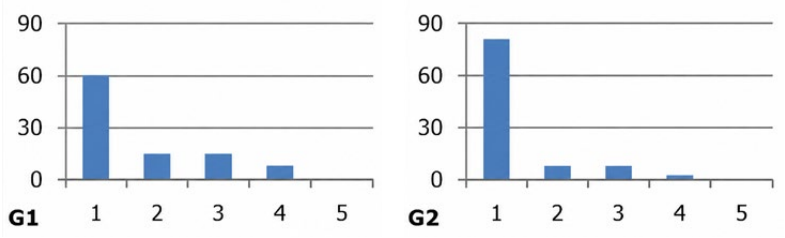


Figure 13. Distribution of answers in sentence (1).

Sentence 2 (Hypothesis Value 1)

En ese tiempo, nadie más **ha sido acusado** ni detenido por ese motivo en Lesbos.

¿**Ha sido** alguien **acusado** por ese motivo?

*In that time, nobody else **has been charged** or arrested for that reason in Lesbos.*

***Has** someone **been charged** for that reason?*

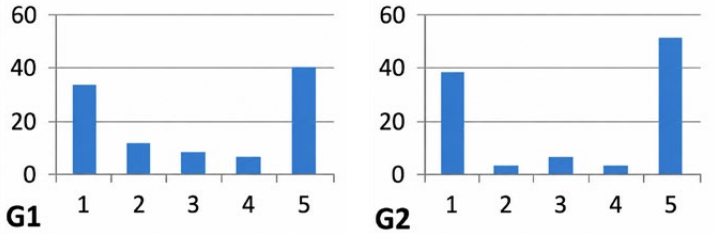


Figure 14. Distribution of answers in sentence (2).

Sentence 3 (Hypothesis Value 5)

Pero al ser acusados en grado de tentativa, porque durante su detención no iba ningún inmigrante con ellos, no **saben** realmente qué les espera.

¿Los acusados **saben** qué les espera?

*But, since they were charged with attempt because there were no immigrants with them when they were arrested, they do not really **know** what awaits them.*

***Do** the defendants **know** what awaits them?*

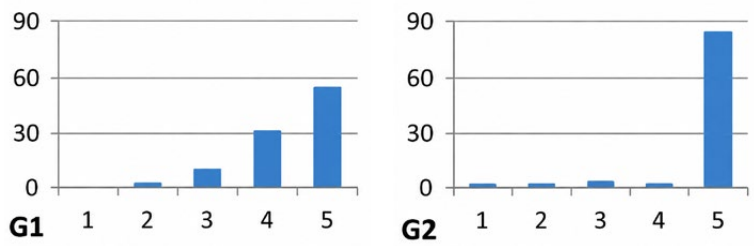


Figure 15. Distribution of answers in sentence (3).

Sentence 4 (Hypothesis Value 1)

Al no localizar el barco, volvían a puerto cuando **fueron interceptados** por los guardacostas griegos.

¿**Fueron interceptados** por los guardacostas griegos?

*Having failed to locate the ship, they were returning to port when they **were intercepted** by the Greek coast guard.*

***Were** they **intercepted** by the Greek coast guard?*

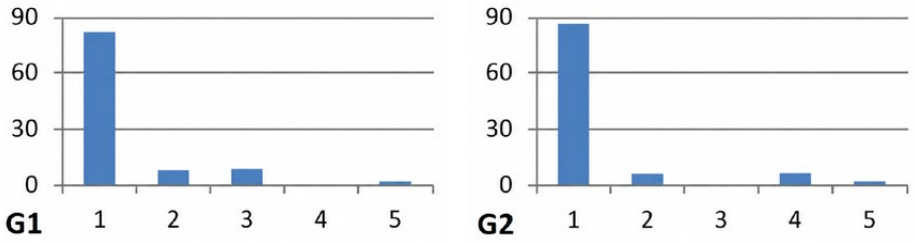


Figure 16. Distribution of answers in sentence (4).

Sentence 5 (Hypothesis Value 5)

El abogado se muestra esperanzado porque se trata de una causa "vaga e imprecisa" que carece de fundamento jurídico ya que "ni siquiera **llevábamos** a bordo a nadie esa noche", pero el hecho de que haya llegado a juicio les preocupa.

¿**Llevaban** a alguien a bordo esa noche?

*The lawyer is hopeful because it is a "vague and imprecise" case that doesn't have any legal basis since "we **did** not even **have** anybody on board that night". However, the fact that it has been taken to court worries them.*

***Did** they **have** anybody on board that night?*

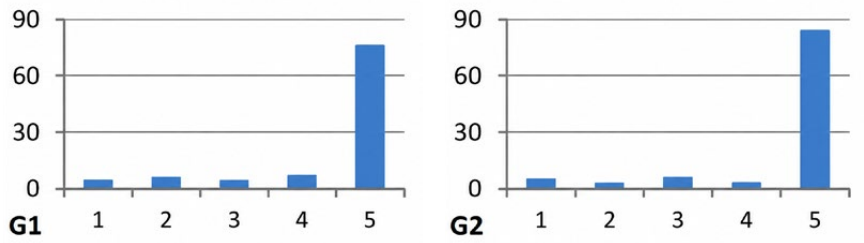


Figure 17. Distribution of answers in sentence (5).

Sentence 6 (Hypothesis Value 3)

"En cualquier caso, si finalmente Palacín **dimite**, también es un triunfo para nosotros porque era lo que queríamos", afirma el citado asesor.

¿Palacín **dimite**?

*"In any case, if Palacín finally **resigns**, it also means a success for us because that's what we wanted", states the aforementioned advisor.*

***Does** Palacín **resign**?*

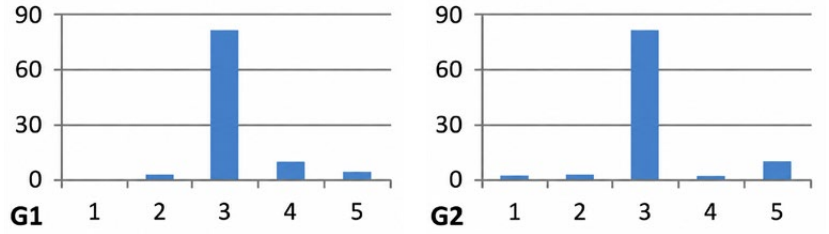


Figure 18. Distribution of answers in sentence (6).

Sentence 7 (Hypothesis Value 1)

Es más, la organización no **dejó** la isla hasta 2017.

¿La organización **dejó** la isla en 2017?

*Moreover, the organization **did** not **leave** the island until 2017.*

***Did** the organization **leave** the island in 2017?*

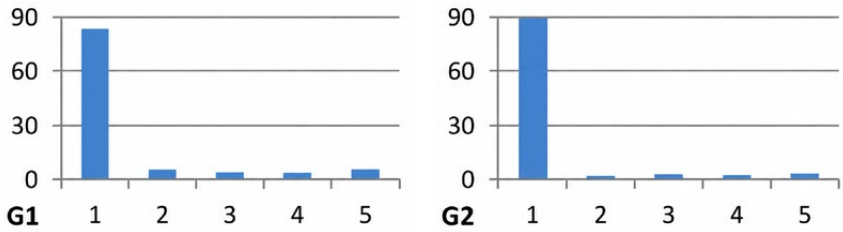


Figure 19. Distribution of answers in sentence (7).

Sentence 8 (Hypothesis Value 4)

"Pero", dice Stone, "no hicimos nada por **seguir** les el juego y porque yo, al contrario de los demócratas, no he hecho nada malo".

¿Les **siguió** Stone el juego?

*"But", Stone says, "we did not do anything **to play along** and because, unlike the Democrats, I have done nothing wrong."*

***Did** Stone **play along**?*

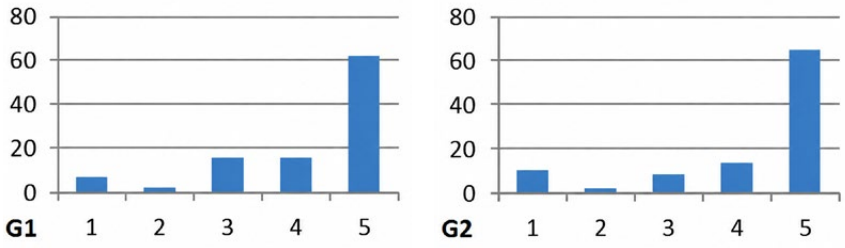


Figure 20. Distribution of answers in sentence (8).

Sentence 9 (Hypothesis Value 5)

Al no **localizar** el barco, volvían a puerto cuando fueron interceptados por los guardacostas griegos, detenidos junto a dos voluntarios daneses y acusados de facilitar el tráfico ilegal de inmigrantes e incluso de posesión de armas.

¿El barco **fue localizado**?

*Having failed to **locate** the ship, they were going back to port when they were intercepted by the Greek coast guard, arrested along with two Danish volunteers and charged with facilitating illegal smuggling of immigrants and even possession of weapons.*

***Was** the ship **located**?*

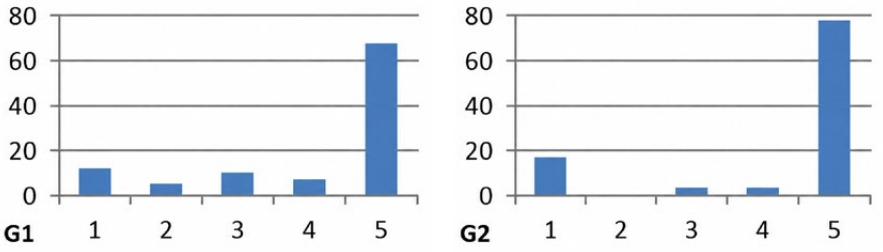


Figure 21. Distribution of answers in sentence (9).

Sentence 10 (Hypothesis Value 3)

Otros nombres que seguramente **integrarán** el Gabinete de Olivos son los de la actual portavoz en el Congreso, Josefa Céspedes y el número tres del PSOE, Bernardo Lupo.

¿Josefa Céspedes y Bernardo Lupo **integrarán** el gabinete de Olivos?

*Other names that **will** surely **be part** of Olivos' Cabinet are the current spokeswoman in Congress, Josefa Céspedés and PSOE's number three, Bernardo Lupo.*

***Will** Josefa Céspedes and Bernardo Lupo **be part** of Olivos' Cabinet?*

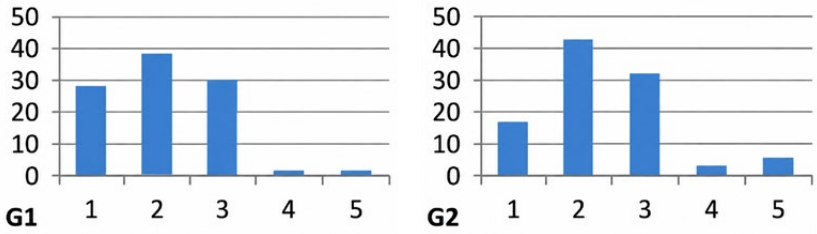


Figure 22. Distribution of answers in sentence (10).

Sentence 11 (Hypothesis Value 3)

Sin embargo, en el entorno de Inocencio se cree que se puede **llegar** a acuerdos con el PNV en muchos temas, y que hay una buena sintonía inicial entre ambos partidos pese a las grandes diferencias políticas que los separan.

¿Se **llega** a un acuerdo?

*However, in Inocencio's entourage it is believed that agreements with PNV can **be reached** on other topics, and that there is initial good harmony between both parties, despite the great political differences that separate them.*

***Is** an agreement **reached**?*

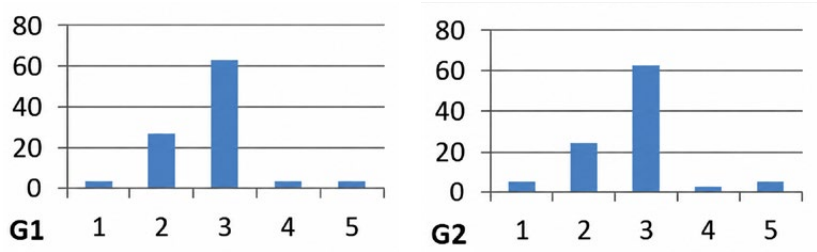


Figure 23. Distribution of answers in sentence (11).

Sentence 12 (Hypothesis Value 5)

Lo que iba a **ser** una colaboración puntual acabó dando paso a una asociación, al apoyo de 10 voluntarios y a decenas de misiones.

¿**Fue** una colaboración puntual?

*What was meant to **be** a one-time collaboration eventually gave way to a partnership, to the support of 10 volunteers and dozens of missions.*

***Was** it a one-time collaboration?*

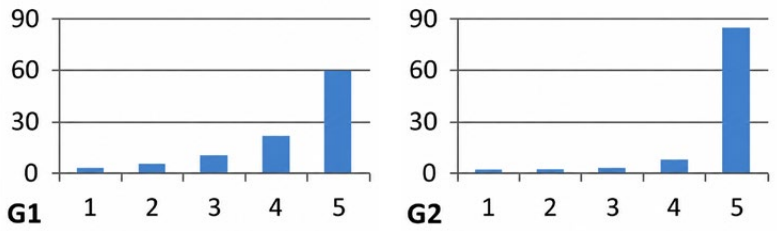


Figure 24. Distribution of answers in sentence (12).

Sentence 13 (Hypothesis Value 3)

En la madrugada del mismo jueves llegó al entorno del candidato que la moción decaería por la dimisión de Montoya, y los socialistas aún no se fían de que pueda **dimitir** este viernes.

¿Montoya **dimitirá**?

*In the early hours of Thursday morning, it was reported to the candidate's entourage that the motion would fall because of Montoya's resignation, and the socialists are still not confident that he can **resign** on Friday.*

***Will** Montoya **resign**?*

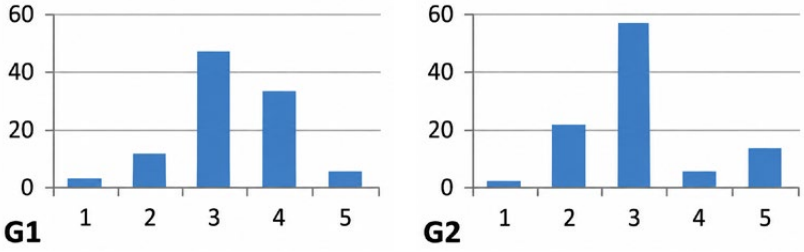


Figure 25. Distribution of answers in sentence (13).

Sentence 14 (Hypothesis Value 2)

Este jueves, Nuño pareció una dirigente **zarandeada** por la actualidad, llevada en andas por los suyos, nadie sabe hasta dónde como 'lideresa' y hasta dónde, quizá, como mártir.

¿Nuño **fue zarandeada**?

*On Thursday, Nuño seemed a leader **shaken** by the news, carried aloft by her supporters, nobody knows up to what extent as a 'leaderess" and up to what extent, maybe as a martyr.*

***Was** Nuño **shaken**?*

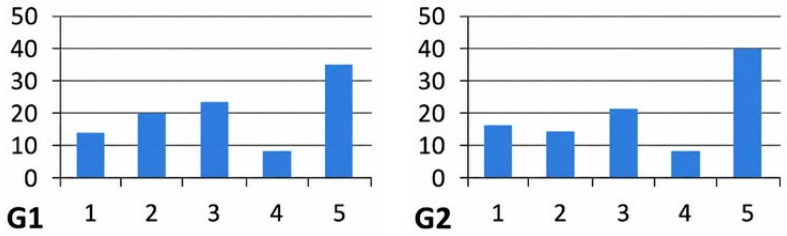


Figure 26. Distribution of answers in sentence (14).

Sentence 15 (Hypothesis Value 3)

Según el diputado catalán, parece que en la comisión **hay** barra libre.

¿**Hay** barra libre?

*According to the Catalan deputy, **there** seems to **be** a free-for-all in the Commission.*

***Is there** a free-for-all?*

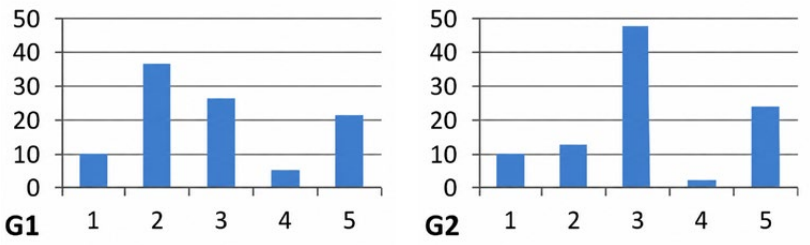


Figure 27. Distribution of answers in sentence (15).

Sentence 16 (Hypothesis Value 4)

En la noche del domingo los analistas de los principales diarios coincidían en que solo un verdadero milagro político le permitiría a Haddad **revertir** lo que parece irreversible.

¿Haddad **revertirá** lo que era irreversible?

*On Sunday evening, analysts from the main newspapers agreed that only a true political miracle would allow Haddad to **reverse** what seems irreversible.*

***Will** Haddad **reverse** what was irreversible?*

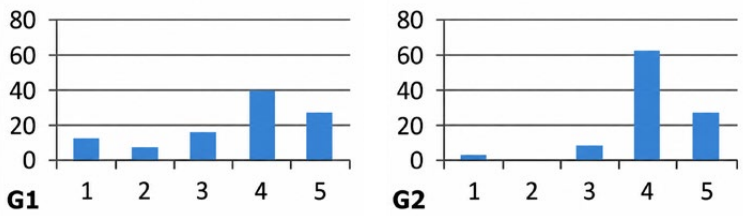


Figure 28. Distribution of answers in sentence (16).

Sentence 17 (Hypothesis Value 1)

Pero no fueron los únicos. Otros dos voluntarios daneses **fueron arrestados** aquel día.

¿**Fueron arrestados** dos voluntarios más?

*But they were not the only ones. Two other Danish volunteers **were arrested** that day.*

***Were** two other volunteers **arrested**?*

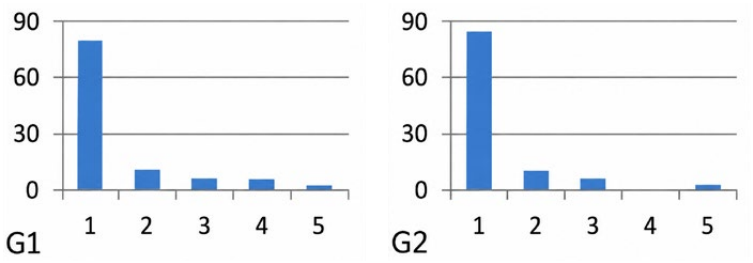


Figure 29. Distribution of answers in sentence (17).

Sentence 18 (Hypothesis Value 4)

A su alrededor todo es misterio y nadie quiere **aventurar** la posibilidad de que renuncie.

¿Alguien **aventura** que el diputado puede renunciar?

*Everything around him is a mystery and no one wants to **venture** the possibility of his resignation.*

***Does** anyone **venture** that the deputy may resign?*

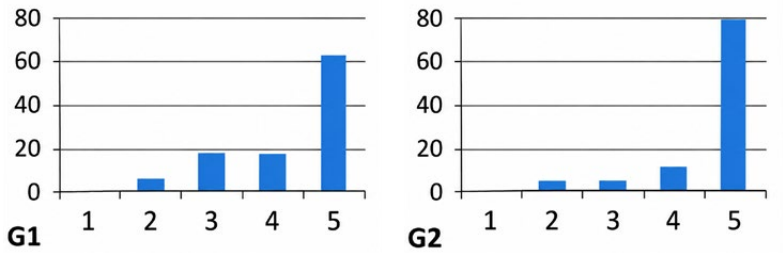


Figure 30. Distribution of answers in sentence (18).

Sentence 19 (Hypothesis Value 3)

"No voy a permitir que este tipo de cosas me **separen** de mi camino", dijo al periodista David Del Cura.

¿Este tipo de cosas le **separan** de su camino?

*"I'm not going to allow these sorts of things to **keep** me from my path", said to the journalist David Del Cura.*

*Do these sorts of things **keep** him from his path?*

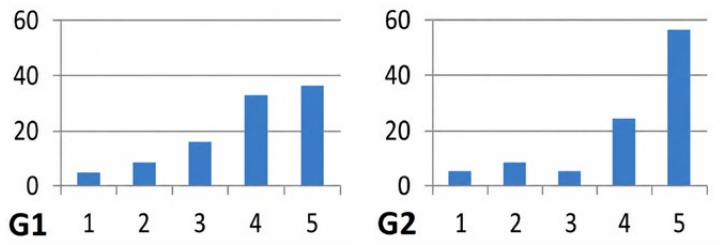


Figure 31. Distribution of answers in sentence (19).

Sentence 20 (Hypothesis Value 1)

La operación de este martes no guarda relación con estas dos investigaciones, que **lleva a cabo** la Audiencia Nacional.

¿Esta operación la **lleva a cabo** la Audiencia Nacional?

*Tuesday's operation does not have any relation with these two inquiries, **carried out** by the National High Court.*

***Is** this operation **carried out** by the National High Court?*

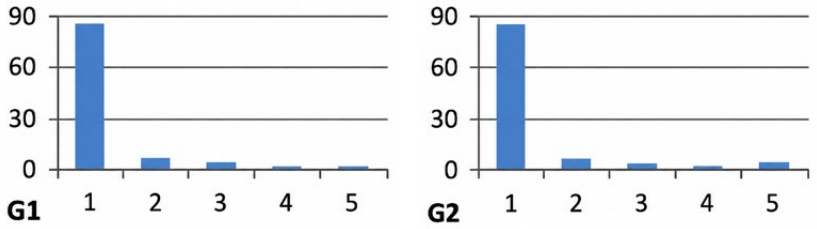


Figure 32. Distribution of answers in sentence (20).

Sentence 21 (Hypothesis Value 3)

Larson fue el encargado de anunciar que el trabajo de fin de carrera de Rosell no se **haría público** "para no seguir estirando el chicle"

¿El trabajo de Rosell se **hará público**?

Larson was in charge of announcing that Rosell's end of degree paper would not be made public "to avoid stretching it out".

***Will** Rosell's paper **be made** public?*

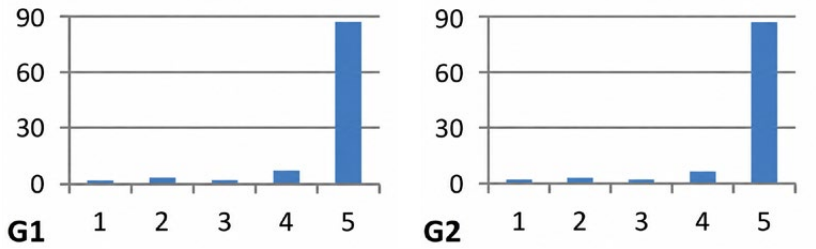


Figure 33. Distribution of answers in sentence (21).

Sentence 22 (Hypothesis Value 1)

En Onda Cero Rosell **atribuyó** la publicación de eldiario@es "a un ataque sin fundamento construido sobre la falsedad".

¿Rosell **atribuyó** la publicación a un ataque?

In Onda Cero, Rosell attributed the publication by eldiario@es "to an unfounded attack built on falsehood".

***Did** Rosell **attribute** the publication to an attack?*

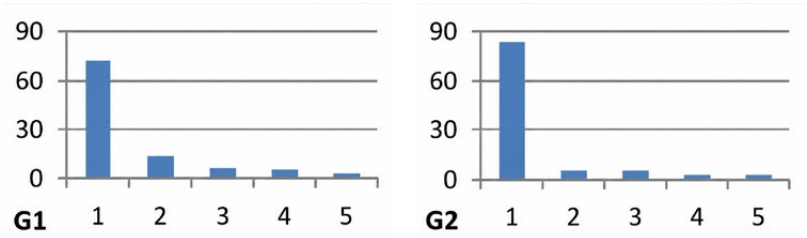


Figure 34. Distribution of answers in sentence (22).

Sentence 23 (Hypothesis Value 4)

Las webs jamás **reservarían** un párrafo al debate parlamentario de la Asamblea regional.

¿Las webs **reservarán** espacio a este debate parlamentario?

*The websites **would** never **save** a paragraph for the parliamentary debate at the regional Assembly.*

***Will** the websites **save** some space for that parliamentary debate?*

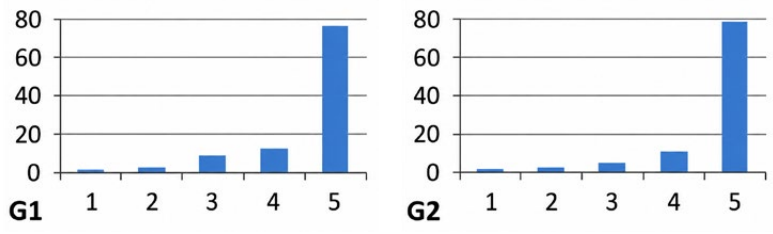


Figure 35. Distribution of answers in sentence (23).

Sentence 24 (Hypothesis Value 4)

El portavoz ha deseado que "ojalá" toda la corrupción del PP **fuera** mentira.

¿**Es** mentira toda la corrupción del PP?

The spokeperson wished all the PP corruption ***was*** *a lie.*

Is *all the PP corruption a lie?*

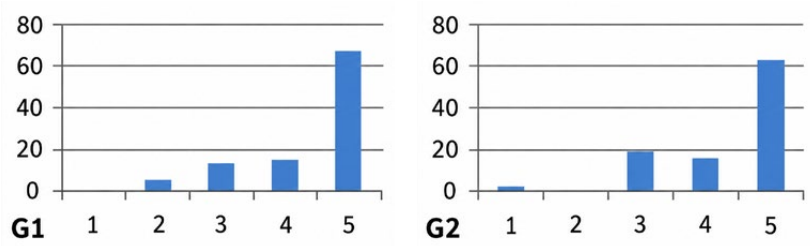


Figure 36. Distribution of answers in sentence (24).

Sentence 25 (Hypothesis Value 4)

“En manos del partido. ¿En serio? ¡Vaya con la gran nación española, qué incapacidad de **llegar a acuerdos**!”, reprochó.

¿Se **ha llegado a acuerdo**s?

“In the party’s hands. Seriously? Look at the great Spanish nation, totally incapable of ***reaching*** *agreements,” he/she criticized.*

Have *agreements* ***been reached****?*

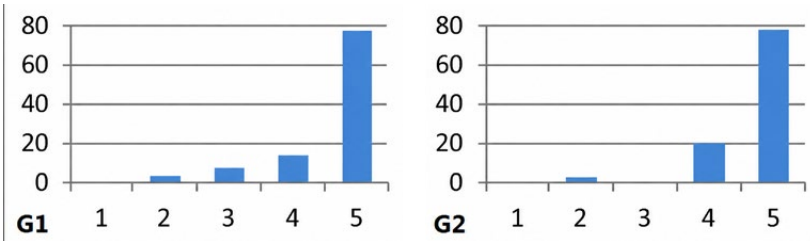


Figure 37. Distribution of answers in sentence (25).

Sentence 26 (Hypothesis Value 3)

“A los países puede no **gustarles** lo que hacemos, pero respetan lo que hacemos”, ha dicho

¿Les **gusta** a los países lo que hacemos?

“Countries may not ***like*** *what we do, but they respect what we do,” he/she said.*

Do *countries* ***like*** *what we do?*

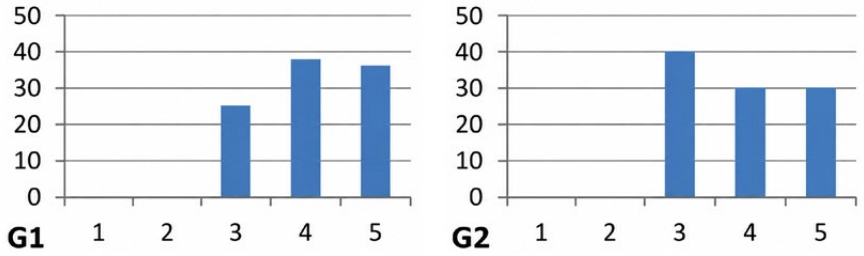


Figure 38. Distribution of answers in sentence (26).

Sentence 27 (Hypothesis Value 2)

Paco, vas a volver a ganar con mayoría absoluta porque estoy seguro de que todos en Castilla-La Mancha **saben** que solo pueden depender de ti.

¿**Saben** todos que dependen de Paco?

*Paco, you will win again by absolute majority, because I'm sure that everybody in Castilla-La Mancha **knows** that they can only depend on you.*

***Does** everybody **know** that they only depend on Paco?*

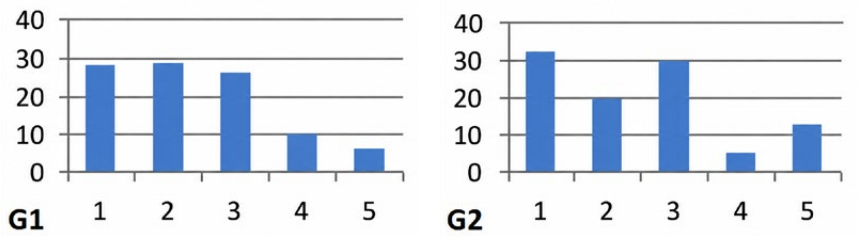


Figure 39. Distribution of answers in sentence (27).

Sentence 28 (Hypothesis Value 4)

Ninguna de esas estrategias parece **haber funcionado**.

¿**Ha funcionado** alguna estrategia?

*None of those strategies seemed to **have worked**.*

***Has** any strategy **worked**?*

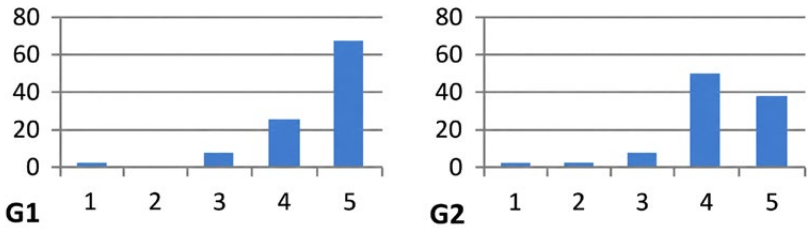


Figure 40. Distribution of answers in sentence (28).

Sentence 29 (Hypothesis Value 4)

"Han intentado **forzar** traer al presidente a rastras y de las orejas", ha llegado a decir el portavoz socialista.

¿**Han forzado** traer al presidente?

*"They have tried to **force** the president to be dragged here," the Socialist spokesman went so far as to say.*

***Have** they **forced** the president to be dragged?*

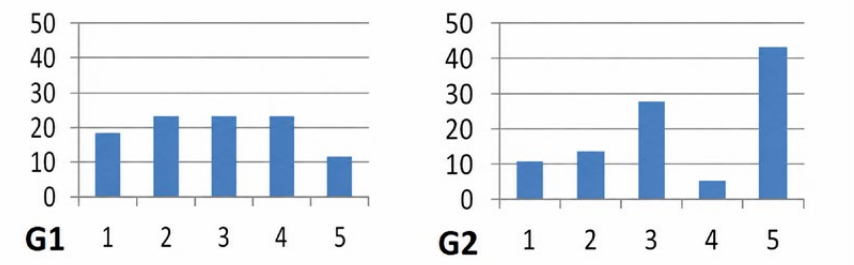


Figure 41. Distribution of answers in sentence (29).

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Old English verbs of learning in Role and Reference Grammar. Argumental Effector and peripheral Source

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Abstract: The aim of this article is to explain the syntax and semantics of Old English verbs of learning. The theoretical basis of this work is Role and Reference Grammar and, more specifically, internal aspect, lexical representation, logical structures, and the semantics-syntax interface as posited by this theory of language. The corpus of analysis, which has been extracted from both textual and lexicographical sources, is comprised of 715 tokens, in which the following verbs are found: *(ge)cneordlǣcan*, *gefrāgian*, *(ge)fricgan*, *(ge)frignan*, *(ge)leornian*, *ofācsian*, and *onfindan*. The main conclusions are, firstly, that a semantic explanation is needed for verbs of learning, in contradistinction to the position currently held by Role and Reference Grammar, which is based on the distinction between compulsory and optional syntactic constituents; and, secondly, that Old English verbs of learning may represent states of affairs corresponding to Accomplishments and Achievements but also to the causative versions of these *Aktionsarten*.

Keywords: *old english, verbs of learning, role and reference grammar, linking, causativity.*

Verbos de aprendizaje en inglés antiguo según la Gramática del Papel y la Referencia. Realizador argumental y Fuente periférica

Resumen: El objetivo de este artículo es explicar la sintaxis y la semántica de los verbos de aprendizaje en inglés antiguo. La base teórica de este trabajo es la Gramática del Papel y la Referencia y, más específicamente, el aspecto interno, la representación léxica, las estructuras lógicas y la interfaz semántica-sintaxis, tal y como son propuestas por esta teoría del lenguaje. El corpus para el análisis, que ha sido obtenido tanto de fuentes textuales como lexicográficas, está formado por 715 muestras, que se corresponden con los siguientes verbos: *(ge)cneordlǣcan*, *gefrāgian*, *(ge)fricgan*, *(ge)frignan*, *(ge)leornian*, *ofācsian* y *onfindan*. Las principales conclusiones que se extraen del análisis son, en primer lugar, que una explicación semántica es necesaria para los verbos de aprendizaje, en contraste con la actual postura mantenida por la Gramática del Papel y la Referencia, la cual se basa en la distinción entre constituyentes sintácticos obligatorios y opcionales; y, en segundo lugar, que los verbos de aprendizaje en inglés antiguo pueden representar estados de cosas que se corresponden no solo con Realizaciones y Logros sino también con las versiones causativas de estos *Aktionsarten*.

Palabras clave: *inglés antiguo, verbos de aprendizaje, gramática del papel y la referencia, enlace, causatividad.*

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1. Introduction

This article intends to contribute to the synchronic study of Old English. More concretely, its aim is to explain the syntax and semantics of Old English verbs of learning. This study draws on the theoretical framework provided by Role and Reference Grammar (henceforth RRG). As it turns out, the analysis of this verbal set raises some questions relevant for the RRG analysis of two-place and three-place state predicates, as well as for the scope in this theory of derived predications based on nominalizations. The method of the present study is based on the analysis of Old English verbs of learning as to their *Aktionsart*, thematic roles, macrorole assignment, and Privileged Syntactic Argument (PSA). Ultimately, the goal of the research program in which this work belongs is to synchronically describe the lexicon of Old English on a principled and theoretically up-to-date linguistic basis.

Verbs of learning code states of affairs such as the ones depicted in *Laura learned how to swim butterfly style* or in *Laura learned how to swim butterfly style thanks to her instructor*. Thus described, verbs of learning raise the question of causativity. That is to say, must the segment *thanks to her instructor's lessons* be analyzed as representing a non-induced change of state or as entailing an induced (causative) change of state? In its current state, RRG considers *thanks to her instructor* in a context like *Laura learned how to swim butterfly style thanks to her instructor* an optional constituent captured by means of a Periphery that is attached to the Core. As is explained below, the Core contains the predicate and the compulsory arguments, while the Periphery is the clausal slot where optional adjuncts are placed. The position held in this article is that this analysis is oriented towards syntax, rather than towards semantics. This is not in disagreement with the outline of RRG, which provides semantic explanation for syntactic structure. As a result, theoretical and empirical evidence is given to analyze some knowledge transfer events, like *Laura learned how to swim butterfly style thanks to her instructor,* as a causative change of state and a Causative Accomplishment logical structure. When it is a Core argument the initiator receives the macrorole Actor in the syntax-semantics linking, becoming the PSA of the construction at the same time; on the other hand, if it is an adjunct in the Periphery, then it is realized by a prepositional phrase. This solution has the advantages of allowing for a similar analysis of verbs of teaching and learning and, furthermore, of relating nominal phrases to derived predications. On the other hand, it calls for additional semantic distinctions, including, for instance, the one holding between animate and inanimate initiators of the knowledge transfer event.

The article is structured as follows. Section 2 reviews former studies dealing with Old English syntax and semantics. The relevant aspects of RRG are presented in Section 3. Section 4 draws the semantic distinctions necessary for a semantically oriented analysis of Old English verbs of learning. Section 5 describes the sources, methodological steps and data of this study. Section 6 explains the syntax-semantics linking with Old English verbs of learning and gathers empirical evidence in favor of distinguishing between argumental Effector and peripheral Source depending on the type and participants of the

change of state. Section 7 turns to more theoretical questions and discusses the typology of knowledge and information transfer events proposed in Section 4 from the perspective of derived predications. Section 8 summarizes the main conclusions of the article.

2. Previous research in Old English syntax and semantics

Old English syntax has received more attention in scholarly research (for example, Campbell, 1987; Denison, 1993; Hogg & Fulk, 2011; McLaughlin, 1983; Mitchell, 1985; Quirk & Wrenn, 1994; Traugott, 1992; Visser, 1963-1973;), than semantics, which has been studied most frequently without examining its connection with syntax (Kastovsky, 1992; Martín Arista, 2018; Weman, 1933). Still, there are studies which deal with verbal classes and actually consider the relation between syntax and semantics. Some put the spotlight on semantics by analyzing verbs of sensory perception (Penttilä, 1956), movement (Ogura, 2002; Weman ,1933), knowledge (Ono, 1989), thinking (Ogura, 1986b), sentiment (Ogura, 2013), taste (Ogura, 2008), and impersonal verbs (Ogura, 1986a; Möhlig-Falke, 2012); while other studies focus on syntax, with reference to constructions with *self* (Ogura, 1989), verbal complementation (Denison, 1993; Molencki, 1991), oblique case marking (Allen, 1995), non-finite constructions (Timofeeva, 2010) and periphrastic constructions (Ogura, 2018).

The works of researchers that have examined the semantic motivation of English syntax on the basis of current linguistic theories imply a further development in the field. Martín Arista (2000a, 2000b) has analyzed the internal aspect of Old English verbs according to the *Aktionsart* types proposed by RRG (Van Valin & LaPolla, 1997). On its part, the Lexematic Functional Approach has proposed an inventory of lexical templates and mapping principles which are grounded on the system of lexical representation of RRG. Verbs of feeling (C. García Pacheco, 2013), verbs of existence (L. García Pacheco, 2013) and many others have been studied using this framework with the application of the Lexematic Functional Approach to Old English verbal classes. Some recent works, which aim to reassess the configuration of the verbal lexicon of Old English, have evaluated how consistent verbal classes are from semantic and syntactic perspectives by considering *Aktionsart* types, logical structures, constructions and alternations. Inaction verbs (Ojanguren López, 2019a, 2021), verbs of prohibition (Ojanguren López, 2019b), end verbs (Ojanguren López, 2020), rejoice verbs (Martín Arista, 2020), verbs of depriving (Lacalle Palacios, 2022), and verbs of increasing (Lacalle Palacios, 2021) have hitherto been addressed in this line of investigation. The present paper has been devised as a contribution to this research avenue.

3. Theoretical basis: Role and Reference Grammar

The theoretical foundations of this research paper correspond with the functional framework of RRG (Foley & Van Valin, 1984; Van Valin, 2005, 2014; Van Valin & LaPolla, 1997). This section examines the most significant aspects of this approach with regards to the discussion presented in Sections 6 and 7.

The semantic representations devised by RRG are based on four *Aktionsart* classes proposed by Vendler (1967): States, Achievements, Accomplishments, and Activities. The number of classes has increased with the addition of Active Accomplishments, Semelfactives, and the causative counterparts of all *Aktionsart* types (Van Valin, 2005; Van Valin & LaPolla, 1997). Figure 1 provides examples of every *Aktionsart* class together with their causative versions.

a. State:	The boy is afraid.
a'. Causative state:	The dog frightens/scares the boy.
b. Achievement:	The balloon popped.
b'. Causative achievement:	The cat popped the balloon.
c. Semelfactive:	The pencil tapped on the table.
c'. Causative semelfactive:	The teacher tapped the pencil on the table.
d. Accomplishment:	The ice melted.
d'. Causative accomplishment:	The hot water melted the ice.
e. Activity:	The soldiers marched in the park.
e'. Causative activity:	The sergeant marched the soldiers in the park.
f. Active accomplishment:	The soldiers marched to the park.
f'. Causative active accomplishment:	The sergeant marched the soldiers to the park.

Figure 1. Instances of the Aktionsart types included in RRG (Van Valin, 2005, p. 34).

The six classes are based on four different semantic features: [±static], [±dynamic], [±telic], and [±punctual]. The most basic feature [± static] makes a distinction between verbs coding a 'happening' from others coding a 'non-happening'. [± dynamic] makes reference to a state of affairs in which there is action or not. The feature [± telic] refers to an event with an inherent terminal point or not. Finally, events that have internal duration are distinguished from others which lack it through the feature [± punctual]. The correspondence between *Aktionsart* class and semantic features is shown in Figure 2.

a. State:	[+ static], [− dynamic], [− telic], [− punctual]
b. Activity:	[− static], [+ dynamic], [− telic], [− punctual]
c. Achievement:	[− static], [− dynamic], [+ telic], [+ punctual]
d. Semelfactive:	[− static], [± dynamic], [− telic], [+ punctual]
e. Accomplishment:	[− static], [− dynamic], [+ telic], [− punctual]
f. Active accomplishment:	[− static], [+ dynamic], [+ telic], [− punctual]

Figure 2. Aktionsart types and semantic features (Van Valin, 2005, p. 33).

In RRG, the semantics-syntax and the syntax-semantics linking are determined by logical structures, which guarantee the projection from clausal semantics onto clausal syntax (Van Valin & LaPolla, 1997, p. 102). Logical structures discern stative (**predicate´**) from non-stative (**do´**) verbs whose argument variants are represented by *x*, *y* and *z*. The metalinguistic predicates INGR(essive), SEM(e)L(factive), BECOME, and CAUSE mark ingressives, semelfactives, accomplishments, and causatives, respectively. Figure 3 illustrates each *Aktionsart* class along with its respective logical structure.

Aktionsart class	Logical Structure
STATE	**predicate´** (x) or (x, y)
ACTIVITY	**do´** (x, [**predicate´** (x) or (x, y)])
ACHIEVEMENT	INGR **predicate´** (x) or (x, y), or
	INGR **do´** (x, [**predicate´** (x) or (x, y)])
SEMELFACTIVE	SEML **predicate´** (x) or (x, y)
	SEML **do´** (x, [**predicate´** (x) or (x, y)])
ACCOMPLISHMENT	BECOME **predicate´** (x) or (x, y), or
	BECOME **do´** (x, [**predicate´** (x) or (x, y)])
ACTIVE ACCOMPLISHMENT	**do´** (x, [**predicate$_1$´** (x, (y))])
	& INGR **predicate$_2$´** (z, x) or (y)
CAUSATIVE	α CAUSE β, where α, β are logical structures of any type

Figure 3. Lexical representations for Aktionsart classes (Van Valin, 2005, p. 45).

RRG includes a catalogue of thematic roles that 'are defined in terms of the argument positions in the decomposed logical structure representations' (Van Valin, 2005, p. 53); e.g. the thematic roles of verbs of learning are Effector, Cognizer and Content. Conversely, Actor and Undergoer are the generalized semantic macroroles around which RRG centers its semantic analysis and which make grammatical generalizations across sets of thematic roles. Agentive verbs have an Actor as first argument whereas the only argument of stative verbs is an Undergoer, which is also the second argument of transitive verbs. The Actor-Undergoer Hierarchy determines the relation between macrorole and argument position, the Actor being the leftmost argument of the hierarchy in contrast to the Undergoer, which is the rightmost one. Macrorole transitivity establishes the number of explicit macroroles that can be taken by predicates (Van Valin & LaPolla, 1997, pp. 150-151) and classifies them into transitive (2 macroroles), intransitive (1 macrorole) and atransitive (0 macroroles).

RRG makes use of the concept of Privileged Syntactic Argument (PSA) rather than the grammatical notions of subject and object, which are not considered universal. The PSA, which controls agreement with finite verbs, is the first argument in active constructions and the second one in passive constructions. Any remaining arguments in the clause can be direct core arguments or oblique core arguments.

The connection between semantics and syntax, called linking in RRG, is defined from semantics to syntax (production) and from syntax to semantics (comprehension), guaranteeing that what is included in the semantics is also coded in the syntax. Verb agreement, case assignment, and prepositional government are salient components of linking, whose interaction is summed up this way: accusative languages like English set the highest-ranking core macrorole as controller of finite verb agreement and case-mark it nominative; the other core macrorole takes accusative, while non-macrorole direct core arguments receive dative case; however, in ergative languages, "the lowest-ranking argument is the default choice" (Van Valin & LaPolla, 1997, p. 317).

To finish this review, the Layered Structure of the Clause describes how clausal semantics is projected onto clausal syntax (Van Valin & LaPolla, 1997, pp. 26-29). This hierarchical structure is composed of a number of semantic layers that are needed to reflect the scope of operators (grammatical features including, among others, tense, aspect, and modality) in a suitable way. The Layered Structure of the Clause is divided into the Core, which contains the predicate or verbal nucleus along with its arguments (as in *They are buying a gift for John*); and the Periphery, which includes non-arguments of the predicate, also named adjuncts (as *tomorrow at Maggie's shop*). When two or more units are combined at Clause level, they make up a Sentence, as in *The baby started to cry so his mother gave him a pacifier*. All these components are also the main constituents of complex sentences in RRG.

4. Knowledge and information transfer events in RRG

This section delves into the semantics of verbs of learning and, more specifically, it classifies the events which can be represented by verbs of learning, discusses verbs of learning as semantically intertwined with verbs of teaching, puts forward a classification of the thematic roles licensed by verbs of learning and teaching, and describes the logical structures of verbs of learning as consisting of either a derived construction that entails a causative predication or a clausal Periphery attached to a two-argument Core. For the sake of clarity, the discussion is illustrated with Present-Day English. Sections 6 and 7 focus on the Old English counterparts of the categories and functions presented in Section 4.

First of all, a distinction must be drawn between knowledge transfer events and information transfer events. Knowledge transfer events are gradual processes of transfer of large sets of data that typically represent structured bodies of knowledge. Teaching or learning classical languages or physics are prototypical examples of knowledge transfer events. Information transfer events, on the other hand, are punctual happenings of transfer of small sets of data which do not constitute structured fields of knowledge. Learning that one´s neighbor has given birth to a baby girl or that someone has been awarded the Nobel prize are information transfer events. In other words, the outcome of both knowledge transfer events and information transfer events is that a receiver gets to know something. The difference lies in what the receiver gets to know and in how long it takes the receiver to become aware of the transferred contents. Therefore, the distinction between knowledge

and information transfer correlates with the difference between durative and punctual *Aktionsart*. The transfer of knowledge implies a durative change of state that entails a learning process represented by verbs such as *learn, memorize*, and *study*. The relevant *Aktionsart*, therefore, is the Accomplishment. In contrast, the transfer of information conveys a punctual change of state, does not involve a previous learning process and is represented by verbs such as *realize*, *discover*, *find out*, and *get to know.* The *Aktionsart* of these verbs is the Achievement. (1) shows the logical structures of Accomplishments and Achievements besides two representative examples adapted from Van Valin and LaPolla (1997, p. 105).

(1)

a. Alfred learned English phonology.
BECOME **know´** (Alfred, English phonology)

b. Martha found out the incredible news.
INGR **discover´** (Martha, the incredible news)

Figure 4 shows the corresponding tree diagram analyses of the Accomplishment (1a) and Achievement (1b).

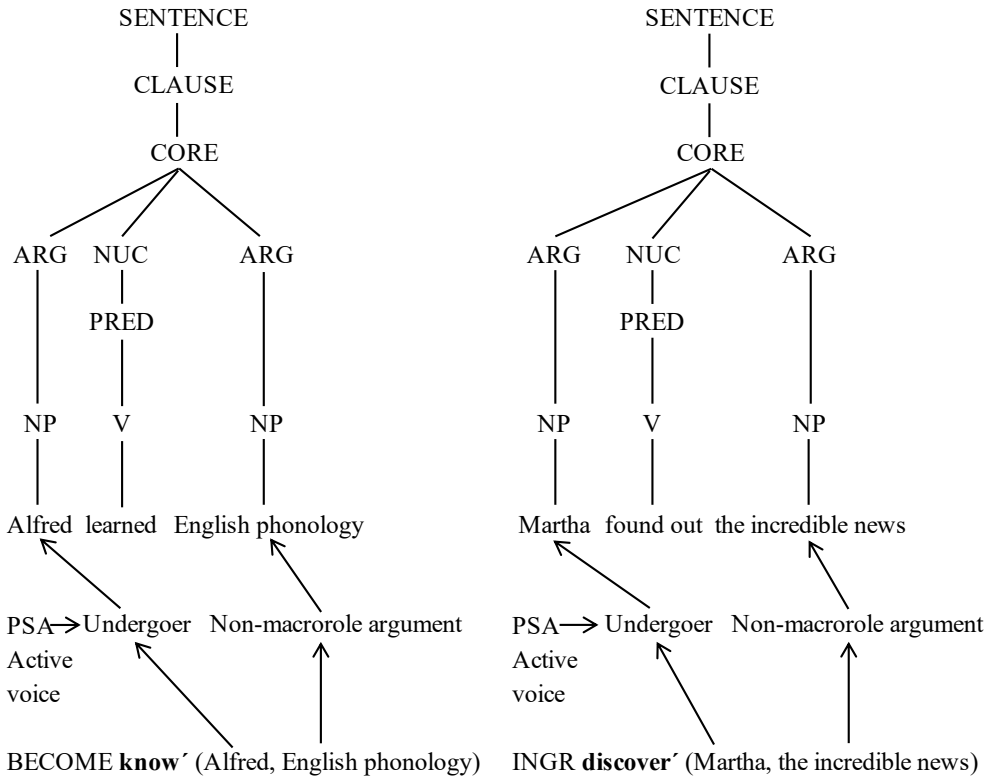


Figure 4. Tree diagram analyses of the Accomplishment in (1a) and the Achievement in (1b).

As is explained below, the Core contains the predicate and the compulsory arguments, while the Periphery is the clausal slot where optional adjuncts are placed. In the argumental realization of Laura learned how to swim butterfly style thanks to her instructor, the participant Laura undergoes a change of state whereby she becomes able to swim. However, the origin of the ability of the participant that undergoes the change of state is expressed by means of oblique syntax: an adjunct, rather than a core argument, that is modified by a prepositional phrase. Put in other words, while a causal chain can be identified in the semantics between the ability to swim of the participant her instructor and the participant Laura; the syntax expresses such causal chain rather loosely. In this respect, the position held in this article is that the current analysis of RRG of instances like Laura learned how to swim butterfly style thanks to her instructor is more oriented towards syntax than towards semantics. This is not in tune with the general profile of RRG, which, as a functional theory of language, seeks semantic explanation for syntactic structure. Therefore, theoretical and empirical reasons are provided in favor of an analysis of some knowledge transfer events, like Laura learned how to swim butterfly style thanks to her instructor, as involving an induced change of state and a Causative Accomplishment logical structure. In the syntax-semantics linking, the initiator receives the macrorole Actor and becomes the PSA of the construction, when it is a Core argument; and it is realized by a prepositional phrase when it is an adjunct in the Periphery. This solution is inspired by Van Valin´s (2013, p. 80) treatment of instruments, which depends on whether there is a causal chain in the event or not: instruments can serve as actors if the event can be described in terms of a causal chain, as in *The burglar shattered the window with the crowbar / The crowbar shattered the window* (Van Valin, 2013, p. 80). Along with being compatible with the analysis of instruments cited above, the solution proposed in this article has the advantages of allowing for a similar analysis of verbs of teaching and learning and, furthermore, of relating nominal phrases to derived predications. On the other hand, it calls for additional semantic distinctions, including, for instance, the one holding between animate and inanimate initiators of the knowledge transfer event.

Verbs of knowledge and information transfer can be found in two versions: one version selects two semantic participants, the other three semantic participants. The version with two semantic participants displays the receiver and the transferred content, whereas the one with three semantic participants, stages the initiator along with the receiver and the transferred content. (2a) is an instance of the two-participant version while (2b) illustrates the version with three semantic participants.

(2)

a. Jill learned ice skating.

b. Jack taught chess to the pupils.

In a syntax-centered analysis, the difference between (2a) and (2b) is attributed to the prepositional phrase *to the pupils*, which can also be realized as a post-verbal noun phrase: *Jack taught the pupils chess*. In an analysis of semantic persuasion such as the one posited by RRG, both (2a) and (2b) show syntactic transitivity 2 (the Core takes two arguments, *Jill-ice skating* and *Jack-chess*) but (2a) presents macrorole transitivity 1 (in a change of state there is just one macrorole, the Undergoer), whereas the macrorole transitivity of (2b) is 2 (*Jack* receives Actor and *chess* gets the macrorole Undergoer). This analysis has two shortcomings, though. On the syntactic side, *ice skating* in (2a) is a non-macrorole direct core argument and *to the pupils* in (2b) is considered an oblique core argument, as it is realized by a prepositional phrase.

This analysis raises two issues. Firstly, a different function is assigned to two segments that are similar in being realized as a post-verbal noun phrase and, moreover, that can be the target of passivization (*Ice skating was learned that winter, Chess was taught at university*). Secondly, this analysis offers no solution for the version with three semantic participants of (2a), that is, *Jill learned ice skating from her brother*. No dative alternation is possible on (2a) like the one compatible with (2b), thus *Jack taught the pupils chess* is grammatical whereas **Jill learned her brother ice skating* is not. Therefore, the participant *her brother* cannot be realized as an oblique core argument and, consequently, it belongs in the clausal Periphery. From the semantic point of view, however, *her brother* in *Jill learned ice skating from her brother* is the initiator of the process of change of state, exactly as *Jack* in *Jack taught chess to the pupils*.

To solve these issues, the line is taken in the present study that teaching and learning events represent two complementary processes of change of state and, as such, must be described as involving the same *Aktionsart* and as giving rise to the same logical structures. Given a pair such as (3a) and (3b), which depicts a state of affairs in which knowledge is transferred between two participants, the relevant *Aktionsart* corresponds to a causative gradual change of state, namely the Accomplishment. Considering that the participant *Martha* is the initiator of the process depicted by (3a) and (3b), both expressions constitute the causative version of the Accomplishment.

(3)

a. Martha taught Jill knitting.

b. Jill learned knitting from Martha.

The differences between the fully volitional process coded by *to teach* and the less explicitly volitional process to which *to learn* makes reference are captured in terms of thematic role assignment. The participant *Martha* is a prototypical Agent in (3a), whereas it gets the thematic role Effector (the non-prototypical initiator of an action, process, or event in RRG) in (3b). Furthermore, with verbs of teaching and learning the initiator must be human or, at least, animate. For this reason, (4a) does not make sense, while the prepositional phrases *from a book* in (4b) and *with a book* in (4c) realize the thematic role Source (*from*) or Instrument (*with*) and belong in the clausal Periphery.

(4)

a. ???A book taught Jill how to knit.

b. Jill learned knitting from a book.

c. Jill learned knitting with a book.

To summarize, the processes of knowledge or information transfer that code two semantic participants are represented by means of clauses in which the first argument realizes the thematic role Cognizer and receives the macrorole Undergoer. The Undergoer is the PSA of the construction. The processes of knowledge or information transfer that code three participants correspond to two different syntactic configurations that result from the semantics of the event. Human or animate participants that initiate processes of knowledge or information transfer can be realized in the clausal Core, whereas inanimate participants must be realized in the Periphery of the clause. The former receives the thematic role Agent with verbs of teaching and the thematic role Effector with verbs of learning; the latter play the thematic roles Source or Instrument. As has been pointed out above, knowledge transfer events are Accomplishments, whereas the *Aktionsart* of information transfer events is the Achievement. The causative versions of these *Aktionsarten* require an Actor or an Effector initiator. If the initiator belongs in the Core, it receives the macrorole Actor, which gets the PSA of the construction. If it belongs in the Periphery, it is realized by a prepositional phrase. The logical structures of verbs of learning according to this typology are presented in (5).

(5)

a. The disciples learned humility.
[BECOME **know´** (the disciples, humility)]

b. The disciples learned humility from Jesus.
[**do´** (Jesus)] CAUSE [BECOME **know´** (the disciples, humility)]

c. The president got to know the agreement signed with the rebels.
[INGR **discover´** (the president, the agreement signed with the rebels)]

d. The president learned from the press that an agreement had been signed with the rebels.
[**be-from´** (the press)] [INGR **discover´** (the president, that an agreement had been signed with the rebels)]

Examples (5a) and (5b) display logical structures corresponding to durative changes of state, thus Accomplishments. In (5a), the Cognizer (*the disciples*) gets to know the Content (*humility*), the Cognizer receiving Undergoer and PSA. In (5b), the Effector (*Jesus*) causes the Cognizer (*the disciples*) to learn the Content (*humility*), in such a way that the Effector gets the macrorole Actor and becomes the PSA of the construction. (5c) and (5d) show logical structures describing a punctual change of state or Achievement. In (5c), the Cognizer (*the president*) undergoes a change of state whereby it gets to know the Content (*the agreement*

signed with the rebels). The Undergoer is assigned to the thematic role Cognizer, and so is the PSA of the construction. The initiator of (5d), in contradistinction to (5a) and (5b), is not animate and, consequently, cannot play the thematic role Effector. It is Source, instead. These logical structures are discussed from the empirical perspective in Section 6 and from the theoretical side in Section 7.

5. Sources, data, and steps for the analysis

The main textual sources in this research include the *Dictionary of Old English Corpus* (henceforth DOEC), the *York-Toronto-Helsinki Parsed Corpus of Old English Poetry*, and the *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE refers to both York corpora henceforward). Both the textual fragments and numbers have been drawn from the DOEC whereas, if available, the YCOE parsing has been used for the morpho-syntactic analysis of said fragments. Additionally, lexicographical sources have been examined as well. Old English dictionaries comprise Bosworth-Toller, Clark Hall-Meritt, and Sweet as well as the *Dictionary of Old English* (henceforth DOE) for the verbs that begin with the letters A-I. Likewise, the *Thesaurus of Old English* and the *Historical Thesaurus of the Oxford English Dictionary* have also been consulted for the specific meanings and senses. Lastly, the lexical database of Old English *Nerthus*, containing around 32,000 entries, has provided the lexical and morphological data as well as meaning definitions.

Two methodological steps have been followed to carry out the analysis in this work. First of all, a sub-corpus of Old English verbs of learning has been compiled. Then, the attested inflectional forms of the verbs have been searched in the textual sources so as to analyze their *Aktionsart*, thematic roles, macrorole assignment, and PSA according to the theoretical framework of RRG presented in Section 3.

The design of the sub-corpus has been conducted by the classification of lexical domains proposed by Faber and Mairal (1999), which considers the internal aspect of verbs, as well as notions like causativity, relevant for the present study. 'Cognition (to become aware through one's mind)' is the corresponding lexical domain of verbs of learning, whereas 'To come to know something' is their lexical subdomain (Faber & Mairal, 1999, p. 286). This lexical subdomain serves as the onset for the compilation of potential verbs of learning, which have been subsequently searched both in the *Thesaurus of Old English* and the lexical database *Nerthus*. After putting aside polysemic verbs whose primary meaning is not *to learn*, an initial list of twenty-six has been cut down to fourteen verbs which convey 'to become aware through one's mind' as their lexical domain and 'to come to know something' as their lexical subdomain.

The inflectional forms of the verbs beginning with the letters A-I found in the DOE have been searched for in the DOEC. On the other hand, the canonical inflectional forms of the verbs beginning with the letters L-Y corresponding to the morphological paradigms found in Campbell (1987) and Hogg & Fulk (2011) have been searched in the DOEC. This has evidenced that the canonical inflectional forms of some verbs are not found in the

DOEC. For this reason, the lemmatized lists given by Metola Rodríguez (2015), García Fernández (2018), and Tío Sáenz (2019) have been checked and manual revision has also been required.

Seven verbs make up the sub-corpus of verbs of learning for the analysis, namely *(ge)cneordlǣcan*, *gefrāgian*, *(ge)fricgan*, *(ge)frignan*, *(ge)leornian*, *ofācsian*, and *onfindan* corresponding with a total of 715 tokens or textual attestations. The list of verbs along with their inflectional forms and number of occurrences can be seen in Appendix.

The analysis carried out in Sections 6 and 7 follows the DOEC, as it is illustrated in Figure 5; and the morphological classification and syntactic parsing in the YCOE, as Figure 6 shows. The references between brackets show the sources of Present-Day English translations.

[CP 235100 (58.441.28)]
Leornað ðonne to lufianne ðæt he ær forhogde.
'He then learns to love what he formerly despised' (Sweet, 1871, p. 440).

Figure 5. The organization of examples presented in the analysis.

```
(IP-MAT (NP-NOM *con*)
        (VBPI Leornað)
        (ADVP-TMP (ADV^T ðonne))
        (IP-INF (TO to)
                (VB^D lufianne)
                (CP-FRL (WNP-ACC-1 (D^A ðæt))
                        (C 0)
                        (IP-SUB (NP-ACC *T*-1)
                                (NP-NOM (PRO^N he))
                                (ADVP-TMP (ADV^T ær))
                                (VBD forhogde))))
```

Figure 6. The syntactic description provided by an example from the YCOE.[1]

[1] The following abbreviations for categories and features are included in this example. Syntactic categories: ADVP-TMP (adverb phrase, temporal), NP (noun phrase), WNP (wh-noun phrase); lexical categories: ADV (adverb), D (determiner), PRO (personal pronoun), TO (infinitival TO), VB (verb, inflected infinitive), VBD (verb, past tense indicative/subjunctive ambiguous); VBPI (verb, present indicative); morphological case at word level: ^A (accusative), ^D (dative), ^N (nominative); morphological case at phrase level: -ACC (accusative), -NOM (nominative).

6. The syntax-semantics linking in Old English verbs of learning

This section turns to the analysis of Old English verbs of learning based on the notions of RRG reviewed in Section 3 and the knowledge and information transfer events described in Section 4. Particularly, it focuses on the *Aktionsart* (internal aspect) and logical structures (lexical representations) as well as the thematic roles, macrorole assignment, and PSA that these verbs may license.

Old English verbs of learning comprise two types of *Aktionsart* directly related to the type of content transfer and the duration of the events. The *Aktionsart* of states of affairs in which a Cognizer gradually learns the content (knowledge transfer) is the Accomplishment. Conversely, there are also punctual states of affairs in which the Cognizer gets to know the content without any prior learning process (information transfer) which correspond to the Achievement. In other words, these two *Aktionsarten* describe non-induced changes of state in which a Cognizer either learns or becomes aware of some content. Figure 7 presents the logical structure of Accomplishments and Achievements with Old English verbs of learning.

BECOME **know´** (x, y)
INGR **discover´** (x, y)

Figure 7. The logical structures of Accomplishments and Achievements with verbs of learning.

(6) illustrates Accomplishments and Achievements and their corresponding logical structures.

(6)

a. [HomS 47 (BlHom 12) 000200 (3)]
swa we on Godes bocum leornodan, þæt Drihten sylfa to his gingrum cwæde.
'As we have learned in God's book that the Lord himself said to his disciples' (Morris, 1967, p. 130).
BECOME **know´** (*we, þæt Drihten sylfa to his gingrum cwæde*)

b. [HomS 1 (ScraggVerc 5) 005000 (135)]
Þæt mon leornað on gewritum þæt monige arison of deaðe.
'One learns that in the writings that many arose from death' (Nicholson, 1991, p. 51).
INGR **discover´** (*mon, þæt monige arison of deaðe*)

The tree diagram analysis of (6a) can be seen in Figure 8.

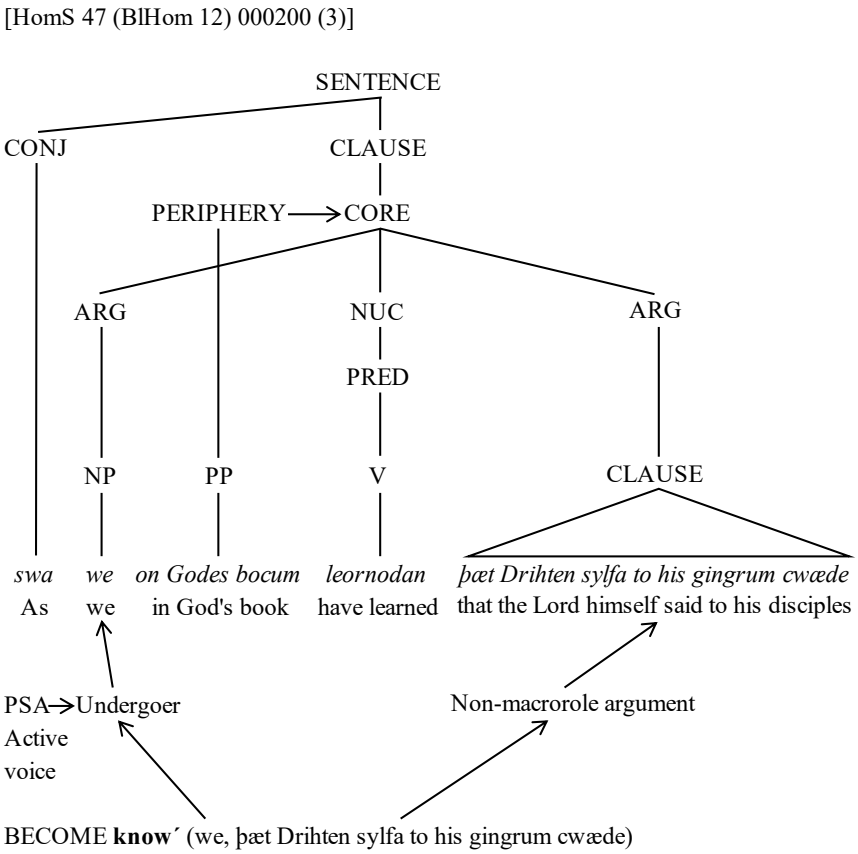


Figure 8. Tree diagram analysis of the Accomplishment in (6a).

However, in a similar way to verbs of teaching, Old English verbs of learning may depict causative states, that is to say, induced changes of state in which an initiator makes the Cognizer learn or get to know some content. The corresponding *Aktionsarten* in these states of affairs are also distinguished on the basis of the type of transferred content and the duration of the depicted events, thus matching Causative Accomplishments and Causative Achievements, whose logical structures are included in Figure 9.

[**do´** (x)] CAUSE [BECOME **know´** (y, z)]
[**do´** (x)] CAUSE [INGR **discover´** (y, z)]

Figure 9. The logical structures of Causative Accomplishments and Causative Achievements with verbs of learning.

Instances of Causative Accomplishments and Causative Achievements and their logical structures are presented in (7).[2]

[2] The whole fragment and translation of (7b) is as follows: [GDPref 2 (C) 001200 (96.8)] *& eac swylce ic hit gehyrde fram Ualentine, se manega gær wæs fore þam mynstre æt Latrane, & fram Simplicio, se wæs þrydde þe rihte æfter him Benedicte his gesomnunge, & eac ic hit gefrægn æt Honorate, se nu gyt todæge is fore þam ylcan mynstre, in þam se ylca wer wæs drohtniende.* 'And likewise, I heard it from Valentine, who was many years in charge of the monastery of Latrun, and from Simplicius, who was the third superior of the Benedictine order after him. And likewise, I learned it from Honoratus, who is now Abbot of the same monastery in which the same man was living' (own translation).

(7)

a. [ÆCHom I, 26 012600 (396.222)]

Ne leornode ic þas lare æt nanum eorðlicum men.
'I learned not this lore of any earthly man' (Thorpe, 1844, p. 379).
[do´ (*nanum eorðlicum menn*)] CAUSE [BECOME **know´** (*ic*, *þas lare*)]

b. [GDPref 2 (C) 001200 (96.8)]

& eac ic hit gefrægn æt Honorate.
'And likewise, I learned it from Honoratus' (own translation).
[do´ (*Honorate*)] CAUSE [INGR **discover´** (*ic*, *hit*)]

The tree diagram analyses of (7a) and (7b) are respectively shown in Figures 10 and 11.

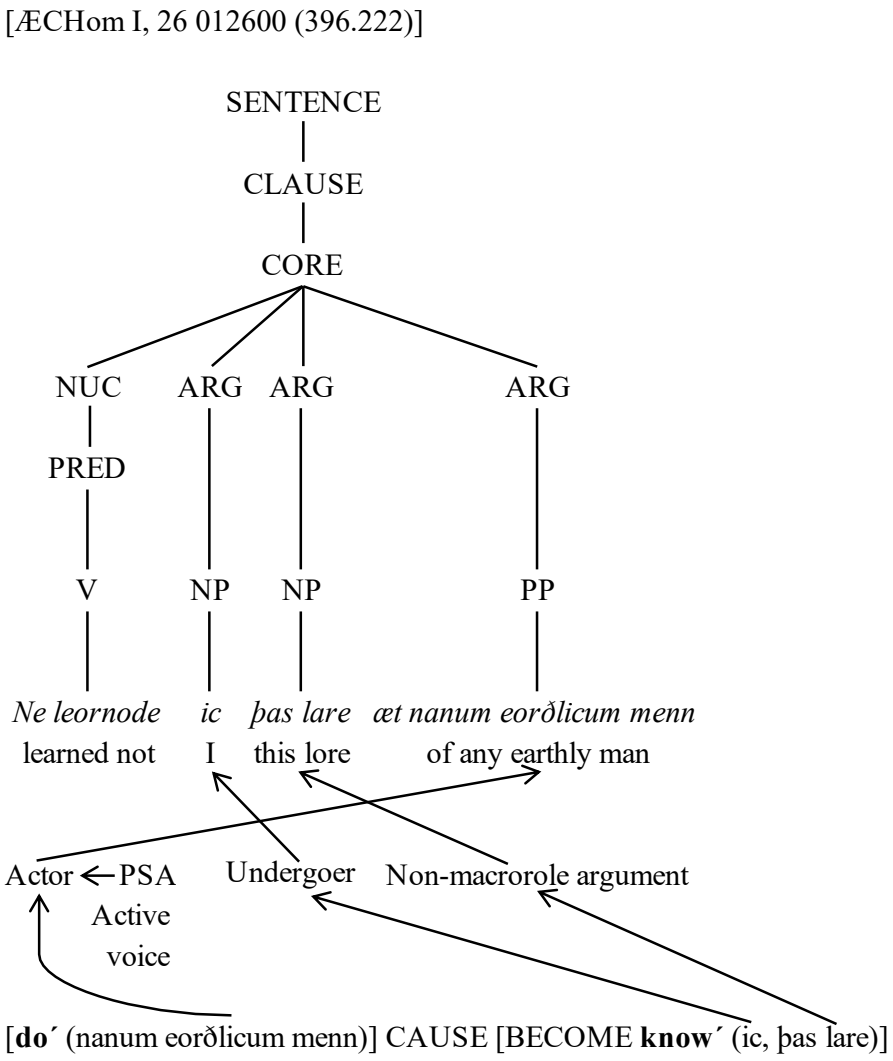


Figure 10. Tree diagram analysis of the Causative Accomplishment in (7a).

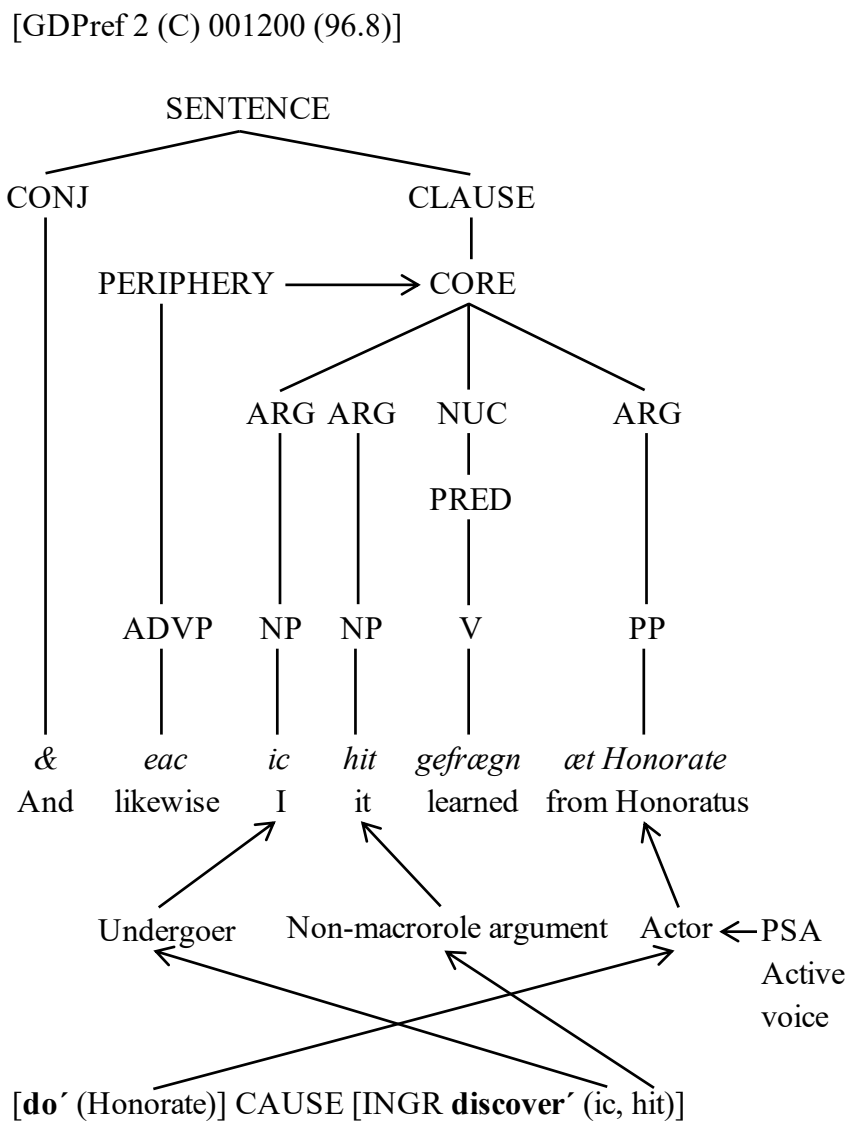


Figure 11. Tree diagram analysis of the Causative Achievement in (7b).

The thematic roles played by the arguments *x* and *y* in Accomplishments and Achievements, and by *y* and *z* in Causative Accomplishments and Causative Achievements are Cognizer and Content. Cognizers, most frequently human participants, as *he* 'he' in (8a) and (8c), *þa Romani* 'the Romans' in (8b), and *þæs ciningas þegnas* 'the king's thanes' in (8d), undergo a state of cognition through which they acquire some Content. As is explained in Section 4, Contents distinguish knowledge transfer, which implies large sets of data normally representing structured bodies of knowledge and a gradual learning process, as *godcundne wisdom* 'heavenly wisdom' in the Accomplishment of (8a) and *þa seofon crœftas* 'the seven parts of knowledge' in the Causative Accomplishment of (8c); from information transfer, which conveys small sets of data which do not constitute structured fields of

knowledge and a punctual change of state in which there is not a previous learning process involved, as *þæt* 'that' in the Achievement in (8b) and *þa unstilnessa* 'the disturbance' in the Causative Achievement in (8d).

(8)

a. [Or 1 022700 (5.23.31)]
& he sæde þæt he of þæm drycræfte geleornode godcundne wisdom.
'And he said that by magic he had learned heavenly wisdom' (Bosworth, 1857, pp. 267, 269).
BECOME **know´** (*he*, *godcundne wisdom*)

b. [ChronD (Cubbin) 001600 (60BC.11)]
Ða þæt onfundon þa Romani, þa noldon hig faran ofer þone ford.
'When the Romans found that, they would not pass over the ford' (Thorpe, 1861, p. 6).
INGR **discover´** (*þa Romani*, *þæt*)

c. [Mart 2.1 (Herzfeld-Kotzor) 014600 (No 28, B.2)]
þæt he æt þam leornode þa seofon cræftas.
'That he might learn from him the seven parts of knowledge' (Herzfeld, 1973, p. 213).
[**do´** (*þam*)] CAUSE [BECOME **know´** (*he*, *þa seofon cræftas*)]

d. [Æ HomM 14 (Ass 8) 004300 (138)]
and he hæfde ofaxod æt oðrum mannum ær, þæt he wæs Iudeisca.
'And he had found out from other men before, that he was Jewish' (own translation).
[**do´** (*oðrum mannum*)] CAUSE [INGR **discover´** (*he*, *þæt he wæs Iudeisca*)]

Additionally, the thematic role of the third semantic participant or initiator in Causative Accomplishments and Causative Achievements is Effector, which is represented by the argument *x*. Effectors are human participants almost exclusively, as *þam* 'him' in (8c) and *Alexandre* 'Alexander' in (9a) or at least animate, as *godes gast* 'the Spirit of God' in (9b). When initiators are not animate, the thematic role Effector cannot be licensed and, in its place, they play Source, as *lancsumere mynsteres drohtnunge* 'their long practice of the monastic life' in (9c) and *soþan* 'a truth' in (9d).

(9)

a. [Or 3 037200 (11.82.25)]
Þa wæs seo sibb & seo mildheortnes geendad þe hie æt Alexandre geleornedon.

‘Then that peace and mercy which they had learned from Alexander, were ended’ (Bosworth, 1857, p. 379).

[do´ (*Alexandre*)] CAUSE [BECOME **know´** (*hie*, *seo sibb & seo mildheortnes*)]

b. [ÆCHom II, 10 011600 (90.327)]

swa swa hi on life. ær geleornodon. þurh godes gast. mid godum willan.

‘As they in life had before been informed, through the Spirit of God, with good will’ (Thorpe, 1846, p. 153).

[do´ (*godes gast*)] CAUSE [INGR **discover´** (*hi*, Ø)]

c. [BenR 010900 (1.9.5)]

ac on lancsumere mynsteres drohtnunge geleorniað, þæt hie anstandonde mid Godes fultume þurh broðra getrymnesse ongean deofol.

‘Rather, they have learned through their long practice of the monastic life how they, standing alone, can fight against the devil’ (Riyeff, 2017, p. 38).

[be-from´ (*lancsumere mynsteres drohtnunge*)] [BECOME **know´** (*hie*, *þæt hie anstandonde mid Godes fultume þurh broðra getrymnesse ongean deofol*)]

d. [Æ LS (Cecilia) 006700 (230)]

swa swa we leornodon to soþan.

‘As we have learned of a truth’ (Skeat, 1966b, p. 369).

[be-from´ (*soþan*)] [INGR **discover´** (*we*, Ø)]

As far as macrorole assignment is concerned, Accomplishments and Achievements present macrorole transitivity 1. Thus, Cognizers get the macrorole Undergoer, as it is illustrated by *ic* ‘I’ in (10a) and *he* ‘he’ in (10b). On the other hand, the macrorole transitivity of Causative Accomplishments and Causative Achievements is 2. Accordingly, Effectors receive the macrorole Actor, as *Plegmunde minum ærcebiscepe* ‘Plegmund my archbishop’ in (10c) and *Pehthelme ðæm arwyrðan biscope* ‘the venerable bishop Pehthelm’ in (10d) while Cognizers get Undergoer, as *ic* ‘I’ in (10c) and *ic* ‘I’ in (10d).

(10)

a. [ÆColl 001000 (12)]

ac þeahhwæþere ic wolde betwenan leornian sprecan on ledengereorde.

‘But nevertheless, between-times I want to learn to speak the Latin language’ (Swanton, 1975, p. 108).

BECOME **know´** (*ic*, *sprecan on ledengereorde*)

b. [Bo 080300 (29.66.25)]

þa he þa onfunde þæt he dead bion <*sceolde*>.

'When, therefore, he found that he must die' (Fox, 1999, p. 57).
INGR **discover´** (*he*, *he dead bion sceolde*)

c. [CPLetWærf 002600 (58)]
swæ swæ ic hie geliornode æt Plegmunde minum ærcebiscepe.
'As I had learnt it from Plegmund my archbishop' (Sweet, 1871, p. 7).
[**do´** (*Plegmunde minum ærcebiscepe*)] CAUSE [BECOME **know´** (*ic*, *hie*)]

d. [Bede 5 035500 (14.442.6)]
Þis spell ic leornade fram Pehthelme ðæm arwyrðan biscope.
'I heard this story from the venerable bishop Pehthelm' (Miller, 1959b, p. 443).
[**do´** (*Pehthelme ðæm arwyrðan biscope*)] CAUSE [INGR **discover´** (*ic*, *Þis spell*)]

Finally, PSA is assigned to Undergoers in Accomplishments, as *hi* 'they (your priests)' in (11a); Achievements, as *landweard* 'the coast guard' in (11b); Causative Accomplishments and Causative Achievements, as *he* 'he' in (11c) and (11d).

(11)

a. [ChrodR 1 074600 (80.48)]
Nyd eac þine preostas þæt hi geornlice leornion and rædan halige gewrytu.
'Make also all your priests study zealously and read holy writings' (Langefeld, 1985, p. 387).
BECOME **know´** (*hi*, *halige gewrytu*)

b. [Beo 053200 (1890)]
Landweard onfand eftsið eorla, swa he ær dyde.
'The coast guard observed the return of the earls, just as before he had seen them' (Hostetter, 2015).
INGR **discover´** (*landweard*, *eftsið eorla*)

c. [Æ LS (Basil) 000200 (4)]
butan he wisdom ær ðam lange leornode æt gelæredum uðwytum.
'Unless he had learned wisdom for a long time beforehand of learned philosophers' (Skeat, 1966a, p. 51).
[**do´** (*gelæredum uðwytum*)] CAUSE [BECOME **know´** (*he*, *wisdom*)]

d. [ÆCHom II, 3 014800 (27.287)]
Is nu for ði micel neod gehwam þæt he leornige æt his lareowe hu he his cristendom healdan sceole. mid þam soðan geleafan.
'It is now, therefore, very needful to every one to learn of his teacher, how he shall hold his christianity with the true belief' (Thorpe, 1846, p. 53).

[do´ (*his lareowe*)] CAUSE [INGR **discover´** (*he, hu he his cristendom healdan sceole mid þam soðan geleafan*)]

As has been shown in this section, fine-grained semantic distinctions can be made on the basis of the typology of information transfer and knowledge transfer events and the associated Aktionsart types, thematic roles, as well as macrorole and PSA assignment. This syntax-semantics linking gives pride of place to semantic categories and functions, which are prioritized when it comes to explaining the constructions in which verbs of learning appear. A clear advantage of the syntax-semantics linking as presented in this section is that it allows to relate verbs of learning to verbs of teaching, which have been explained as giving rise to the same syntax-semantics linking. Another advantage is that the solution adopted in this section also relates derived predications to their corresponding basic predications. This question is addressed in Section 7, which provides additional evidence in favor of the applicability of the typology of information transfer and knowledge transfer events.

7. Derived predications with verbs of learning

As has been explained in Section 4, the causative changes of state conveyed by knowledge and information transfer events are restricted to predications with an animate or a human initiator which performs the thematic role Effector, inanimate initiators playing the thematic role Source. In this section, an additional source of causativity is considered, to wit, nominalizations from clauses that result in noun phrases that entail verbal predications. Such nominalizations allow us to assess the typology of knowledge and information transfer events as well as the syntax-semantics linking presented in Section 6. This is so because nominalizations that entail verbal predications constitute borderline cases between animate and inanimate initiators: from the formal point of view, inanimate initiators belong to the class of abstract nouns; from the functional point of view, inanimate initiators frequently preserve the syntax of the verbal counterpart and, therefore, keep an argumental position that is taken up by the initiator (most frequently the Effector), which is case-marked genitive. This section briefly reviews the treatment of deverbal derived predications in RRG and then deals with the Old English data.

RRG considers some prepositional phrases as derived from a unit of the clausal level. For instance, *The arrest of John by FBI agents in New York City* has a clausal correlate like *FBI agents arrested John in New York City* that can be attributed to a nominal such as *arrest* which is derived from a verb (Van Valin & LaPolla, 1997, p. 186), and, like the verbal basis of derivation, takes two semantic arguments (the 'arrester' and the 'arrestee'). In the case of *instructor*, the noun is morphologically related to the verb *to instruct*, whose lexical representation can be put down informally as *someone teaches someone else to do something*. In other words, while the causative status of *Laura learned how to swim butterfly style thanks to her instructor* is not explicit in the syntax, its semantics, as mapped on the formation of the derived nominal *instructor*, entails

a predication causing another predication: the change of state whereby *Laura learned how to swim butterfly style* was caused by the process through which *Laura´s instructor taught her how to swim butterfly style*.

In Old English, the noun phrase can entail a verbal predication too (Ojanguren López, 2019a, p. 254). In (12a), there is a nominalization of the verbal predication because *æhtan* is morphologically related to the strong verb base *āgan* 'to possess'. The same can be said of (12b), in which *weorces* derives from the weak verb *wyrcan* 'to work'; (12c), in which *rynes* is a derivative from the strong verb base *yrnan* 'to run'; and of (12d), in which *tintregena* is morphologically related to the weak verb *tintegrian* 'to torment'. According to Ojanguren López (2019a, p. 254), the constituent inflected for the genitive case in these examples gets the macrorole Actor.

(12) (from Ojanguren López, 2019a, pp. 254-255)

a. [LS 8 (Eust) 38]

Placidas ða lange stod, and beheold þone heort, and wundrode his micelnysse, and ablan his æhtan.

'Then Placidas stood long and beheld the hart, and wondered at its size, and ceased his pursuit.'

b. [LS 17.1 (MartinMor) 277]

Þa wæs he dagas wel manige mid þære feforadle swiþe gestanden, ah he þeah næfre Godes weorces ne ablon.

'He was afflicted by a fever for many days, yet he never ceased from God's work.'

c. [ÆLS (Martin) 1060]

Ða ofhreow þam halgan þæs haran frecednyss, and þam hundum bebead þæt hi ablunnon þæs rynes.

'Then the saint rued the hare's peril, and commanded the hounds to desist from running.'

d. [ÆCHom I, 29 428.274]

Witodlice Decius egeslice awedde & binnon þrim dagum mid feondlicere stemne singallice hrymde: ic halsie þe Laurentius. Ablin hwæthwega þæra tintregena.

'But Decius became horribly frantic, and for three days, with fiendlike voice, constantly cried "I beseech thee, Lawrence, cease somewhat of those torments".'

Leaving morphological case aside, both in Old English and in Present-Day English, some oblique constituents (governed by preposition in Present-Day English instances like *the arrest of John*; and marked by the oblique case genitive in Old English, in instances such

as *his æhtan* 'of his pursuit') can be related to a direct constituent in a clausal counterpart that, moreover, receives semantic macrorole. As it turns out, deverbal nominalizations resulting in noun phrases that entail a verbal predication can also help to distinguish between causative and non-causative changes of state. Before dealing with this aspect, the question of prepositional government is addressed.

The noun phrases headed by deverbal nominals are, as a general rule, governed by a preposition. The preposition *þurh* 'through' is chosen in a vast majority of the cases, as can be seen in (13).

(13)

[BedePref 001800 (4.21)]

& þæt on Lindese geworden wæs ymbe Cristes geleafan, þurh gesegene ðæs arwurðan biscopes Cynebyrhtes [...] we geleornodon.

'The progress of Christ's faith in Lindsey we have learnt from the statements of the venerable bishop Cyneberht' (Miller, 1959a, p. 5).

It is worth mentioning, in this respect, that *þurh* also governs the demoted Actor of passives, as is illustrated in (14). This might be an additional link of nominalizations with the corresponding verbal expressions.

(14)

[Mart 5 (Kotzor) 061200 (Ju 22, B.3)]

Ðurh *sumne preost he wæs gelæred to godes geleafan.*

'By a priest he was instructed in the faith of God' (Herzfeld, 1973, p. 101).

The noun phrases headed by deverbal nominals show a remarkable degree of variation as regards prepositional government. On the one hand, the noun phrases headed by deverbal nominals are not governed by preposition in some instances. In the absence of a preposition, they are inflected for the dative, as is the case with *monungum* 'admonitions' in (15).

(15)

[Bede 4 027500 (14.296.32)]

Þa wæs se Godes mon bebyrged in Sancte Paules cirican þæs apostoles, þæs monungum he gelæred wæs & geleornade, þæt he ða heofonlecan eadignesse gehyhte.

'Then the man of God was buried in the church of the apostle St. Paul, by whose admonitions he had been taught and instructed to hope for heavenly bliss' (Miller, 1959b, p. 297).

On the other hand, a variety of prepositions can govern the noun case-marked dative, including *fram*, as in (16a), *æt*, as in (16b), and *of*, as in (16c).

(16)

a. [LS 10.1 (Guth) 001400 (0.44)]

Þas þingc, þe ic her onwrite, ic geleornode fram gesegenum þæs arwyrðan abbodes Wilfrides.

'The things which I here write, I learned from the relation of the venerable abbot Wilfrid' (Goodwin, 1848, p. 7).

b. [GDPref 1 (H) 004300 (9.18)]

Ic geleornode æt gesægene swiðe arwurðra witena þæt þæt ic secge.

'I learned from the conversation of very honourable wise men that which I say now' (own translation).

c. [Æ LS (Mark) 004200 (147)]

ac he leornode swaðeah of Petres bodunge hu he ða boc gesette.

'But he learned, nevertheless, from Peter's preaching, how he should write the book' (Skeat, 1966a, p. 331).

Deverbal nominalizations with Old English verbs of learning can make reference to information transfer events, as in (17a) and (17b), and to knowledge transfer events, as is the case with (17c) and (17d).

(17)

a. [ChronE (Irvine) 039100 (755.15)]

& þa on ðęs wifes gebœron onfundon þæs ciningas þegnas þa unstilnessa.

'And when from the woman's cries the king's thanes became aware of the disturbance' (Garmonsway, 1975, p. 48).

b. [Bede 3 060400 (19.244.8)]

Forðon he þurh gesyhð geleornade, ge hwæs he God bœd & to him wilnade, & þæt þe his bene gehyrede wœron.

'For by a vision he had learnt, both what he prayed God and desired, and that his prayers were heard' (Miller, 1959b, p. 245).

c. [ChronF (Baker) 016700 (694.16)]

of uran ealdran fœderan gesetnesse ic habbe ðœt geleornod ðœt nan lœwede man nah mid rihte to stingan hine a nanre cirican na a nan ðara ðingan ðe to cyrcan belimpð.

'I [...] have learned from the institutes of our forefathers, that no layman has a right to possess himself of a church, nor of any of the things which belong to a church' (Giles, 1914, p. 30).

d. [El 006600 (153)]
þa þe snyttro cræft Þurh fyrngewrito gefrigen hæfdon.
'Those who had acquired a knowledge of wisdom from ancient writings' (Bradley, 1982, p. 169).

Examples (17a) and (17c) can be described as causative because the semantic initiator (*ðęs wifes* 'of the woman' in (17a) and *uran ealdran fæderan* 'of our forefathers' in (17c)) plays the role of Effector in the basic predication. This can be seen in the tree diagrams in Figures 12 and 13.

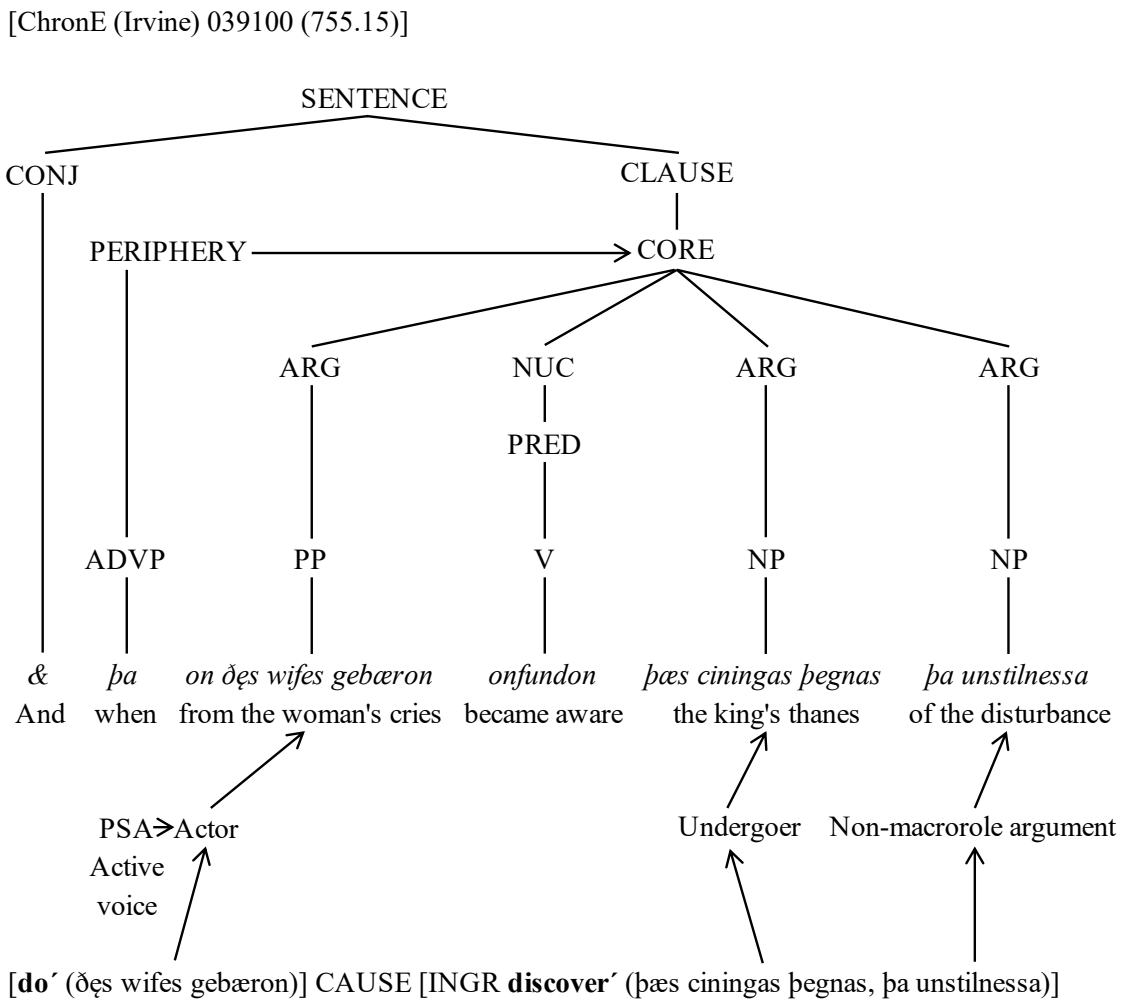


Figure 12. Tree diagram analysis of the Causative Achievement in (17a).

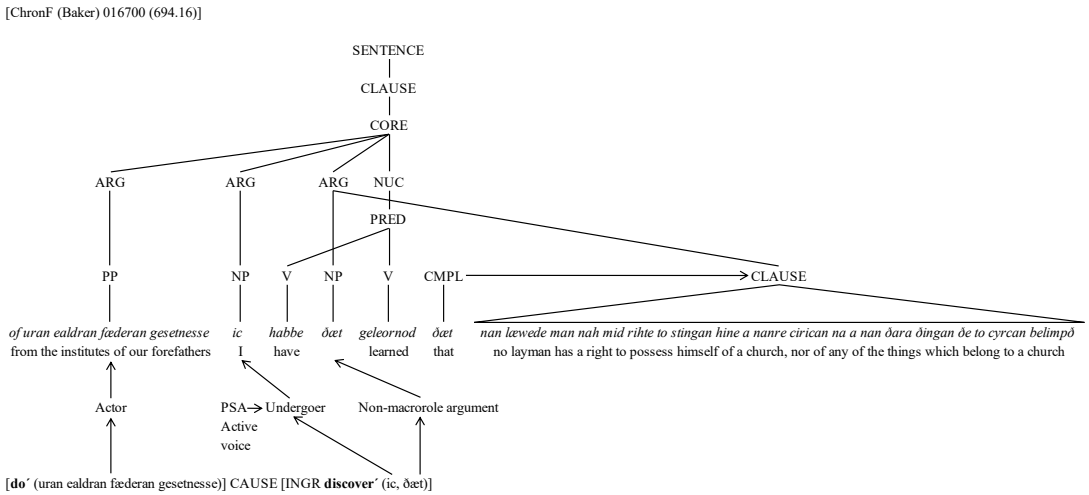


Figure 13. Tree diagram analysis of the Causative Achievement in (17c).

In the nominalization, the Effector is realized as an oblique argument that is case-marked genitive. Examples (17b) and (17d), in contradistinction, do not realize an animate semantic initiator and, consequently, the deverbal noun is governed by a preposition, in such a way that the prepositional phrase that plays the thematic role Source belongs in the Periphery of the Clause. The nominalization with the genitive, therefore, gives rise to less oblique syntax than the peripheral Source. The tree diagrams corresponding to examples (17b) and (17d) are shown in Figures 14 and 15.

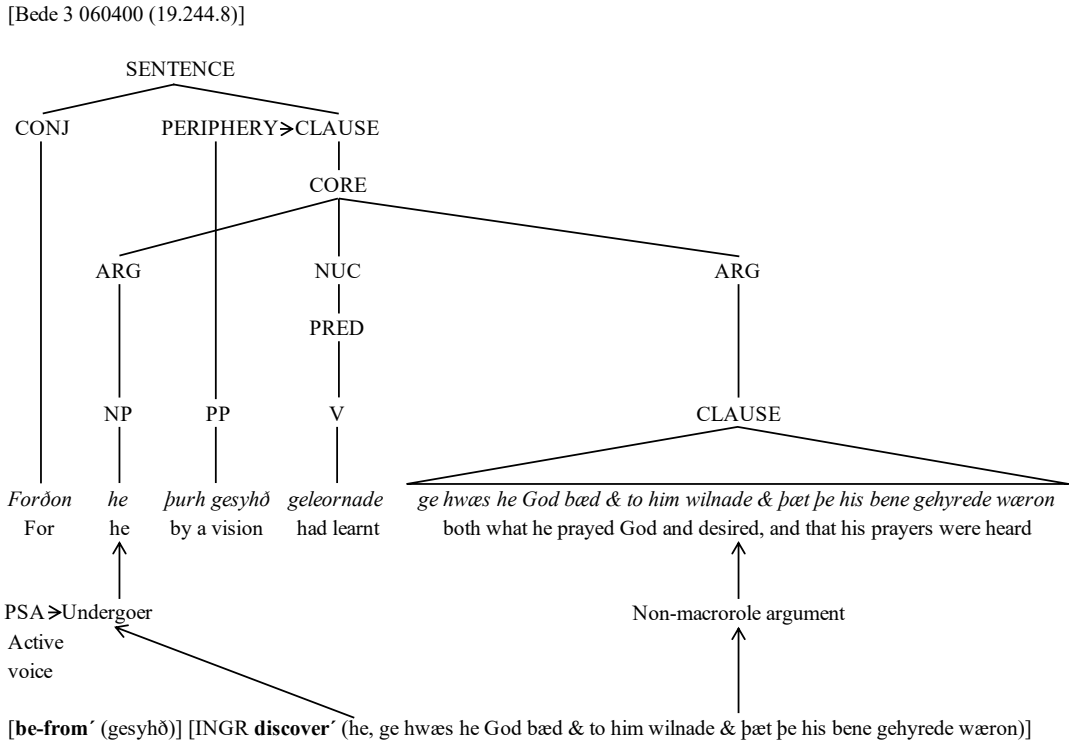


Figure 14. Tree diagram analysis of the Causative Achievement in (17b).

[El 006600 (153)]

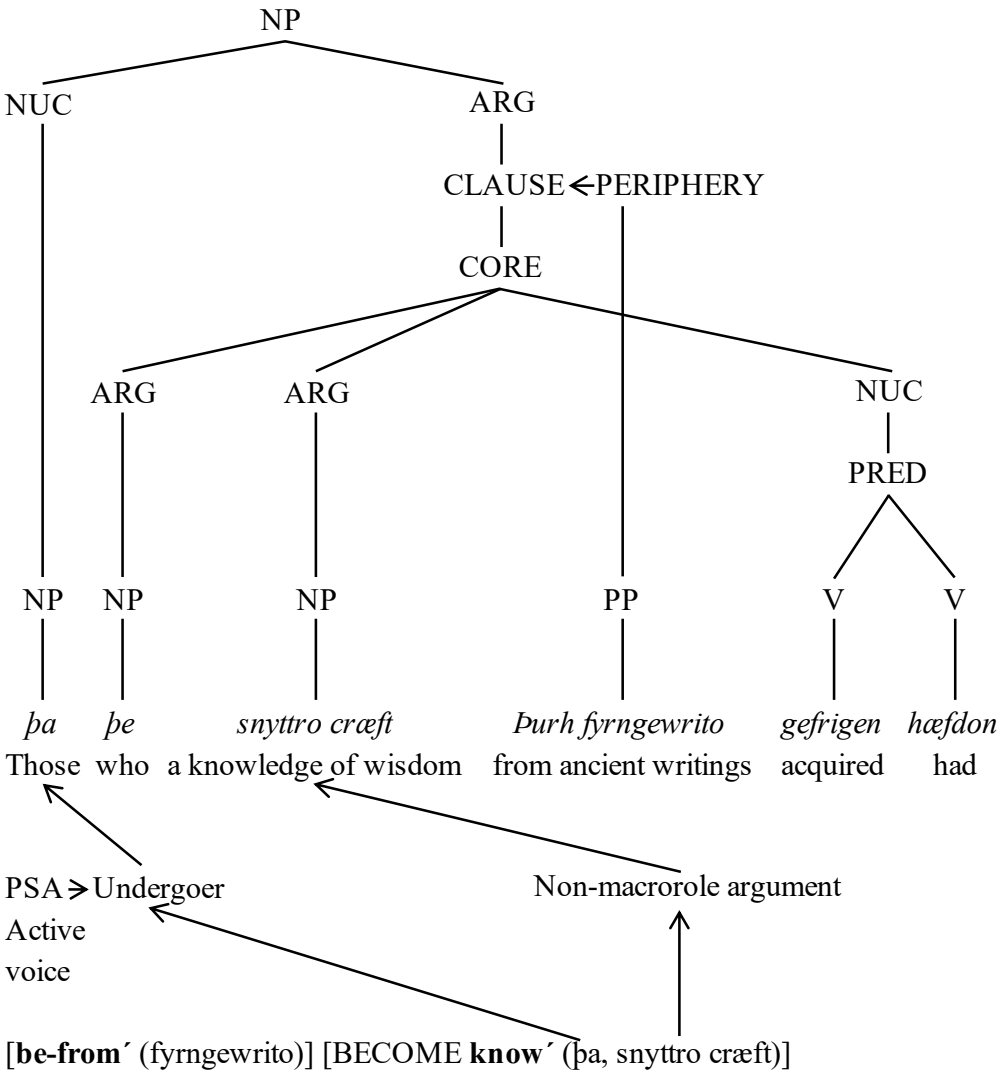


Figure 15. Tree diagram analysis of the Causative Achievement in (17d).

If we consider the evidence gathered in this section, it is the case that the typology of knowledge and information transfer events as well as the syntax-semantics linking presented in Section 6 can be successfully applied to deverbal nominalizations that keep argumental positions that are filled up by a noun phrase inflected for the genitive. Conversely, the coding of the third participant in the knowledge or information transfer event as an argumental Effector or as a peripheral Source draws a well-motivated distinction between causative and non-causative logical structures, independently of the fact that it applies to a basic or to a derived predication.

8. Conclusions

Fine-grained semantic analysis has often been considered as a hindrance to computation. This article has shown that in the specific area of Old English verbs of learning it is possible to make syntactic generalizations on the basis of internal verbal aspect, thematic role licensing, semantic macrorole transitivity, and PSA assignment. Such generalizations include the licensing of the Effector in the Core of the causative version of an Achievement or an Accomplishment and the Source in the Periphery of the non-causative version of these *Aktionsarten*, both with Old English verbs of learning. Furthermore, the oblique argument of a deverbal nominal that is case-marked genitive gets the macrorole Actor in the derived predication. And last, but not least, this analysis allows for a similar analysis of verbs of teaching and learning. The solution proposed in this article has a theoretical cost, too. It is necessary to draw additional semantic distinctions, such as between animate and inanimate initiators in knowledge or information transfer events; and to accept oblique macroroles in derived predications. These aspects will deserve further attention in future research.

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Appendix

The following include the verbs selected for this study; the number of inflectional forms (tokens) of each of the verbs (types) is given between brackets.

(ge)cneordlǣcan (16): *cneorðlæcendum* (1), *gecneordlæcan* (1), *gecneordlæcaþ* (2), *gecneordlæce* (4), *gecneordlæcen* (1), *gecneordlæcende* (1), *gecneordlæcon* (1), *gecneordlæhte* (1), *gecnyrdlæcað* (1), *gecnyrdlæce* (3).

gefrāgian (1): gefragade (1).

(ge)fricgan (19): *frige* (5), *gefrægen* (7), *gefregen* (2), *gefrigen* (5).

(ge)frignan (50): *fregnan* (1), *fregnanne* (1), *frin* (3), *frinan* (1), *gefrægn* (27), *gefran* (2), *gefregn* (1), *gefrugnen* (3), *gefrugnon* (1), *gefrunan* (2), *gefrunen* (3), *gefrunon* (5).

(ge)leornian (482): *geleornad* (5), *geleornade* (21), *geleornað* (3), *geleornedon* (5), *geleornian* (28), *geleornianne* (1), *geleorniað* (1), *geleornie* (1), *geleornigan* (1), *geleornige* (17), *geleornigen* (3), *geleornion* (1), *geleornod* (10), *geleornode* (44), *geleornodest* (1), *geleornodon* (20), *geliorned* (1), *geliornod* (3), *geliornode* (2), *geliornodon* (2), *leornade* (16), *leornað* (6), *leornde* (1), *leornedon* (9), *leornedost* (1), *leornege* (1), *leornendum* (1), *leorneodes* (1), *leorniæn* (2), *leornian* (57), *leornianne* (2), *leorniað* (36), *leorniaþ* (11), *leornie* (1), *leornienne* (5), *leornigan* (1), *leornigað* (2), *leornige* (41), *leornigeað* (1), *leornigeaþ* (1), *leornigen* (6), *leornigeð* (2), *leornion* (7), *leornod* (4), *leornodan* (3), *leornode* (58), *leornodes* (1), *leornodest* (6), *leornodon* (21), *leornudan* (1), *liorna* (2), *liornode* (2), *liornodest* (1), *liornodon* (2).

ofācsian (33): *ofacsian* (1), *ofahsade* (1), *ofahsian* (1), *ofahsode* (1), *ofaxade* (1), *ofaxian* (11), *ofaxie* (2), *ofaxod* (2), *ofaxode* (12), *ofaxxie* (1).

onfindan (114): *anfindan* (1), *anfunde* (8), *onfand* (18), *onfindað* (2), *onfindan* (1), *onfindaþ* (1), *onfinde* (6), *onfindeð* (3), *onfinden* (3), *onfindende* (3), *onfindest* (1), *onfindeþ* (1), *onfond* (4), *onfunde* (20), *onfunden* (20), *onfundene* (2), *onfundon* (20).

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Anotación de errores gramaticales en el corpus de aprendices de español COWS-L2H

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Resumen: Los corpus de aprendices de español han despertado un creciente interés en los últimos años dada su diversidad de aplicaciones en el ámbito de la adquisición de la segunda lengua, así como en su didáctica. Dentro de los estudios metodológicos sobre la creación y el uso de corpus, uno de los aspectos menos estudiados es la anotación manual de los errores, un proceso que implica un elevado coste humano y temporal, pero que incrementa exponencialmente las posibilidades de explotación del corpus. El objetivo principal de este trabajo es presentar el diseño, el desarrollo y las pruebas de fiabilidad del etiquetado de errores gramaticales del corpus COWS-L2H y, como parte de sus aplicaciones, mostrar uno de sus usos más relevantes, el análisis de la interlengua de los aprendices a través la observación del etiquetado en una selección de textos de naturaleza pseudolongitudinal en relación con cinco fenómenos morfosintácticos propios del sintagma nominal (flexión de género y de número, uso del artículo y del pronombre personal de sujeto, y colocación del adjetivo). Los resultados no solo aportan datos sobre la progresión de los errores analizados, sino que, además, contribuyen al desarrollo metodológico de los sistemas de anotación y análisis de errores en corpus de aprendices.

Palabras clave: *corpus de aprendices de español, anotación de errores, fiabilidad, adquisición de la segunda lengua, gramática, ELE.*

Annotation of Grammatical Errors in the COWS-L2H Spanish Learner Corpus

Abstract: Spanish learner corpora have attracted increasing interest in recent years due to their diversity of applications in the field of second language acquisition, as well as in foreign language teaching. Within the methodological studies on the creation and use of corpora, one of the least explored aspects is the manual annotation of errors, a process that involves high human and time costs, but exponentially increases the possibilities of corpus exploitation. The main aim of this paper is to present the design, development and reliability tests of the grammatical error tagging in the COWS-L2H corpus and to show one of its most relevant applications, analyzing the learners' interlanguage through the analysis of the errors tags in a selection of pseudolongitudinal texts related to five morphosyntactic phenomena concerning the noun phrase (gender and number inflection, use of the article and the subject personal pronoun, and adjective placement). The results not only provide data on the progression of the errors analyzed, but also contribute to the methodological development of annotation systems and error analysis in learner corpora.

Keywords: *learner corpora, error annotation, reliability, grammar, second language acquisition, SFL.*

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1. Introducción

Los corpus de aprendices son colecciones electrónicas de textos escritos u orales producidos por estudiantes de la lengua de diferentes niveles y nacionalidades, y compilados de acuerdo con unos criterios de diseño explícitos (Granger, 2009; Granger *et al.*, 2015; Sánchez Rufat, 2015; Ferreira *et al.*, 2022). Suelen contar con una interfaz de recuperación del material más o menos completa, donde se pueden seleccionar los textos en función de las características socioculturales de los aprendientes, de forma que sirven como recurso para investigadores, profesores, diseñadores de materiales didácticos o estudiantes. En su elaboración y aprovechamiento confluyen diferentes ámbitos científicos (como la lingüística de corpus, la lingüística teórica, el procesamiento del lenguaje natural, la adquisición de segundas lenguas o la enseñanza de lenguas extranjeras), por lo que sus aplicaciones son igualmente interdisciplinares.

Dentro de las últimas disciplinas citadas, las posibilidades de uso de los corpus de aprendices han sido descritas extensamente en diferentes trabajos (Castello *et al.*, 2015; Palacios *et al.*, 2019; Le Bruyn y Paquot, 2020; Sánchez-Gutiérrez *et al.*, 2022). En ellos se presenta un amplio abanico de funcionalidades, desde enfoques centrados en el análisis y la descripción de la interlengua de los aprendices, el desarrollo de los procesos de aprendizaje o el contraste con el desempeño de hablantes nativos, hasta propuestas pedagógicas consistentes en el diseño de materiales didácticos o en la incorporación de los corpus a las hojas de ruta curriculares, a los procesos de evaluación o a la formación del profesorado. Aunque los primeros corpus de aprendices se desarrollaron en el ámbito del inglés como segunda lengua (Granger, 1998; Granger *et al.*, 2002), en las últimas décadas han experimentado un gran crecimiento en el ámbito del español como lengua extranjera (Alonso Ramos, 2016; Parodi *et al.*, 2022; Sánchez-Gutiérrez *et al.*, 2022).

Este trabajo se centra en el corpus de aprendices COWS-L2H (*Corpus of Written Spanish of L2 and Heritage Speakers*), desarrollado en la Universidad de California Davis, EE. UU. (UC Davis). Se trata de una recopilación de textos escritos por hablantes de español como segunda lengua y hablantes de herencia que combina datos longitudinales (evolución de un mismo estudiante a lo largo de su aprendizaje de español en los sucesivos cursos recibidos en la universidad) y pseudolongitudinales o transversales (datos de grupos de estudiantes de diferentes niveles), y que incorpora anotaciones de errores gramaticales a partir de una taxonomía previamente establecida (Yamada *et al.*, 2020, Sánchez-Gutiérrez *et al.*, 2024).

La lingüística de corpus recurre habitualmente a procedimientos informáticos para recopilar, estructurar y anotar los textos de los corpus, lo que permite poner a disposición de los investigadores grandes conjuntos de datos con los que se puede trabajar de manera automática. No obstante, en el tratamiento de los corpus de aprendices hay determinadas tareas que todavía no se han conseguido automatizar completamente, entre ellas, la detección y clasificación de los errores (Díaz Negrillo y Fernández Domínguez, 2006; Calero *et al.*, 2020). Así, si bien el etiquetado de las categorías gramaticales o funciones sintácticas básicas sí se realiza por medios automáticos (Van Rooy, 2015), la anotación manual de los errores sigue siendo el procedimiento más habitual, lo que implica la existencia de un equipo

humano que toma decisiones sobre cuáles son los errores, las taxonomías de desviaciones identificadas y los objetivos científicos del etiquetado (Lüdeling y Hirschmann, 2015, Díez-Bedmar, 2015 y 2021). Se trata de un proceso complejo, que requiere un amplio equipo de profesionales bilingües y que supone un gasto económico y temporal muy elevado, por lo que la mayor parte de los corpus de aprendices de español no incorporan anotaciones de errores y, si lo hacen, suelen ser conjuntos de textos menores y focalizados en fenómenos concretos (Rojo *et al.*, 2022).

En la primera parte del artículo se contextualiza el corpus que nos ocupa junto a los corpus más relevantes en el ámbito hispánico y se incluye un estado de la cuestión sobre los estudios dedicados a la corrección y anotación de los materiales (apartados 2.1 y 2.2). A continuación, presentamos el proceso de anotación de errores gramaticales llevado a cabo por el equipo de la Universidad de Salamanca (USAL) durante los años 2020-2023 para el corpus COWS-L2H en relación con las dos primeras fases descritas en Díez Bedmar (2015, 2021): preliminares, localización y corrección de errores, anotación y pilotaje para comprobar la fiabilidad del etiquetado (apartado 3). Por último, proporcionamos un primer análisis centrado en errores morfosintácticos propios del sintagma nominal como una aproximación a las posibilidades que ofrece COWS-L2H en el estudio de la interlengua, asumiendo que los errores son reflejo de esta gramática interna del aprendiz (Selinker, 1972).

2. Marco teórico

2.1. Los corpus de aprendices en español: el caso del COWS-L2H

En el contexto de la lingüística de corpus en un sentido amplio y, en concreto, dentro de la elaboración de herramientas que permitan el acceso a extensos conjuntos de textos etiquetados con información lingüística, los corpus de aprendices tienen un desarrollo relativamente reciente (Sánchez Rufat, 2015). Surgidos a finales de los años 80 y principios de los 90, los corpus de aprendices de inglés como segunda lengua constituyeron el primer eslabón dentro de la lingüística de corpus de lenguas distintas a las nativas (Granger, 1998; Granger *et al.*, 2002), pero pronto comenzaron a crearse en otros idiomas (véase la amplitud de los corpus de aprendices indexados en la herramienta Learner corpora around the world de la Universidad Católica de Lovaina). Ha sido solo en las dos últimas décadas cuando los corpus de aprendices de español han comenzado a emerger en diferentes contextos, si bien la desproporción con los de inglés sigue siendo notoria: de los 137 corpus de aprendices recogidos en Learner corpora around the world, los de español representan solo el 8 % frente al 60 % de corpus en inglés (Sánchez-Gutiérrez *et al.*, 2022).

Los corpus de aprendices de español disponibles se caracterizan por una gran heterogeneidad. Para su descripción, tomaremos como punto de partida la tipología de los textos recogidos (orales y escritos), las lenguas nativas de los estudiantes y los procesos de etiquetado, en el caso de que los posean. Para identificar los corpus, recomendamos

consultar el Indexador de Corpus de Aprendices de Español de la Universidad Complutense de Madrid (ICAE) (Díaz Sánchez *et al.*, s.f.) y, para una revisión más exhaustiva, véase Rojo *et al.* (2022).

Sin duda, uno de los hitos más relevantes en el avance de los corpus de aprendices de español es la propuesta y elaboración del CAES (Corpus de aprendices de español como lengua extranjera), un proyecto promovido por el Instituto Cervantes y desarrollado por la Universidad de Santiago de Compostela. En su versión 2.1 de marzo de 2022, se compone de 6561 textos escritos por 2544 aprendices de 11 lenguas maternas y de distintos niveles de competencia (desde A1 hasta C1). Las tareas producidas por los aprendices se anotan morfosintácticamente de forma automática y a continuación se desambiguan manualmente.

Otra de las compilaciones más amplias es el Corpus Escrito del Español como L2 (CEDEL2), recogido en la Universidad de Granada (Lozano, 2022) y compuesto por más de un millón de palabras en su versión 2.0 de septiembre de 2020. CEDEL2 incorpora las producciones escritas y orales de aprendices de once lenguas maternas y distintos niveles de competencia, así como datos de hablantes nativos de diferentes orígenes a fin de posibilitar análisis contrastivos. Como el CAES, CEDEL2 posee etiquetas relativas a las clases de palabras en el subcorpus de aprendices de español, el subcorpus de nativos de español y el de nativos de inglés. En este caso, las categorías gramaticales se anotan automáticamente mediante el etiquetador Freeling sin un proceso de desambiguación posterior. Incluye también textos escritos y orales el corpus LANGSNAP, integrado por dos subcorpus paralelos de 56 anglófonos aprendices de español y de francés en contexto de inmersión, con un diseño longitudinal muy extenso. En la misma línea, el Corpus de Aprendices Taiwaneses de Español (CATE) en su versión 2.0 integra dos subcorpus: el Corpus Escrito de Aprendices de Español (CEATE, 2005-2011) y el Corpus Oral de Aprendices de Español (COATE, 2013-2017).

Dentro de los corpus escritos, en la universidad de Alcalá se compiló el Corpus para el Análisis de Errores de Aprendices de E/LE, el CORANE (Cestero y Penadés, 2009), de naturaleza longitudinal y con un total de 1091 composiciones elaboradas por 321 aprendices de más de veinte lenguas maternas diferentes y de niveles de competencia elemental, intermedio, avanzado y superior. Integrado también por composiciones escritas de estudiantes de distintas lenguas maternas, se encuentra el Corpus de Aprendientes de Español como Lengua Extranjera (CAELE). Este corpus de corte longitudinal se compone de 1217 textos producidos por 201 estudiantes de intercambio de nivel A2 y B1, en el contexto universitario chileno (Ferreira *et al.*, 2022). CAELE incluye anotación de errores, en un primer momento, basada en una taxonomía que contemplaba errores léxicos, gramaticales y ortográficos de distintos tipos (Ferreira y Elejalde, 2017) y que posteriormente se actualizó con un criterio etiológico (Ferreira y Elejalde, 2020, Ferreira *et al.*, 2022). Con una denominación similar, pero sin relación directa, el Corpus de Aprendientes de Español como Lengua Extranjera y Segunda Lengua (CÁELE/2) es un proyecto del Instituto Caro y Cuervo que se propone “diseñar, recopilar, sistematizar y construir un corpus escrito y

oral de muestras de aprendientes de español, extranjeros, sordos e indígenas en Colombia" (Hincapié, 2018). Para terminar este grupo, a partir de los textos producidos para la obtención de los Diplomas de Español como Lengua Extranjera (DELE) de nivel B2, se desarrolló en la Universidad de Salamanca el corpus ESPALEX (Bustos Gisbert y Sánchez Iglesias, 2011), con más de dos millones de palabras y la participación de 6288 informantes de 85 países diferentes.

En cuanto a los corpus escritos que solo poseen registros de aprendices de una lengua materna destacan el Corpus de ELE en Japón, CELEN (Valverde, 2020), compuesto en su versión 1.2 de abril de 2023 por 6196 textos escritos por 1035 aprendices japoneses; el CINEAS, Corpus de Interlengua Española de Aprendices Sinohablantes, coordinado desde la Universidad de Lleida, con un total de 4339 tareas producidas por estudiantes de español de origen chino con distintos niveles de competencia (desde A1 hasta C1) en contexto de inmersión y de no inmersión (Calero *et al.*, 2020); el Aprescrilov I y II (Aprender a Escribir en Lovaina), con datos transversales (Aprescrilov I) y longitudinales (Aprescrilov II) de aprendientes de español como L3 de nivel universitario (Buyse et al., 2016); el Corpus del español de los italianos (CORESPI y Bailini, 2018), con 474 textos y más de 120 000 palabras; el SAELE, el Corpus de Aprendientes Suecos de ELE (Pino Rodríguez, 2012), integrado por textos argumentativos de aprendientes de nivel A2-B1, o The Tartu Learner Corpus of Spanish as a L3+, con 885000 palabras de muestras de escritura académica de estudiantes estonios.

Por otro lado, entre los corpus que recogen textos orales de estudiantes de diferentes nacionalidades destacan el Corpus Oral de Español como Lengua Extranjera (CORELE), que compila las producciones de 40 aprendices de niveles A2 y B1 de los cursos de español de la Universidad Autónoma de Madrid y de la Universidad Complutense de Madrid; y el Corpus Fono.ele, centrado en el desarrollo del componente fónico y compuesto por muestras de habla de aprendientes de español de niveles A2, B1, B2 y C1 de seis nacionalidades distintas (Blanco Canales, 2011).

Finalmente, de los corpus orales centrados en aprendientes de español de la misma lengua materna, cabe señalar el Spanish Learner Language Oral Corpus (SPLLOC 1 y 2), con muestras de 120 participantes británicos de distintos niveles, además de un subcorpus adicional de hablantes nativos; el SPT (Spanish corpus Proficiency level Training), que proporciona 327 grabaciones de 38 informantes angloparlantes con diferentes niveles de español, entre los que se incluyen 17 hablantes de herencia (Koike y Witte, 2016); el Spanish in Texas Corpus, que ofrece entrevistas y conversaciones de 97 hablantes bilingües inglés-español que viven en Texas tanto en archivos de vídeo como de audio, además de textos con las transcripciones completas y anotaciones referidas a las clases de palabras (Bullock y Toribio, 2013); el Corpus Oral de Interlengua Español-Italiano (CORINÉI), en el que estudiantes de italiano llevan a cabo interacciones orales entre pares con nativos (Chiapello y González Royo, 2020), o el corpus COPINE, Corpus Oral de Peticiones en Interacciones

Naturalizadas en Español (Marsily, 2022), con 120 participantes, 60 estudiantes de ELE de origen belga con el francés como lengua materna y 60 hablantes nativos de español de España.

En este contexto descrito, se integra el Corpus of Written Spanish of L2 and Heritage Speakers (COWS-L2H), que reúne una extensa colección de composiciones escritas por estudiantes de español de la UC Davis. Con 5383 textos, este corpus proporciona datos transversales y longitudinales de aprendices de español como lengua extranjera, así como de hablantes de herencia, lo que supone un elemento diferenciador con respecto a la mayoría de los corpus disponibles.

La recogida de datos se inició en 2017 y se llevó a cabo en todos los cursos de español que se ofrecen en UC Davis, tanto del programa de español para extranjeros como del específico para hablantes de herencia. El hecho de que los datos se recopilen en una sola institución permite trabajar con una muestra homogénea en cuanto al contexto de aprendizaje. Dado que todos siguen el mismo programa de español, comparten objetivos, contenidos, metodología y materiales didácticos, lo que supone una ventaja a la hora de analizar el desarrollo de la interlengua y posibilita análisis relativos al impacto de tales factores institucionales en el desarrollo de la competencia escrita (Yamada *et al.* 2020). Cada trimestre se pide a los estudiantes que elaboren dos redacciones y se les ofrece un crédito extra por su participación. Por tanto, un alumno que completa todo el programa (obligatorio para los que cursan el grado en español) puede aportar al corpus un total de 14 textos, o bien de 6 en el caso de los hablantes de herencia, de forma que, además de datos transversales, se obtienen datos longitudinales, lo que supone un nuevo elemento diferenciador de COWS-L2H (Sánchez-Gutiérrez y Fernández Mira, 2022).

Hasta la fecha, las redacciones solicitadas se corresponden con los siguientes temas: “Una persona famosa”, “Unas vacaciones perfectas”, “Una persona especial en tu vida”, “Una historia terrible”, “Tú mismo”, “Una experiencia bonita”, “Chaplin” y “Un lugar que te disguste” (Yamada *et al.*, 2020). Todos estos temas cuentan con textos anotados de acuerdo con una taxonomía de errores gramaticales previamente definida (véase 3) y se han proporcionado versiones corregidas que, junto con las originales, se han empleado para entrenar sistemas de procesamiento del lenguaje natural para la corrección de errores gramaticales (Davidson *et al.*, 2020).

En cuanto a su disponibilidad, COWS-L2H se encuentra alojado en un repositorio de GitHub bajo licencia Creative Commons, a plena disposición de la comunidad investigadora. En este sentido, entre los trabajos que ya han hecho uso de los datos del corpus, se distinguen al menos tres líneas: investigaciones en procesamiento del lenguaje natural (PLN), en adquisición de la L2 y en didáctica de la lengua (véase Lozano y Fernández Mira (2022) para una propuesta de los tipos de investigaciones que posibilita el corpus en relación con las decisiones que subyacen a su diseño).

En la primera línea de investigación encontramos el trabajo ya citado de Davidson *et al.* (2020), así como el de Miaschi *et al.* (2020), en el que se emplean datos longitudinales de COWS-L2H para extraer los rasgos lingüísticos que caracterizan la escritura de los estudiantes en los distintos niveles de competencia y desarrollar un sistema automático de clasificación, además de explorar la relación entre los rasgos más predictivos y el plan de estudios seguido por los alumnos.

Dentro de los estudios de adquisición se situaría el de Fernández Mira *et al.* (2021), que analiza la influencia del tema de la redacción en las puntuaciones de diversidad léxica del texto en relación con dos variables, la valencia positiva o negativa del tema, y su cercanía o cotidianeidad. En todos los niveles, los textos con mayor diversidad léxica se corresponden con los que abordan una experiencia positiva y con los que describen a un personaje famoso. Posteriormente, Sánchez-Gutiérrez y Fernández Mira (2022) combinan datos transversales y longitudinales de COWS-L2H para analizar la progresión de los estudiantes en relación con la diversidad léxica que muestran sus composiciones escritas. La adopción de este enfoque mixto les permite obtener una visión más completa del objeto de estudio: mientras que el análisis transversal proporciona tendencias evolutivas generales, el longitudinal permite agrupar a los estudiantes en función del tipo de trayectoria que muestran. Se emplean también datos longitudinales y transversales en Minnillo *et al.* (2022), en este caso, para evaluar las predicciones de la Hipótesis del aspecto léxico (LAH), la Hipótesis del tiempo pasado por defecto (DPTH) y la Hipótesis de la distribución sesgada (DBH) en relación con la adquisición del pretérito perfecto simple y del imperfecto en español como L2. Y en este mismo grupo se inscribe el trabajo de Hidalgo (2023) sobre los errores relativos al género gramatical cometidos por aprendientes de ELE y hablantes de herencia, y sobre su relación con el sexo de los participantes, así como el de Carando *et al.* (2023), donde se compara la evolución de la complejidad estructural de los textos de los aprendientes de ELE y los hablantes de herencia.

Por último, si bien Lozano y Fernández Mira (2022) ofrecen sugerencias sobre posibles usos pedagógicos tanto de COWS-L2H como CEDEL2, el trabajo de Sampedro (2022) es el primero que desarrolla una propuesta didáctica basada en el uso de corpus de aprendices de ELE entre los que se encuentra COWS-L2H. En concreto, Sampedro (2022) diseña una unidad para aprendientes de nivel B1 en torno a la función comunicativa de dar consejos en la que combina el enfoque inductivo con el de PPP (presentación, práctica y producción).

2.2 El etiquetado de errores en los corpus de aprendices

Dentro de las posibilidades de análisis de los materiales del corpus, ha habido dos enfoques predominantes, el *Análisis contrastivo de la interlengua —Contrastive Interlanguage Analysis* (Granger, 1996)— y el *Análisis de errores asistido por ordenador —Computer-aided error analysis* (término introducido por Dagneaux *et al.*, 1998)—. El primero compara las actuaciones lingüísticas recogidas en los corpus con otros corpus de nativos o entre grupos de aprendices de la lengua, mientras que el segundo tiene como objetivo principal etiquetar y analizar los errores cometidos por los aprendices. Aunque la presencia de corpus de

aprendices con etiquetado de errores está creciendo (Thewissen, 2015), la complejidad que entraña el proceso de anotación y el coste humano y temporal que conlleva hacen que este segundo enfoque siga siendo el menos frecuente. En efecto, los corpus con etiquetado de errores son minoritarios, según se ha señalado para diversas lenguas (español, Campillos Llanos, 2014, 2016; Alonso Ramos, 2016, y Rojo *et al.*, 2022; inglés, Díez-Bedmar, 2015, 2021 y Fuchs y Werner, 2018; alemán Lüdeling *et al.*, 2005, etc.). Además, estas anotaciones no suelen estar integradas en el corpus general, sino que forman parte normalmente de tratamientos de datos independientes (Van Rooy, 2015).

Como describe Díez Bedmar (2021), la mayor parte de los procesos de etiquetado para el análisis de la interlengua se llevan a cabo para errores concretos y se realizan sobre un conjunto de textos limitado. Por ejemplo, en el nivel gramatical, uno de los fenómenos del ámbito nominal más estudiados es la presencia o ausencia del sujeto pronominal (*null/overt pronouns*) en diferentes contextos sintácticos y pragmáticos. Un trabajo reciente de Domínguez y Arche (2022) utiliza el corpus oral SPLLOC, referenciado en 2.1, para analizar la evolución de este fenómeno en 60 estudiantes británicos, repartidos en tres niveles de español, a través de dos tareas (120 textos) y concluye, como la mayoría de los estudios previos, que, aunque los hablantes anglófonos tienen dificultades para interpretar los sujetos en algunos contextos, especialmente en los niveles iniciales, se produce una clara evolución con el aumento del grado de competencia. La ventaja de los corpus extensos de acceso abierto es que permiten al investigador ampliar fácilmente el espectro de estudio, los perfiles de los estudiantes o las tipologías textuales si la investigación lo requiere (como las mismas autoras hacen a partir de un estudio de Domínguez, 2013), además de posibilitar la replicabilidad del trabajo y la consulta de casos concretos.

Tal y como indicamos en la introducción, este estudio persigue mostrar las posibilidades de análisis que ofrece el etiquetado de errores del corpus COWS-L2H. Dicho enfoque está claramente influido por la trayectoria del análisis de errores tradicional llevado a cabo en la lingüística aplicada desde los años 70 (Corder, 1967), pero se centra en textos producidos por los aprendices en las condiciones más naturalísticas posibles.

Quizá la mayor crítica que ha recibido este enfoque en la aplicación a la lingüística de corpus es la necesidad de establecer un estándar prescriptivo como punto de partida para realizar el etiquetado y determinar el error (Lüdeling y Hirshmann, 2015), lo que plantea serias dificultades en lenguas pluricéntricas como es el español incluso a la hora de delimitar el corpus (Rojo *et al.*, 2022). Otro de los problemas señalados tiene que ver con la conceptualización del error. Dado que el error se entiende como una desviación de la norma, algunos autores prefieren evitar ese término y emplear expresiones como *formas no codificadas* o *formas no convencionales*. En cualquier caso, siempre es necesario partir de una hipótesis de uso que se considera como la práctica deseable por parte de los alumnos —la denominada *target hypothesis* en Lüdeling y Hirchmann (2015, pp. 142-146)—. En nuestro etiquetado hemos considerado los usos recogidos en las obras normativas de las Academias (RAE y ASALE 2005, 2009), las cuales incorporan, hasta cierto punto, las diferentes variedades estándar de la lengua española.

Antes de continuar, debemos hacer hincapié en los diferentes tipos de anotaciones incorporadas a los corpus de aprendices: los etiquetados morfosintácticos, que distinguen categorías gramaticales, fundamentalmente, y permiten búsquedas de elementos lingüísticos concretos, y los etiquetados de identificación y corrección de errores, que marcan las características de la interlengua de los estudiantes comparándolas con las soluciones nativas. Los primeros suelen llevarse a cabo con una herramienta automática de marcación de las formas lingüísticas junto con una revisión y ajuste por parte del investigador (Van Rooy, 2015; Campillos Llanos, 2016). Este aparato de búsqueda puede servir para localizar clases de palabras en su contexto (por ejemplo, sustantivos o sustantivos masculinos), ciertos patrones combinatorios (por ejemplo, «sustantivo + adjetivo») o incluso funciones sintácticas simples. Como ejemplo para el español, dentro del enfoque del análisis contrastivo de la interlengua (Rojo *et al.*, 2022), puede verse el caso del recuento de uso del pretérito imperfecto de subjuntivo por diferentes lenguas de origen en Rojo y Palacios (2022, pp. 82-83).

Por otro lado, las anotaciones que marcan errores están concebidas para facilitar al investigador la identificación de las desviaciones que, en fenómenos concretos, muestra la interlengua de los aprendices. En estos casos, se asigna un código de error a la secuencia específica que se juzga como una desviación y, en algunos casos como el nuestro, se proporciona también la solución correcta (Lüdeling y Hirchmann, 2015; Díez-Bedmar, 2021). Esto requiere, en primer lugar, una selección de los errores que se van a etiquetar (no pueden marcarse todos los que identifican la interlengua del aprendiente) y un diseño, testeo y aplicación de las etiquetas seleccionadas por parte del investigador. Se trata, por tanto, de anotaciones orientadas a problemas concretos (Leech, 1997, p. 15).

A partir de corpus con etiquetado automático se han llevado a cabo análisis de errores extrayendo una serie de ejemplos y anotándolos posteriormente de acuerdo con los fenómenos que se desea investigar (véase, por ejemplo, la propuesta de Palacios *et al.* (2019), donde se analizan manualmente ejemplos extraídos mediante la interfaz de búsqueda que incorpora el CAES para examinar la confusión entre *ser* y *estar,* y las preposiciones *por* y *para*). Este procedimiento semiautomático de análisis de errores se enmarca en el denominado *Análisis de Errores Asistido por Computador* (Dagneaux *et al.*, 1998).

Ejemplos de este mecanismo de etiquetado son dos estudios recientes sobre la anáfora. Lozano y Quesada (2023) realizan anotaciones manuales en una selección de 75 textos del CEDEL con etiquetas implementadas en la *UAM Corpus Tool* versión 6.2 para analizar la resolución de las anáforas con antecedente ambiguo, un fenómeno ampliamente investigado desde modelos experimentales, pero no desde la lingüística de corpus. Con este objetivo, diseñan un sistema detallado de etiquetado específico, donde se incluyen el número de potenciales antecedentes de cada anáfora y la posición de cada uno de ellos. Para el mismo fenómeno, Bruscato y Baptista (2022) recogen dos microcorpus específicos de estudiantes de origen brasileño, uno de ellos en español (15 textos) y el otro en inglés (30 textos). Para la incorporación manual de las anotaciones utilizan el software libre *Recogito annotation tool*, que permite establecer relaciones orientadas entre anáforas y

antecedentes, y diseñan un sistema de etiquetado con el que se indica la forma, la función, el segmento oracional, la ambigüedad y la relación anafórica o catafórica (Bruscato y Baptista, 2022, p. 9). En cualquier caso, este tipo de análisis de errores que utiliza el apoyo de software específico (véase Calero *et al.* (2020) para una revisión de estas herramientas aplicadas a textos de aprendices de español), no permite en ningún caso la automatización completa del trabajo. Según se ha señalado previamente, el diseño de las etiquetas y la decisión de qué fragmentos van a ser anotados recaen necesariamente sobre un equipo humano.

En este sentido, Díez-Bedmar (2015, pp. 41-50) presenta un detallado análisis de las fases que debe seguir la creación y la puesta en marcha del proceso de etiquetado de errores. Este será el modelo que utilicemos en el apartado siguiente para describir nuestra propuesta. En la primera fase, considerada preliminar, se decide la taxonomía de errores que se van a etiquetar y el número y el grado de especificidad de las etiquetas. La segunda fase integra diferentes pasos: detectar los errores, realizar un pilotaje para clasificarlos y describirlos a partir de un perfilado del sistema de etiquetado (*fine-tuning the error tagging system*) y poner en marcha los sistemas de fiabilidad. Como resultado de esta segunda fase se confecciona un manual de etiquetado con un conjunto de etiquetas fácilmente comprensibles para los anotadores (Granger, 2003). La tercera fase comprende los procesos posteriores al etiquetado de postedición y preparación del corpus para su consulta.

Según Granger *et al.* (2007), el sistema de etiquetado debe ser jerárquico en su estructura y, al mismo tiempo, flexible, de forma que admita la incorporación de nuevas etiquetas durante y después del proceso de anotación, esto es, que permita su sofisticación si el investigador lo considera oportuno. Asimismo, el diseño de esta taxonomía debe estar guiada por un objetivo de investigación y su aplicación, mediada por la subjetividad del anotador, debe ser rigurosa y lo más sistemática posible. Para ello, se recomienda que los anotadores sean nativos de la variedad en la que se están realizando las correcciones (españoles en nuestro caso), pero que dominen también la lengua materna de los estudiantes (inglés para nosotros) (Granger, 2003; Díaz-Negrillo y Fernández-Domínguez, 2006). Además, para asegurar la consistencia, la validez y la eficacia del procedimiento, han de incorporarse medidas de fiabilidad tanto del sistema de etiquetado como de las correcciones realizadas por los anotadores (Dahlmeier *et al.*, 2013; Lüdeling y Hirchmann, 2015). Se aconseja que estas últimas sean realizadas por dos anotadores independientes (Granger, 2009; Lüdeling y Hirchmann, 2015) y que haya un tercero para desambiguar los casos dudosos. Se trata, en definitiva, de un proceso largo y laborioso, que requiere un equipo amplio de investigadores que cumplan con los requisitos expuestos y trabajen en coordinación (Díez Biedmar, 2021).

3. Descripción del proceso de etiquetado del COWSL2-H

La anotación de errores de COWS-L2H es el resultado de una colaboración entre la Universidad de California Davis, responsable del corpus, y la Universidad de Salamanca, en el marco de un proyecto de investigación de tres años de duración (desde 2020 a 2023). Con anterioridad a dicha colaboración, el equipo de UC Davis había iniciado ya el proceso de etiquetado con la definición del esquema de anotación, integrado en el texto (*in-text annotation*), y el diseño de las primeras etiquetas —en concreto, las relativas a la flexión de género y número, y a la *a* de complemento directo (Davidson *et al.*, 2020), si bien de esta última se prescindió en la taxonomía posterior—. La labor del equipo salmantino, integrado por cuatro coordinadores y doce investigadores, ha consistido en la adaptación y ampliación de la taxonomía de errores (fase 1), y en la localización, corrección y anotación de los errores definidos, con el correspondiente proceso de pilotaje para garantizar su fiabilidad (fase 2). Junto con este trabajo de anotación manual, los investigadores de la USAL llevaron a cabo un proceso paralelo de corrección por pares de los textos con el fin de que tales correcciones holísticas sirvieran para desarrollar una herramienta de corrección automática (Davidson *et al.*, 2020).

3.1 Fase 1

Frente a otros etiquetados más generales (Díaz Negrillo y Fernández Domínguez, 2006), el de COWS-L2H se centra en el nivel gramatical y comprende algunos de los fenómenos morfosintácticos, tanto del ámbito nominal como verbal, que mayor atención reciben en la gramática aplicada y en su didáctica (Gutiérrez Araus, 2022), y que son causa de interferencia con el inglés como L1 (Bueso y Casamián, 2001; Rothman *et al.*, 2018). En concreto, las anotaciones de COWS-L2H atienden a las siguientes categorías: flexión de género y número, pronombres personales (específicamente de sujeto), artículos, preposiciones (hasta la fecha, *por* y *para*), verbos copulativos (*ser* y *estar*), adjetivos y morfología verbal.

En cada una de estas categorías los tipos de errores que se contemplan se refieren a problemas de concordancia de género y/o de número, atribuciones indebidas del género o del número, presencia o ausencia indebida del pronombre personal de sujeto o del artículo, intercambio de las preposiciones *por* y *para* o de los verbos *ser* y *estar*, errores de colocación del adjetivo en el sintagma nominal y selección de la forma verbal incorrecta (en cuanto a la flexión de tiempo, modo, persona o número, o por la elección de la raíz —irregular que se regulariza o viceversa—). De esta forma, a las etiquetas iniciales para los errores relacionados con la flexión nominal se suma toda una serie de etiquetas relativas a la flexión verbal, lo que permite analizar la adquisición de la morfología flexiva en su conjunto y posibilita la investigación de diversos fenómenos morfosintácticos, como los valores y las relaciones temporales, la selección modal, los procesos de concordancia sujeto-verbo o el uso de las formas no personales del verbo, entre otros. El resto de etiquetas presenta un alcance más específico: atienden a comportamientos de determinadas unidades en distintas clases de palabras que caracterizan la evolución de la interlengua

de los estudiantes de español L2 (Rothman *et al.*, 2018). Se trata de temas clásicos de la gramática ELE, recientemente abordados también desde la lingüística de corpus, como el uso de las preposiciones *por* y *para* y de los verbos copulativos, los sujetos nulos, los sintagmas nominales escuetos o la posición del adjetivo (véase, por ejemplo, Palacios *et al.*, 2019; Guijarro-Fuentes *et al.*, 2023; Domínguez y Arche, 2022; Yonekawa y San Mateo Valdehíta, 2022).

Una vez localizados, estos errores se corrigen y se anotan dentro del texto (*in-text annotation*) de acuerdo con el siguiente esquema:

[error del estudiante]{forma corregida}<etiquetas de error>

En las etiquetas de error se distinguen dos niveles: primero se identifica el tipo de error (concordancia, atribución, presencia o ausencia indebida, intercambio, colocación, etc.) y a continuación se indica la clase de palabras afectada. Véanse los ejemplos siguientes:

(1) (McAdams es muy simpática con [su]{sus}<na:det> amigos.

(Error de concordancia de número —*number agreement*— en un determinante)

(2) Johnny Depp es un actor famoso. [Él]{}<pr:su:pron> nació en 1963 en Kentucky.

(Error de presencia indebida de un sujeto pronominal)

(3) []{El}<ab:det:art:def> Señor Sandler es muy feliz.

(Error de omisión del artículo definido)

(4) Había un perro bebé color marrón que [era]{estaba}<conf:v:seta> triste porque nadie lo quería y no tenía casa.

(Error de confusión de los verbos copulativos *ser* – *estar*)

(5) “The Rock” [lucha]{luchó}<fs:st:t> en la WWE hace mucho tiempo.

(Error de selección de una forma verbal simple en relación con el tiempo)

Se define, por tanto, una taxonomía bidimensional en la que se combinan, en buena medida, las dos sugeridas por Dulay *et al.* (1982) —la referida a las categorías lingüísticas afectadas por el error y la que indica la forma en que el aprendiz ha modificado la estructura superficial, es decir, la estrategia que ha puesto en marcha (omisión, adición, intercambio, colocación, etc.)—, en línea con lo que se defiende, por ejemplo, en Granger (2003) o Díaz Negrillo y Fernández Domínguez (2006). La taxonomía completa puede consultarse en el Anexo I.

En su diseño, se asumen los principios de consistencia, informatividad, flexibilidad y reutilización definidos en Granger (2003, p. 467) para la creación de sistemas de anotación de errores eficaces y se establece una taxonomía precisa y jerárquica (que aporta sistematicidad en la aplicación de las etiquetas, pero que deja margen para su combinación, ampliación o profundidad) y un conjunto de etiquetas manejable, pero

informativo. En este sentido, el hecho de proporcionar una clasificación del error y la categoría gramatical afectada, además de la forma corregida, hace que el etiquetado de COWS-L2H sirva para: 1) realizar una identificación más rápida y eficaz de los fenómenos problemáticos para su análisis o incorporación a propuestas didácticas; 2) realizar un análisis longitudinal o transversal de los fenómenos etiquetados; 3) identificar elementos léxicos o contextos gramaticales donde se dan determinados tipos de errores, y 4) realizar análisis contrastivos.

3.2 Fase 2

Según se ha señalado, esta fase comprende el proceso de localización, corrección y anotación de los errores, así como el análisis de su fiabilidad (Díez Bedmar, 2015, 2021). Tras una formación específica para familiarizarse con el corpus y con el sistema de etiquetado, el equipo de la USAL, integrado por hablantes nativos de español con dominio del inglés como L2 y especializados en la enseñanza de español como lengua extranjera, ha sido el encargado de anotar manualmente los textos seleccionados por el equipo de UC Davis. Para ello, se ha seguido un sistema de anotación por pares con la posibilidad de consultar dudas específicas a los dos coordinadores responsables del diseño de la taxonomía de errores. De esta forma, el manual de etiquetado de COWS-L2H se ha ido completando a lo largo del proceso con una sección de dudas resueltas. En los tres años del proyecto (2020-2023), el equipo salmantino ha anotado 2948 textos —lo que supone el 54,8 % del corpus— y ha aportado un total de 9425 versiones (recuérdese que el proyecto incluía también una parte de corrección de textos para el entrenamiento de un modelo de procesamiento del lenguaje natural).

Dado que la anotación manual de errores es un proceso largo y laborioso, que depende de la actuación de un equipo humano, es necesario comprobar su consistencia como requisito previo para considerar la validez del etiquetado y, en última instancia, la calidad de cualquier análisis basado en las anotaciones del corpus (Dobrić, 2023). Las medidas principales para garantizar la fiabilidad del etiquetado analizan el grado de coincidencia entre pares de anotadores (*inter-annotator agreement*) y también entre los propios anotadores (*intra-annotator agreement*), con el etiquetado de los mismos textos al cabo de un tiempo. Esta coincidencia interanotador e intraanotador se expresa generalmente mediante índices de acuerdo, como el coeficiente kappa de Cohen, que es el que se emplea aquí (Cohen, 1960; Carletta, 1996; Artstein y Poesio, 2008; Dahlmeier *et al.*, 2013; Díez Bedmar, 2015). En este caso, se ha tenido en cuenta como *agreement* tanto las coincidencias en el etiquetado como en los ítems seleccionados para ser anotados, es decir, que un ítem no haya sido etiquetado por ambos correctores también se considera acuerdo.

De los 2948 textos anotados, se seleccionaron aleatoriamente 490 (el 20 %) para los análisis de fiabilidad. Para el acuerdo interanotador, se establecieron 20 pares de correctores y se llevó a cabo una comparación de 30 textos por cada par. En el caso del acuerdo intraanotador, se solicitó el reetiquetado de 30 textos aleatorios de diferentes años. Según se ha señalado, la fórmula estadística seleccionada fue el kappa de Cohen y,

para la preparación y alineación de los textos, se empleó un código *ad hoc* programado con Python. Los resultados muestran un índice kappa superior a 0.6 en la comparación *inter-* y a 0.7 para el caso de *intra-*, lo que supone una buena estimación del grado de acuerdo (Tabla 1).

Tabla 1. Kappa para la estimación del grado de acuerdo.

EKappa	Acuerdo
<0	No acuerdo
0.0-0.2	Insignificante
0.2-0.4	Bajo
0.4-0.6	Moderado
0.6-0.8	Bueno
0.8-1.0	Muy bueno

4. Evolución de errores en el sintagma nominal

4.1 Metodología

Para este estudio se ha tomado un conjunto de 905 textos de COWS-L2H (aproximadamente un 17 % del corpus total y un 30 % de los textos anotados), con una media de 251 palabras por texto y un total de 227 236 *tokens*. De las diversas propuestas temáticas del corpus (véase 2.2), para este estudio se han seleccionado dos a fin de comprobar el impacto del tipo de texto en los errores producidos y en su evolución: "Tú mismo" (*Yourself*) (491 textos) y "Una experiencia bonita" (*Beautiful*) (414 textos).

Se propone un estudio de naturaleza transversal, para el que se consideran textos escritos por estudiantes de español como lengua extranjera (no por hablantes de herencia) de distintos niveles de los cursos de español general. En concreto, se toman 644 textos de nivel Introductorio (correspondientes a tres asignaturas de primer año y equivalentes a un A1-A2) y 261 textos del curso de Composición (dos asignaturas de tercer año equivalentes a un B1+ / B2). Esta clasificación en niveles es un reflejo del universo de estudio: en términos generales, el número de cursos de español introductorio que se ofertan cada trimestre en UC Davis es dos o tres veces mayor que el de los cursos de Composición (Yamada *et al.*, 2020, p. 23). Por transparencia, en el análisis de resultados nos referiremos a estos dos grupos como nivel inicial y avanzado.

De los errores etiquetados (véase 3.1), se seleccionan aquí los que afectan al sintagma nominal, esto es, aquellos que tienen que ver con la flexión de género y de número, con el uso del pronombre personal de sujeto y del artículo, y con la colocación del adjetivo. El objetivo de este análisis es determinar cuáles de dichos aspectos gramaticales del ámbito nominal presentan mayores dificultades para los aprendices norteamericanos y cómo es

su evolución, planteamiento que se aproxima a los estudios exploratorios enmarcados en el análisis de errores que persiguen la identificación de fenómenos lingüísticos problemáticos (Lüdeling y Hirchmann, 2015).

4.2 Resultados y discusión

Los 905 textos analizados contienen un total de 9463 errores relativos a las categorías anotadas en el sintagma nominal. Tal y como se refleja en la Figura 1, el error más frecuente se corresponde con la presencia indebida de un pronombre personal de sujeto (3051 casos, 32 %), seguido por los errores de concordancia de género (2235 casos, 24 %) y la ausencia de artículo (1695 casos, 18 %). Cuando consideramos los distintos errores que afectan a estas categorías (presencia o ausencia, concordancia o atribución, etc.), se comprueba que los pronombres personales de sujeto siguen siendo la categoría más problemática, seguidos de la flexión de género y los artículos (Figura 2).

Esta distribución de los errores se explica en buena medida por interferencias con la L1: frente al inglés, el español es una lengua de sujeto nulo con flexión nominal de género y, aunque en ambas se emplean artículos como marcadores de definitud, sus usos menos prototípicos difieren significativamente. En este sentido, es razonable que la flexión de número ofrezca menos dificultades a los aprendientes, mientras que la colocación del adjetivo, distinta también en ambas lenguas, sería, en principio (puesto que se trata de un fenómeno más restringido), menos problemática.

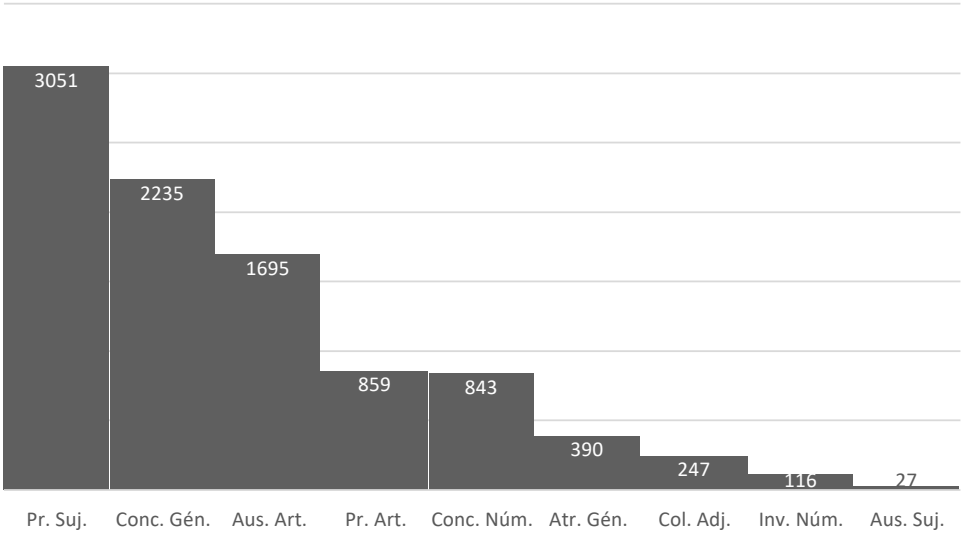


Figura 1. Tipos de errores en el SN por su frecuencia absoluta.

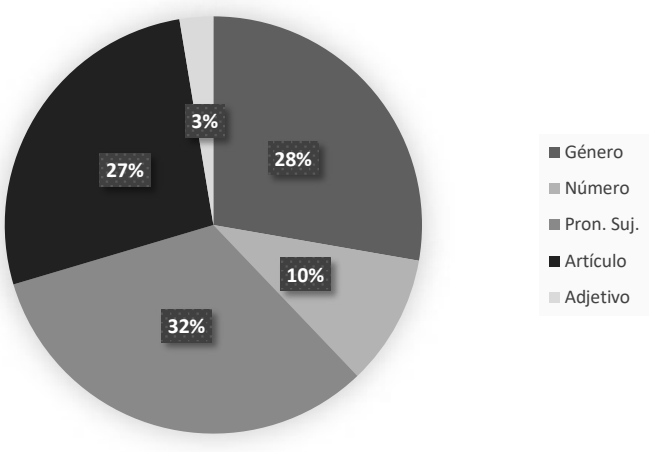


Figura 2. Distribución de los errores en cada categoría.

Por otro lado, si bien la presencia indebida de un sujeto pronominal es el error más frecuente, es también el que experimenta un descenso más pronunciado en la comparación por niveles de competencia (Figura 3), tal y como concluyen las investigaciones previas sobre el fenómeno (Domínguez, 2013; Domínguez y Arche, 2022). La progresión es también favorable en los errores relativos a la concordancia de número y a la ausencia de artículo, mientras que se registra un leve aumento (de 0,02 puntos) en la media de errores correspondientes a la atribución incorrecta de género y la presencia de artículo. No obstante, en términos generales, todas las categorías examinadas muestran un menor número de errores en las composiciones de nivel avanzado que en las de nivel introductorio (Figura 4).

En cualquier caso, según se defiende en Sánchez-Gutiérrez y Fernández Mira (2022), este análisis transversal (y exploratorio) debería completarse con datos longitudinales que permitieran matizar dichas tendencias generales en función de los tipos de trayectorias evolutivas que mostraran los participantes. Frente a la visión tradicional de la adquisición

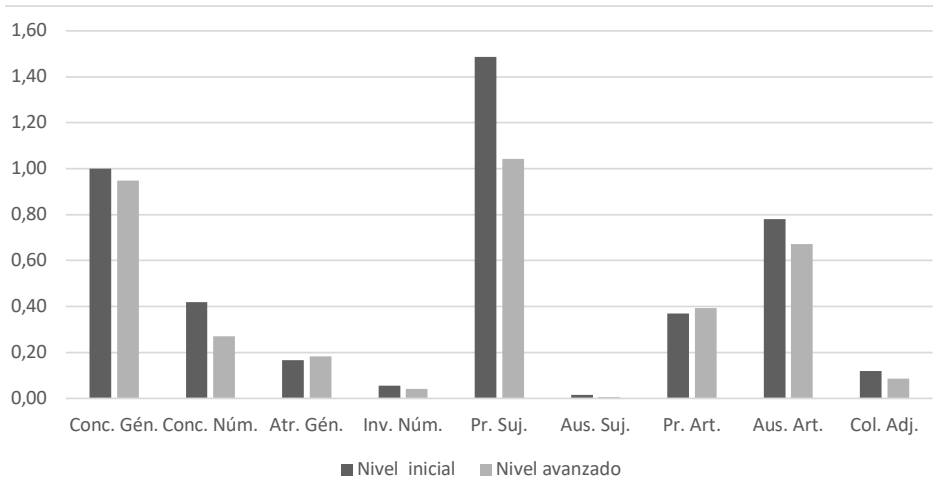


Figura 3. Progresión de cada tipo de error.

de la L2, se asume que el desarrollo de la competencia gramatical no es un proceso lineal sino dinámico, de forma que los contenidos morfosintácticos supuestamente adquiridos no se mantienen estables en la interlengua de los aprendientes, sino que son susceptibles de degradarse, perderse, volver a recuperarse, etc. (Sánchez-Gutiérrez y Fernández Mira, 2022, p. 375).

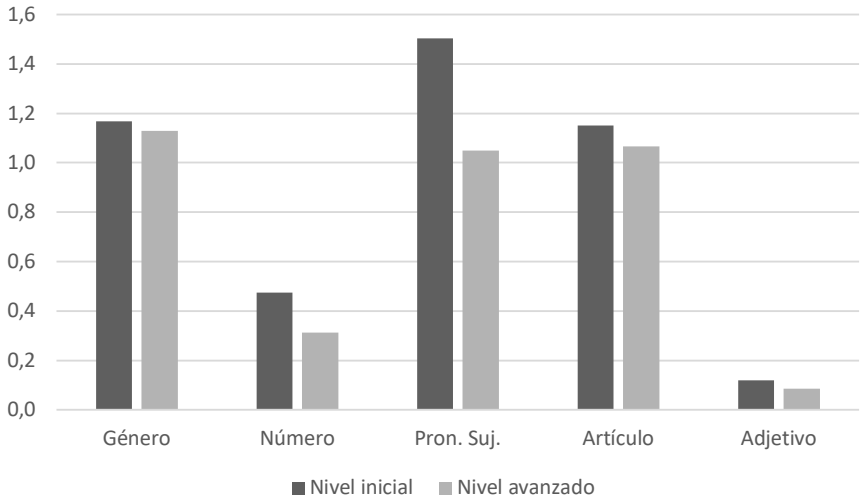


Figura 4. Progresión de los errores en cada categoría.

En cuanto al tipo de texto, los aprendientes cometen más errores en las redacciones en las que hablan de sí mismos que en los textos que describen una experiencia bonita, especialmente en los niveles iniciales (Figura 5). Esta tendencia se aprecia en todos los errores analizados (salvo en la ausencia de sujeto pronominal, de forma muy poco representativa), pero es especialmente acusada en los errores de ausencia de artículo, de presencia de sujeto pronominal, concordancia de género y presencia de artículo (Figura 6). De hecho, al considerar los errores en función de la categoría afectada, el artículo presenta un mayor impacto del cambio textual, seguido por el sujeto y la flexión de género (Figura 7).

Estos datos ponen de manifiesto la necesidad de completar los análisis cuantitativos de los corpus con un enfoque cualitativo para conseguir una correcta interpretación de los resultados. En este caso, se podría comprobar si el hecho de que haya más usos incorrectos del artículo en las redacciones en las que los aprendientes hablan de sí mismos se relaciona con la presencia de sustantivos referidos a partes del cuerpo o prendas de vestir, por ejemplo, en los que el uso del artículo es distinto en ambas lenguas (*Tengo los ojos azules – I have blue eyes*). En la misma línea, cabe suponer que un tema como "Tú mismo" habrá propiciado más ejemplos de pronombre personal de sujeto innecesario y, en consonancia con los resultados de Hidalgo (2023), habría que determinar si las alumnas, al describirse a sí mismas, tienden a usar formas masculinas.

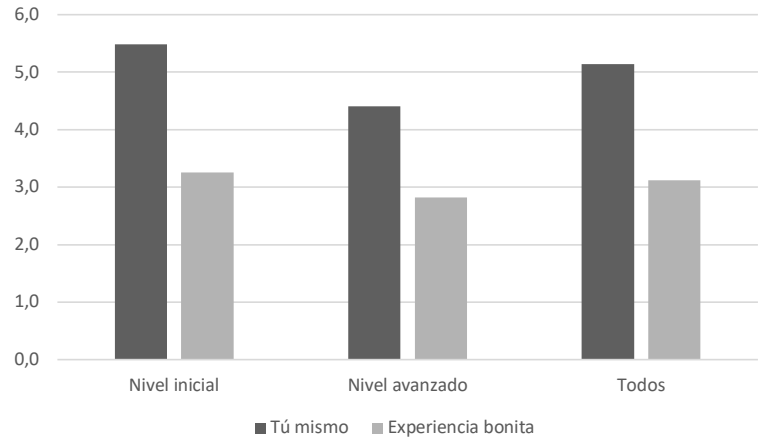


Figura 5. Media de errores por tipo de texto.

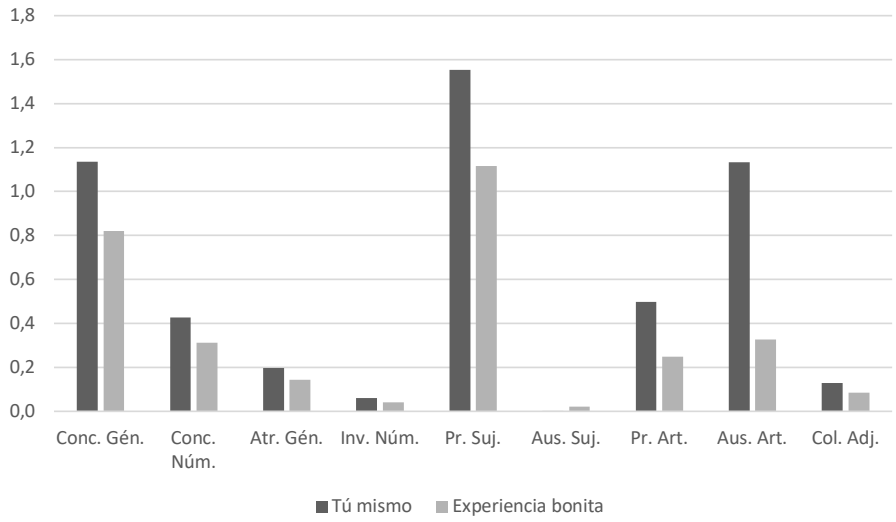


Figura 6. Tipo de error en cada tipo de texto.

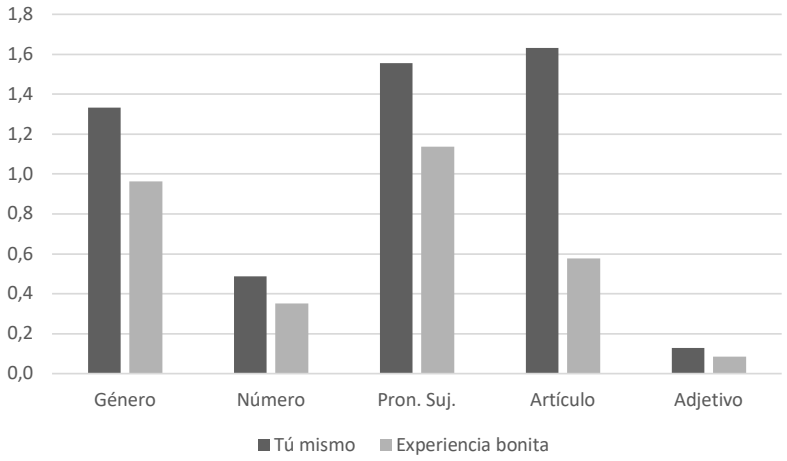


Figura 7. Errores por texto en cada categoría.

4. Conclusiones

En el marco de los estudios de corpus de aprendices de español, este trabajo ha contribuido a la caracterización del Corpus of Written Spanish of L2 and Heritage Speakers (COWS-L2H) desde una doble perspectiva: metodológica e investigadora.

Desde una perspectiva metodológica, se ha presentado el proceso de anotación de errores gramaticales que se ha llevado a cabo, desde el diseño de la taxonomía empleada hasta las medidas de fiabilidad calculadas (inter e intraanotadores) a fin de garantizar la validez de los datos. A pesar de la inversión de tiempo y esfuerzo que requiere este proceso, coincidimos con Granger (2003) o Van Rooy (2015), entre otros muchos, en que este tipo de anotaciones incrementa enormemente el valor del corpus como herramienta de investigación y facilita su explotación en aplicaciones diversas, en nuestro caso, en el ámbito de la adquisición de la gramática del español como lengua adicional o de su didáctica, pero también en el marco de la gramática teórica (aunque los datos de corpus han sido menos frecuentes en la tradición generativa, en realidad, pueden servir como contribución empírica para cualquier escuela).

El sistema de etiquetado debe responder a una reflexión previa sobre la finalidad del corpus. Así, la propuesta implementada en el COWS-L2H parte de un conjunto de etiquetas que comprende algunos de los fenómenos morfosintácticos más representativos de la interlengua de los aprendices angloparlantes, de forma que, a partir de una estructura jerárquica (Granger, 2009), además de aportar información sobre fenómenos amplios, puede usarse como punto de partida para la anotación de errores gramaticales más específicos, permitiendo afinar en distintos niveles de anotación (*fine-tuned*, Díez Bedmar, 2021). Se trata de un etiquetado muy especializado, que no habría sido posible sin la intervención de un equipo humano con conocimiento de ambas lenguas y formación específica en gramática aplicada. En efecto, a pesar de los avances en cuanto a la automatización del etiquetado, estas prácticas siguen presentando muchas limitaciones frente a la anotación manual.

Desde una perspectiva investigadora, se ha mostrado el potencial que ofrece el etiquetado para el análisis del desarrollo de la competencia gramatical de los aprendientes a través de un estudio exploratorio centrado en errores propios del sintagma nominal. Los resultados obtenidos nos han permitido confirmar los fenómenos más problemáticos y las tendencias generales en cuanto a su evolución, así como la influencia que ejerce el tipo de texto solicitado. Asimismo, este análisis preliminar nos ha servido para comprobar la conveniencia de emprender investigaciones que combinen datos transversales y longitudinales, y la necesidad de completar los análisis cuantitativos con los cualitativos para poder interpretar adecuadamente los resultados.

En definitiva, COWS-L2H brinda amplias posibilidades como recurso de investigación en español como lengua adicional. La incorporación de anotaciones precisas sobre aspectos gramaticales altamente representativos de la interlengua de aprendices angloparlantes posibilita la realización de estudios tanto generales como centrados en fenómenos muy

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específicos, como, por ejemplo, la concordancia de persona en el verbo. Asimismo, se trata de uno de los pocos corpus de aprendices de español que proporciona datos transversales y longitudinales, y que incluye una submuestra de hablantes de herencia, además de hablantes de ELE. Por último, el hecho de que todos los participantes pertenezcan a la misma institución y respondan a las mismas tareas permite, por un lado, un amplio control de las condiciones de aprendizaje y, por otro, un análisis sobre el impacto del modelo textual o del tema de la redacción.

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Anexo I

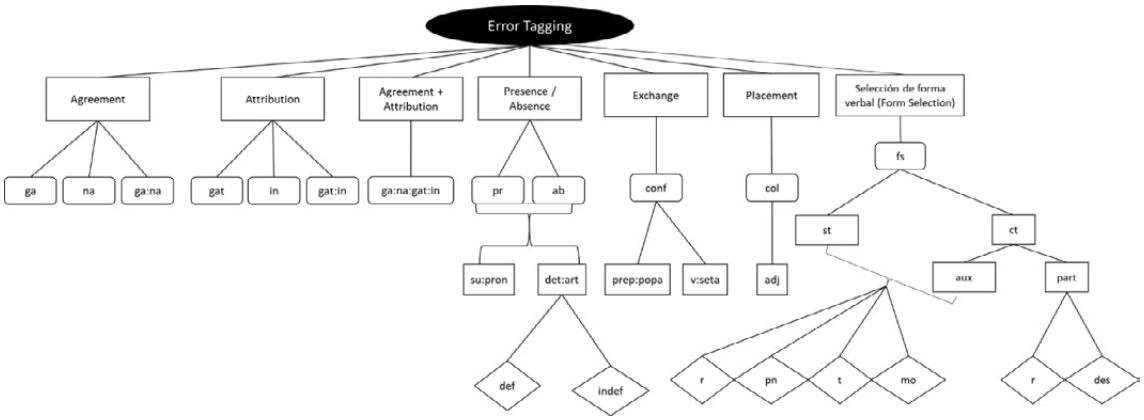


Figura 8. Listado completo de etiquetas utilizadas.

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Parallel Corpora Spanish (PaCorES): A collection of multifunctional parallel corpora

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Abstract: This paper introduces PaCorES, a compilation of parallel bidirectional corpora with Spanish as the focal language. It is currently comprised of four corpora in German/Spanish, English/Spanish, French/Spanish, and Chinese/Spanish, which are accessible online without restrictions. The aim of this paper is to provide adequate documentation for the PaCorES_project and its contents for the corpus research community, while underscoring its multifunctionality. First, gaps are identified in existing parallel bi- and multilingual corpora featuring Spanish as one of their components. Then, the criteria underlying the design and architecture of the PaCorES corpora are outlined. The main section of the paper is devoted to the different steps in the compilation of the corpora, with special emphasis on the alignment process and its review. Finally, attention is directed towards the three search levels available for querying the corpora and the display features. This renders PaCorES corpora a valuable resource for a wide range of applications and user groups across diverse linguistic fields, as well as language teachers, practitioners, and language learners alike.

Keywords: *parallel corpora, bidirectional corpora, corpus multifunctionality, corpus compilation, corpus alignment.*

Corpus paralelos del español (PaCorES): una colección de corpus paralelos multifuncionales

Resumen: En este trabajo se presenta PaCorES, una compilación de corpus paralelos bidireccionales con español como lengua central. Actualmente consta de cuatro corpus (alemán/español, inglés/español, francés/español y chino/español), accesibles libremente en línea. El objetivo de este trabajo es proporcionar a los investigadores en el ámbito de la lingüística de corpus documentación adecuada del Proyecto PaCorES y los recursos que comprende, haciendo especial énfasis en la multifuncionalidad de estos. En primer lugar, se identifican las lagunas existentes en el panorama de los corpus paralelos bilingües y multilingües que incluyen el español como una de sus lenguas. A continuación, se exponen los criterios que han guiado el diseño y la arquitectura de los corpus de PaCorES. La sección principal del trabajo se dedica a las fases de la compilación de los corpus, con especial atención al proceso de alineado y de su revisión. Finalmente, se subraya la existencia de tres niveles de búsqueda disponibles para interrogar el corpus y se explica las funcionalidades de la interfaz y de la presentación de resultados. Estas últimas características hacen de los corpus de PaCorES un recurso valioso para un amplio rango de aplicaciones y tipos de usuarios: investigadores de diferentes ámbitos de la lingüística, docentes de lenguas, usuarios profesionales de la lengua o aprendices.

Palabras clave: *corpus paralelos, corpus bidireccionales, multifuncionalidad de los corpus, compilación de corpus, alineamiento de corpus.*

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1. Introduction

The compilation of extensive parallel corpora has been the key factor in the spectacular development of statistical (and more recently neural) machine translation systems and in other natural language applications, such as speech recognition, speech-to-text and text-to speech technologies, automatic document summarizing, and many others. On the other hand, parallel corpora have been also used for investigating linguistic and communicative phenomena, most notably languages in contrast and translation. Furthermore, parallel corpora can find uses in applied areas such as lexicography, language and translation teaching and learning. Of all the scenarios, the latter (i.e., translation and language learning and teaching with parallel corpora) relies the most on the availability and usability of parallel resources (Doval & Sánchez Nieto, 2019).

PaCorES is a collection of bilingual corpora with Spanish as the central language that can be easily and freely queried online. The roots of the PaCorES project date back to 2015 with the creation of the German<>Spanish Parallel Corpus (PaGeS)[1] (Doval et al., 2019, Doval & Jiménez Juliá, 2019, Doval & Sánchez Nieto, 2022).

The English<>Spanish Parallel Corpus (PaEnS) (Doval, 2023) and the French<>Spanish Parallel Corpus (PaFreS) have already been launched and can be accessed online. The Chinese<>Spanish Parallel Corpus (PaCheS) has recently been made publicly available. All these corpora draw on the same architecture and philosophy as the initial PaGeS corpus.

Considering that the creation of parallel corpora is a demanding task that consumes significant resources, our aim from the beginning was to design the PaCorES corpora to be multifunctional, capable of serving a wide range of applications and user groups, such as language learners and teachers, translators, translator trainers and educators, translator trainees and students, language, communication and translation scholars, and lexicographers. It goes without saying that these corpora can be used as a reliable source of texts for training machine translation systems.

The purpose of this paper is to provide adequate documentation for the PaCorES project and its contents for the corpus research community. In section 2, PaCorES is mapped onto the landscape of those parallel bi- and multilingual corpora that are in one way or another comparable to its own. In Section 3, the criteria leading to the design and the make-up of the PaCorES corpora are explained. The tasks conducted before alignment are detailed in Section 4, while Section 5 delves into the alignment process. Section 6 introduces the features of the corpus search engine underlying all PaCorES corpora, offering insights into the corpus query system and results display. Finally, Section 7 wraps up the main conclusions of the paper.

[1] For the corpora's URLs see footnote 8.

2. Related work

In this section, we will provide a brief overview of a selection of parallel corpora that are comparable to the PaCorEs collection with the aim of discovering whether these resources are multifunctional as defined for the PaCorES corpora in Section 1.

The criteria for the inclusion of the resources in this overview are (i) being freely accessible and (ii) having Spanish as one of the included languages. As for corpus accessibility, a distinction can be made between corpora that can be accessed and queried online through a web-based corpus interface on the one hand, and corpora which are available for download online for further processing and elaboration on the other. As for the presence of the Spanish language in the selected corpora, attention must be paid to (a) whether the Spanish texts included are the result of either direct or indirect translation processes (i.e., as target texts translated from another language and subsequently parallelized to existing translations of the same text into further language/s); and to (b) whether the status of Spanish as either the source or target language is known.

Four selected parallel resources that meet the aforementioned criteria are briefly presented below.

The growing collection of bilingual and multilingual parallel corpora included in OPUS[2] (Tiedemann, 2012) offers not only the biggest collection of online searchable parallel resources, but also tools for uploading corpora to the collection and pretrained machine translation models. A number of the resources in OPUS are PoS-tagged (Tiedemann 2012, pp. 2216) and can be searched online with the help of multilingual concordance tools based on the query language used in the Corpus Workbench corpus manager (Tiedemann, 2012). External users can contribute their own parallel resources to the corpora collection (Aulamo and Tiedemann, 2019, p.1). At the time of writing, 81 resources can be searched and downloaded for the German/Spanish language pair, 122 for English/Spanish, 93 for French/Spanish and 19 for Chinese/Spanish.

Multilingwis[3] is one of the most successful attempts to make a parallel resource available through an online search interface. The system allows the user to query the parallel corpus of the European Parliament "for spotting translations of content words and multi-word units" (Multilingwis, 2023). The corpus contains 220 million words and word alignments for about 40 million words. The supported languages are English, Spanish, German, French, and Italian.

InterCorp,[4] a part of the Czech National Corpus, is a multilingual parallel corpus whose 8th release includes about 1.4 billion words in 38 languages and 174 million words in Czech (Rosen, 2016, p. 22). It is comprised of a core corpus of mainly literary texts and collections of other texts, which are obtained from other multilingual, freely available

[2] See all the OPUS resources at https://opus.nlpl.eu/ and the OPUS search interface at https://opus.nlpl.eu/bin/opuscqp.pl.26

[3] https://pub.cl.uzh.ch/projects/sparcling/multilingwis/ and https://pub.cl.uzh.ch/projects/sparcling/multilingwis2.demo/

[4] https://kontext.korpus.cz

resources. The texts are automatically aligned at the sentence level via Czech, which is the pivot language. The texts are also lemmatized and partly tagged (Rosen, 2016, p. 23) and can be freely queried on the internet.

Linguee[5] is an online multilingual dictionary combined with an engine that looks up words and word groups in billions of translated texts and returns aligned bilingual examples. Equivalences can currently be generated in more than 20 languages (Hein, 2022, p. 325), including, of course, English, German, Spanish, Chinese, and French. Among the multilingual pages crawled by Linguee's multilingual corpus compilation system are also sites that rely on unsupervised machine translation (Alonso, 2013, pp. 22-23).

In summary, while we can conclude that all four of the aforementioned parallel resources undoubtedly have intrinsic value, they also bear certain disadvantages for both research in contrastive linguistics and translation, and for foreign language teaching and learning and thus cannot be considered multifunctional as described in section 1. Most of these resources are either limited to specific textual varieties (mainly legal, administrative, or technical language), or neither the original language nor the translation process carried out can be precisely determined. Finally, in some cases, the search and display features are not adapted to different user groups.

Multilingwis and many of the OPUS parallel corpora feature to a large extent examples of specialized communication. Business, administrative, and legal language, as well as medical or technical language, show little lexical and morphosyntactic variation and tend towards formulaic language use. These domains are thus unsuitable for teaching/learning for non-specific purposes, as the level of difficulty of the structures therein is too high. At the same time, Linguee provides many parallel texts for a number of language pairs. However, along with the linguistic resources produced by international institutions, such as the European Commision, Linguee also makes other materials available which have not been produced or revised by a human translator and the source language is not known, something that holds true for a number of the parallel resources in OPUS as well. Texts scraped from unverified websites via automatic extraction and alignment are likely to contain errors and misalignments. The InterCorp corpora have been compiled with Czech as the pivot language, so that the English/Spanish, German/Spanish etc. alignments are indirect translations; these are very useful in certain teaching and research contexts, but of more limited use in others. In the case of OPUS, the search language (CQL) in the multilingual search interface[6] requires prior training, which may discourage non-expert users that try on-the-fly queries on their own for the first time. The same might apply as well to certain non-expert users approaching the KonText interface to query InterCorp.[7]

[5] https://www.linguee.de/
[6] https://opus.nlpl.eu/bin/opuscqp.pl
[7] https://www.korpus.cz/kontext/query?corpname=syn2020

In summary, it can be said that the PaCorES corpora have come to fill a gap within the landscape of bilingual corpora of the Spanish-speaking world. As the following sections will show, the strong focus on the quality of the content, the considerable size of the corpora (section 3) and their usability (see section 6) makes them amenable to a broad scope of potential users.

3. Composition of the PaCorES corpora

In this section we will describe in detail the different types of data included in the PaCorEs corpora. The existing corpora to date are as follows, in order of creation:

- The German<>Spanish Parallel Corpus, PaGeS
- The English<>Spanish Parallel Corpus, PaEnS
- The French<>Spanish Parallel Corpus, PaFreS, and
- The Chinese<>Spanish Parallel Corpus, PaCheS[8]

Given that this is an ongoing project that began several years ago, the different bilingual corpora currently find themselves at various stages of completion. As a result, they differ not only in size but also temporarily in terms of the types of indexed texts. In the case of the Chinese<>Spanish and French<>Spanish parallel corpora, the core corpora (see 3.1) are not yet online since the number of texts that have undergone review is still too small. Nevertheless, the general guidelines for compiling the different corpora remain consistent across all four.

In PaCorEs there are two large groups of well-differentiated data: the first consists of the core corpus, and the second is made up of the so-called “supplements”. Both groups differ in their features, the processing procedures they undergo, and the extent to which reviews are conducted during the various processing steps.

3.1 PaCorES core corpora

Taking into consideration the purpose of the corpora and the different applications for which they are intended, we have drawn up a set of guidelines for the data collection for the core corpus as explained in sections 1 and 2. These include the following features:

- both the original data and the translations must have undergone verifiable quality controls
- there must be an unambiguous identification of the original and the translated language
- the translations must have been carried out directly -without a pivot language- from the original by human translators

[8] The URLs in the order listed: www.corpuspages.eu, www.corpuspaens.eu, www.corpuspafres.eu, www.corpuspaches.eu

- the texts should be as close as possible to the current standard variety of the language, and belong to a general, non-specialized register.

In addition to these criteria, it should be noted that compiling a parallel corpus, in contrast to a monolingual one, presents significant constraints in terms of data availability as the vast majority of texts are not translated (Zanettin, 2012, p. 41).

3.1.1 Corpus Design and Research Potential

This section will detail the design of the corpus and consider its potential as a research tool.

In order for the texts to meet the criteria outlined above, we have chosen to limit our scope to texts from reputable publishers, therefore ensuring that both the originals and the translations have undergone rigorous quality controls (Doval, 2018).

Each core corpus consists of two sets of texts:

- original texts in the foreign language (FL)[9] and their translations into Spanish
- original texts in Spanish and their translations into the foreign language.

Both sets are similar in size and the types of texts they contain. As a result, all the core corpora are bidirectional and balanced in terms of translation direction. Regarding the latter, it should be noted that due to the regular incorporation of new works, slight discrepancies may occasionally occur.

This bidirectional and balanced design of the core corpora enables a broader range of analyses and applications compared to unidirectional corpora. (cf. Stieg Johansson, 2004, p. 61).

This design facilitates the comparison of original texts and translations across languages (Figure 1) and allows for bilingual analyses from both the FL to Spanish and Spanish to FL. This approach is essential for studying how patterns vary across languages. Bidirectionality is particularly crucial because, in many cases, translation equivalents are not biunivocal, i.e., the translation of item A (source text) into B (translation) does not necessarily imply that B (source) is translated back into A (translation). A bidirectional corpus allows for the measurement of the percentage of mutual correspondence (MC) between two specific items, ranging from 0% for no correspondence to 100% for complete correspondence. (Bengt Altenberg, 1999, p. 254).

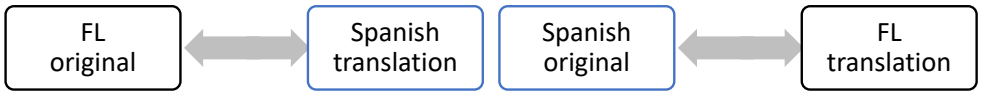


Figure 1. PaCorES as parallel corpora: original texts and translations FL and Spanish.

[9] With the term 'foreign language' (FL) we refer to the four languages included so far in the PacorES collection: German, English, French, and Chinese.

Moreover, bidirectional corpora also enable comparisons between original and translated texts within each language (Figure 2) and between translated texts across languages (Figure 3). Hence, the corpora can be used for research into specific translation phenomena such as translationese or translation universals, i.e., recurring linguistic patterns or features observed in translated texts across different languages (Mona Baker, 1993, pp. 742-746).



Figure 2. PaCorES as parallel corpora: original texts and translations in each language.



Figure 3. PaCorES as parallel corpora: translations across languages.

Finally, the bidirectional configuration of the corpora offers the additional benefit of providing a comparable corpus (Figure 4). This is achieved by comparing original texts in different languages, provided they share similar properties, such as genre, text type or domain, as is the case with the PaCorES corpora.



Figure 4. PaCorES as comparable corpora: original texts across languages.

3.1.2 Composition of the core corpora

The core corpora are composed predominantly of fiction spanning a number of genres, with a smaller percentage dedicated to non-fiction works (essays, self-help, journalistic articles, etc.).

Regarding the geographical origin of the works, we have aimed for diversity by incorporating literature from British, American, Irish, and Australian writers for English, and from Austrian, Swiss, and German authors for German. In the case of Spanish, we've included works from both European and Latin-American writers. Our primary objective is to compile a contemporary text corpus, with the majority of the material stemming from recent decades, placing particular emphasis on works from the 21st century.

As previously mentioned, the different corpora are currently at varying stages of completion. Presently, the French and Chinese core corpora have not yet reached our minimum size requirement (5 million words) to be put online.

The core corpora currently online consist of 229 works for PaGeS (114 German originals and 115 Spanish originals) and 260 works (120 original English texts and 140 original Spanish texts) for PaEnS, along with their translations. These works can be accessed on the respective websites where they are listed by author.[10] Table 1 displays the size of the core German and English corpora as of October 2026.

Tabla 1. Composition of the PaGeS (v 2.3) and PaEnS (v 2.0) core corpora (October 2026).

Language	Tokens	Bisegments	Language	Tokens	Bisegments
German Original	11,049,986	702,731	English Original	13,123,320	806,226
Spanish Translation	11,581,345		Spanish Translation	13,746,700	
Spanish Original	10,266,656	564,089	Spanish Original	12,864,001	703,343
German Translation	10,342,622		English Translation	13,176,524	
Total PaGeS	**43,240,609**	**1,266,820**	**Total PaEnS**	**52,910,545**	**1,509,569**

Due to copyright restrictions on both the originals and the translations, and because we have been unable to obtain explicit permission from all copyright holders, the works are not included in their entirety, but only in fragments.

Not only are the texts included in the core corpora of a high quality, but they also provide a higher level of lexical diversity. Lexical diversity refers to "the ratio between the number of unique word forms (types) and the number of running words (tokens) in the corpus" (Zanettin, 2012, pp. 14-15). The higher the ratio, the greater the lexical diversity of the text. In the case of PaCorES, which consists of corpora of very different lengths, to calculate the lexical diversity we have used the mean segmental type-token ratio (MSTTR), which consists of the average TTR for each non-overlapping segment of equal size (for every 1000 tokens).[11] When compared to the supplements (see Table 5), we can observe that the texts of the core corpora present the highest ratios, with the only exception being PaGeS for Spanish, which is surpassed by fictional works as well, albeit translated.

Table 2. Lexical diversity (MSTTR) of the core corpora of PaGeS and PaEnS.

PaGeS		PaEnS	
German	0.575	English	0.531
Spanish	0,452	Spanish	0.535

[10] The full list of authors and works can be found here: https://rb.gy/n8d83 (PaGeS) and https://rb.gy/e0z7g. (PaEnS)
[11] https://wordcruncher.com/pdf/Phrase%20Compare%20TTR%20Stat%20formulas.pdf

3.2 PaCorES supplements

The second distinct group of texts in PaCorES, whose inclusion was not initially planned but came about for various reasons, is known as the supplements. For specific users and applications, such as studies in Natural Language Processing, Machine Translation, and lexicography, among others, these data have proven to be a valuable resource, despite not meeting all the aforementioned criteria. Additionally, the expansion of the core corpora progresses slowly due to the highly time-consuming manual processing involved. As a result, we offer a separate group of data materials with an adequate level of quality and textual variety, in many cases already aligned, even though we may not always be able to verify the original language, or the alignment may not have undergone manual review. These supplements serve as an additional option for users to consider during their consultation.

In these texts, the original language is not always specified; when such information is available, it has been indexed along with the other metadata. Only the alignment of the Ted-Talks has been manually reviewed as described in Section 5.2. For all other supplemental texts, no manual alignment check has been conducted. In order to minimize misalignments as much as possible, highly unequal bisegments (see Section 5.2) have been excluded as these are more prone to misalignments. Moreover, segments over 350 characters regardless of language were filtered out to avoid overly lengthy segments (see Section 5.1).

The main collections that currently comprise the supplements are as follows:

1. Europarl v7: This subcorpus compiles the proceedings ('Verbatim Reports of Proceedings') of the European Parliament from 1996 to 2011.[12] It is comprised of verbatim transcripts of each speaker's utterances during the plenary meetings of the European Parliament, along with translations into languages of other member states. The subcorpus was extracted by Philipp Koehn (2005), with the release in 2012 being the most recent version available.[13]

2. Ted-Talks:[14] This subcorpus collects transcriptions (mostly original English) and their translations into Spanish, German, French, and Chinese from talks spanning 2006 to 2020.

[12] The European Parliament ceased translating the proceedings into all EU languages in the second half of 2011. The Verbatim reports of plenary sessions are still available on the European Parliament's website but speeches are only published in the languages in which they were delivered.

[13] http://www.statmt.org/europarl. In PaCorES the cleaned and corrected version CoStEP Corpus (Graën / Batinic / Volk 2014) is used as well as its metadata <http://pub.cl.uzh.ch/purl/costep/>.

[14] https://www.ted.com/talks. We use the version provided by the Web Inventory of Transcribed and Translated Talks https://wit3.fbk.eu/ (Cettolo / Girardi / Federico 2012). Thanks are due to Mr. Mauro Cettolo, who kindly made the talks from 2018 to 2021 available to the corpus.

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3. Global-Voices:[15] This subcorpus consists of texts written by an international, multilingual, primarily volunteer community of writers, translators, academics, and human rights activists. A group of Lingua volunteers make the stories available in dozens of languages.
4. Part of the United Nations Parallel Corpus v1.0[16] is included in the Chinese PaCheS corpus. It comprises official records and other parliamentary documents of the United Nations. The current version of the corpus contains content that was produced and manually translated between 1990 and 2014, including sentence-level alignments (Ziemski et al., 2016).
5. A collection of fictional works: In these subcorpora—only available in PaGeS and PaFreS— both texts are translations from a third original language. In the case of PaFreS, five original works in French from the 19th century have been added.[17]
6. For the Chinese corpus there are two additional resources: Wikimatrix, a collection of automatically extracted parallel sentences from the content of Wikipedia articles, and Paracrawl,[18] created automatically by crawling multilingual websites that are then aligned at the sentence level.

The following tables show the number of tokens and bisegments in the different collections that make up the supplemental corpora.

Table 3. Composition of PaGeS (DE-ES) and PaEnS (EN-ES) in supplements.

Bisegments	Tokens	Lang	Collection	Lang	Tokens	Bisegments
1,586,374	39,726,336	DE	**Europarl**	EN	39,481,818	1,536,548
	43,662,223	ES		ES	41,476,923	
310,968	5,599,587	DE	**TED-Talks**	EN	8,240,550	431,095
	5,805,812	ES		ES	7,860,866	
152,077	2,463,109	DE	**Fiction, Works Global Voices**	EN	14,020,955	667,838
	2,479,765	ES		ES	15,039,034	
152,077	**99,736,832**		**TOTAL**		**126,120,146**	**667,838**

15 https://globalvoices.org/.

16 https://shorturl.at/eyDS9

17 For the lists of works see https://www.corpuspages.eu/corpus/search/listofworks?lang=en&format=&search_context=0 (German) and https://www.corpuspafres.eu/corpuspafres/about/about?lang=en&format= (French)

18 For more detailed information, see https://arxiv.org/pdf/1907.05791.pdf (Wikimatrix) and https://aclanthology.org/2020.acl-main.417.pdf (Paracrawl).

Table 4. Composition of PaFreS (FR-ES) and PaCheS (ZH-ES) in supplements.

Bisegments	Tokens	Lang.	Collection	Lang.	Characters/ Tokens*	Bisegments
1,944,439	59,651,196	FR	**Europarl UNO**	ZH	24,031,462	1,219,488
	53,583,854	ES		ES	9,103,395	
50,285	1,179,414	FR	**Global Voices Paracrawl**	ZH	15,235,788	498,145
	1,097,488	ES		ES	7,534,822	
57,733	1,399,200	FR	**Fiction, Works Wikimatrix**	ZH	12,546,473	360,968
	1,282,476	ES		ES	6,028,866	
254,222	5,197,553	FR	**TED-Talks**	ZH	3,695,097	98,713
	4,686,514	ES		ES	1,740,554	
254,222	**128,077,695**		**TOTAL**		**79,916,457**	**98,713**

*For Chinese, counting is done in characters, since one character corresponds more closely to one token: ratio ranges from 2 to 3 between Spanish tokens and Chinese characters.

Table 5 shows the lexical diversity (see section 3.1) of the various collections and corpora. The highest values of each corpus are in bold. As a general trend it can be observed that the fictional works present a higher lexical diversity than the other types of text, although they do not reach the values of the core corpora. (see above).

Table 5. Lexical diversity (MSTTR) by corpora and collections in the supplements.

Collection	PaFreS		PaGeS		PaEnS	
Europarl	French	0.496	German	0.542	English	0.485
	Spanish	0.482	Spanish	0.481	Spanish	0.465
TED	French	0.531	German	0.543	English	0.476
	Spanish	0.534	Spanish	0.506	Spanish	0.506
Global Voices	French	0.497			English	**0.518**
	Spanish	0.489			Spanish	**0.528**
Fictional Works	French	**0.545**	German	0.545		
	Spanish	**0.537**	Spanish	**0.569**		

4. Text preprocessing, textual mark-up, and metadata

This section deals with those steps that the texts for the different PaCorEs core corpora (see 3.1.) undergo before they are segmented and aligned (Section 5). These relate to the areas of text normalization, annotation of textual divisions, and annotation of metadata.

Prior to text normalization, both versions of the work are assessed to see if they consistently match each other or if there are differences between them (i.e., chapters or parts of chapters missing). If these mismatches are significant, the work is discarded.

Text normalization includes the following operations:

- encoding the plain text files in the UTF-8 standard, the format recommended by McEnery and Xiao (2005) for corpus construction (Zanettin, 2012, p. 74)
- removing any element that isn't part of the work itself. That includes (i) paratextual elements that are not parallel, i.e., those elements that appear in only one of the language versions of the works, such as informative paratexts (editorial information), title pages, authors' acknowledgments and dedications, translators' forewords, translators' notes and their calling signs, translators' glossaries, translators' acknowledgments and dedications; (ii) epitextual elements such as table contents, promotional blurbs, promotional references to other works by the same author or by the same publishing house, biographical notes, synopses, and bibliographical references
- standardizing txt files by cleaning them of (i) any extralinguistic elements that might remain after pdf to txt conversion, such as page numbers or end-of-line hyphenation (both seldom needed), line breaks inherited from the pdf conversion; (ii) ornamental text division signs such as clusters of three stars (* * *); tab marks (either individual or groupings); several paragraph marks together, which are replaced by only one paragraph mark, and standardizing the ellipsis mark (three individual dots are replaced with the standardized character «…».

All these normalization tasks are executed with the help of regular expressions. The pieces of software used for this purpose are either the free software Notepad++ or the licensed software EmEditor.[19]

As for the structural annotation, parts and chapters of a work are signaled with specific tags. The tags for the parts of a work are placed between curly brackets ({}) and tags for chapters are placed between angular brackets (<>); arabic numbers are used. These tags are useful at a later stage of the processing: during the alignment process, the aligning algorithm will use them as anchors for recognizing the beginning and the end of parallel text sections.

The extralinguistic annotation or text metadata are collected in a structured manner via a spreadsheet that allows for a conversion of the relevant information into xml format. The collected metadata can be divided into two different groups: text-level metadata, and project-level metadata.

Text-level metadata include, firstly, the nature of the text (original or translation), the status of its Spanish version (either original or translation), and language of the original version. These metadata result in a five-number code identifying (i) the corpus to which the text belongs (PaGeS, PaEnS, PaChEs, PaFreS), (ii) the translation direction, and (iii) the text itself. Further text-level metadata are the text's dialectal variant (resulting in a

[19] https://notepad-plus-plus.org/ and https://www.emeditor.com/

four-letter code, e.g., *eses* for European Spanish, *esch* for Chilean Spanish, etc.),[20] its genre/subgenre, and reviewer (team member[s] in charge of the preprocessing tasks for that text and the manual revision of the alignment).

Project-level metadata include information about the text material that results from the processing tasks: character, token, and word number for the foreign language and for the Spanish text.

5. Segmentation and alignment

5.1 Segmentation of the data

Segmentation involves breaking up a string of written text into smaller processing units. The type of units (document, paragraph, sentence, or word) determines the type of alignment that can be subsequently established. Proper segmentation is essential for the performance of the automatic alignment process since erroneous segmentation often leads to a number of misalignments, as Jörg Tiedemann (2011, p. 9) indicates.

As in most parallel corpora, in the PacorES project the basic unit of alignment is the sentence, which is described in detail below. The sentence segmentation task involves identifying sentence boundaries between different sentences (Palmer, 2000, p. 11). The criteria for a sentence boundary are a punctuation mark such as a period, exclamation point, question mark (.!?), or occasionally a semicolon, followed by whitespace. But this task poses a few challenges, primarily because these marks are not unambiguous. So, a period may denote in Spanish, like in many other European languages, in addition to the end of a sentence, an abbreviation, an ellipsis, or a decimal point, among others. To prevent the incorrect assignment of sentence boundaries, the final punctuation rules accommodate those exceptions.

Another major issue in the segmentation process is that in literary texts, certain authors or works, due to their specific literary style,[21] may have long stretches of text without any final punctuation marks. In this case, automatic segmentation leads to very long segments that would be unsuitable for the purposes of the project. The shorter the bisegments the search engine returns, the easier it is for the user to spot equivalences for a given phenomenon. For this reason, both segments are manually subdivided after automatic alignment. The maximum number of characters allowed for a segment in either language has been set to 300. Segments exceeding this length are split by inserting manual break marks in suitable places in both the L1 and the L2. The average segment length (ASL) of a work is calculated by dividing the total number of characters by the number of bisegments and multiplying by 1000.

$$ASL = \frac{ChN(L_1)+ChN(L_2)}{BisegN} * 1000$$

[20] See the full list at https://www.corpuspages.eu/corpus/help/help?lang=en

[21] For example, authors like Javier Marías or Leonardo Padura stand out for writing long pieces of text without final punctuation marks.

The average segment length (ASL) ranges from 0 to 1, with a lower score indicating that fewer segments will need to be manually cut. The ASL can vary significantly from work to work depending on the author's style.[22] The average ASL for all texts in the core corpus after subsegmentation is 0.161. In the overall manual review, this task is the most time-consuming.

5.2 Alignment and manual review

Sentence alignment is the task of identifying correspondences between sentences in each half of a bitext. The first proposals for automatic sentence alignment date back to the early 1990s and can be categorized into length-based and lexical matching approaches (Tiedemann, 2011, p. 38). To address the limitations of these methods, hybrid approaches such as Hunalign[23] (Varga et al., 2007) and Gargantua (Braune and Fraser, 2010) were later introduced, combining both length-based and lexical matching strategies.

In the PacorES project the hybrid open-source software LF-Aligner, that relies on the Hunalign algorithm, and occasionally Gargantua[24] are used because they have achieved the best results in several tests.[25] LF-Aligner produces not only one-to-one alignments, but many-to-one and one-to-many alignment pairings as well, which are needed to ensure that all the input sentences are actually aligned. (Xu et al., 2015, p. 5). The output is a sequence of bilingual sentence pairs (bisegments) in tab delimited format.

The accuracy of alignment depends largely on the type of texts. It is well known that all systems performed poorly on literary texts compared to other types of texts such as administrative or technical (Xu et al., 2015, p. 1; Zanettin, 2012, p. 155). Moreover, within fictional texts, the degree of correspondence of the bitext varies depending on the author, the translator, the texts themselves, and the direction of the translation.[26]

After the text has been automatically aligned, each bisegment receives a unique ID, composed of the 5 numbers of the work (see above) and 7 sequential numbers, separated by a hyphen, which correspond to the bisegment itself. This ID is crucial for the manual

[22] To mention two extreme examples, Leonardo Padura's work *The Man Who Loved Dogs* (11048) has an ASL of 0.556, while Louise Penny Louise's *The Beautiful Mistery* (10062) has an ASL of 0.11.

[23] This tool is representative of the current state-of-the art in sentence alignment and has been widely used in multilingual projects, like Europarl (https://www.statmt.org/europarl/), Opuscorpora (https://opus.nlpl.eu/tools.php), InterCorp (https://intercorp.korpus.cz/?lang=en), etc.

[24] LF-Aligner: https://sourceforge.net/projects/aligner/, Gargantua: https://github.com/braunefe/Gargantua

[25] The following aligners were tested, among others: ABBYY Aligner 2.0 (https://abbyy.store/aligner-corporate/), Youalign (https://youalign.com/) and WinAlign (https://www.trados.com/solutions/translation-alignment/), commercial tools for aligning parallel texts and creating Translation Memory databases; Champollion http://sourceforge.net/projects/champollion/, a lexicon-based sentence aligner; bitext https://sourceforge.net/projects/bitext2tmx/.

[26] Particularly challenging is the alignment of Chinese literary texts. The above-mentioned aligners have here a much lower level of accuracy. Since it requires very laborious and time-consuming correction work, there are very few texts in the core corpus of PaCheS, so it is not offered online for the time being. To go deeper into this issue would go far beyond the scope of this paper. We simply mention that we are testing with non-monotonic software, specifically with Vecalign (Thompson & Koehn 2019) It employs sentence embeddings to estimate alignment and it has shown promising results in aligning sentences with challenging cases where the sentence structure differs significantly, as in the case of Chinese.

review of the alignment, as it allows the segments to be sorted without losing the original order of the text and recalled throughout the different steps that will be described in the subsequent paragraphs of this subsection.

After subsegmentation (see Section 5.1), the mapping between the corresponding sentences is checked. The first step is to check for automatic correspondences of 1:0 or 0:1. These alignments may be due to omissions or additions in the target text (L2) with respect to the source text (L1). In both cases, the following is indicated: if a piece of text is omitted in L2, it is marked as [n_t_s] (non-translated segment); if it has been added in L1, it is marked as [a_s_t] (text added in the translation). This can be seen in Table 6. These marks, which might seem uninteresting to some users, play a crucial role in analyzing specific instances of translator intervention (Munday, 2007).

Table 6. Omission and addition in the translation (L2).

01076-0000299	Ponía enormes cantidades de grasa de oca en todo, al estilo de su Belgrado natal,	Sie benutzte riesige Mengen Gänseschmalz, wie sie es aus ihrer serbischen Heimat kannte,
01076-0000300	y yo ya había engordado un par de kilos.	[n_t_s]
11041-0002935	—¿No la viste, anoche?	"Didn't you see her last night?"
11041-0002936	[a_s_t]	Oscar asked.
11041-0002937	—¡Claro que la vi!	"Of course I saw her!"

In other cases, alignments of 1:0 and 0:1 are due to misalignments resulting from a sentence having been split into more than one sentence in the target text (correspondence 1:<1, Table 7) or, inversely, several sentences have been merged into one (correspondence <1:1, Table 8). Here the necessary corrections are made.

Table 7. Incorrect alignment 1:2.

11048-0006152	—¿Te va a dar una rabieta? —la voz de Tom destilaba ironía—.	"Are you going to have a tantrum?"
11048-0006153	No te voy a repetir lo que ya sabes.	Tom's tone was sarcastic.
11048-0006154		"I'm not going to repeat what you already know.

Table 8. Incorrect alignment 2:1.

11048-0002714	—Mi amigo murió…	
11048-0002715	Y cuando yo muera, y cuando muera la otra única persona que, según sé, conoce casi todos los detalles, esa historia se perderá.	My friend died… and when I die, and when the only other person dies who, as far as I know, is familiar with all the details, that story will be lost.

Finally, those unbalanced bisegments are reviewed that are more likely to be misaligned in terms of the number of characters. Since we have found that the relevance of the imbalance depends on the number of characters, the less characters the bisegment has the less relevant the imbalance is. To measure the level of imbalance (IL) we apply the following ratio, where *x* represents the total number of characters in the L1 segment and *y* in the L2 segment. The formula uses logarithms to reduce the effect of the number of characters.

$$IL = 1\frac{log(x)-log(y)}{max(log(x),log(y))}$$

The closer the values are to 1, the more balanced the two segments are and the more unlikely a misalignment is. In the manual review we focus on the segments with a value below <0.5.

Table 9. Unbalanced incorrect alignment.

00081-0004868	Bajó las ventanillas y condujo así, suspirando confusa y salpicando el interior del coche con las gotas que llevaba adheridas por fuera.	Verstört seufzte sie auf und ließ die Fensterscheiben herunter.	0.36
00081-0004869	El sonido del teléfono, que reposaba en el asiento del copiloto, interrumpió un hilo de pensamientos oscuros.	Die Tropfen, die außen daran gehaftet hatten, spritzten ins Wageninnere. In diesem Augenblick klingelte das Handy, das auf dem Beifahrersitz lag.	0.42

Note that this ratio can give both false positives and false negatives. Table 10. False positive correct alignment 10 presents examples of false positives, i.e., unbalanced segments that nevertheless are correctly aligned.

Table 10. False positive correct alignment.

01076-0000764	Un escalofrío me atenazó la espalda.	Mich schauderte.	0.29
10043-0010055	Far from it.	Las cosas no eran así, ni mucho menos.	0.21

Occasionally sentences are reordered when translating, but Hunalign, like most sentence aligners, is monotonic, meaning that the relative order of sentences is preserved and it is unable to come up with crossing alignments, i.e., segments A and B in one language corresponding to segments B' A' in the other language. In these cases, a simple operation of merging the sentences into larger units must be performed to find a monotonic mapping for the corresponding parts, even at the cost of longer segments, as in the following example:

Table 11. Crossing alignment.

11048-000283	*Demasiado tarde comprendió que había menospreciado la inteligencia* del ex seminarista georgiano, y no había sido capaz de valorar su genio para la intriga, su desvergüenza para mentir y armar componendas.	Incapable of appreciating the Georgian ex-seminarian's genius for intrigue, his shamelessness in lying and putting together shady deals, Lev Davidovich *understood too late that he had underestimated his intelligence*,

This method allows for more efficient manual revision of the automatic alignment, saving time compared to a comprehensive manual review of each bisegment. It strikes a balance between minimizing tedious review work and maintaining a high level of accuracy.

Figure 5 outlines the PaCorES workflow. Once the texts have been aligned, they are PoS-tagged in each individual language before being rejoined and indexed. It should be noted here that due to technical difficulties, only the untagged versions are currently indexed despite having undergone PoS-tagging. Therefore, we do not address PoS-tagging in this paper.

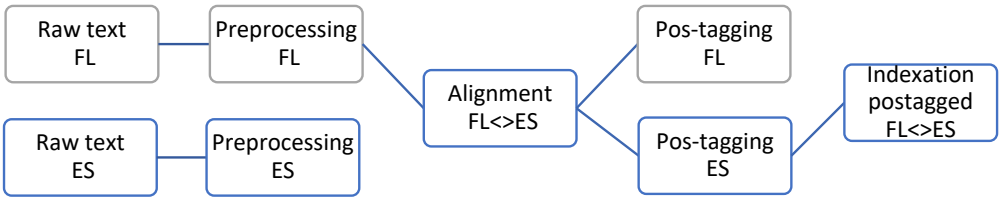


Figure 5. Workflow for the creation of the PaCorES core corpora.

6. Search and display features

Once the texts are indexed, the resulting database can be queried with the help of the SolR search engine (Version 7.5.0).[27] In this section, attention is drawn to the ways the user can query the corpus and the kind of information included in the search results. In both aspects we have tried to meet the needs of a wide range of users, including experts and non-experts.

6.1 Search features

The PaCorES corpora can be queried at three different levels: the first level corresponds to the standard search interface, the second to the advanced search interface, and the third to an "expert level". Figure 6 illustrates how the user can alternate between the standard and the advanced search modes in the case of the PaEnS corpus.

[27] http://lucene.apache.org/solr/ and https://solr.apache.org/docs/7_5_0/



Figure 6. Toggling between the standard and advanced search modes in the PaCorEs corpora (PaEnS).

At the first level (standard search interface), searches, by default, are performed:

- based on lemma (i.e., the character chains are interpreted as forms of a lemma and any segment containing forms of that lemma is added to the search results). If querying the form *back*, the user will be presented with both segments containing *back* as a preposition and segments containing back as a noun. To search for an exact word, the search term must be placed in quotation marks
- on the core corpus, although the user can choose to include the supplements in the query by ticking the respective boxes (see Figure 6). This allows the user to minimally select the kind of language he or she wants to search for (usually more general language in the core corpus vs. specialized language in the case of the Europarl, TED, or Global Voices supplements, which contain instances of administrative, popular science, and journalistic language, respectively)
- without differentiating between original and translated texts.

At the second level (advanced search interface), the user can choose between the following options (see Figure 7):

- querying specific works or groups of works by selecting the specific ID numbers, authors, publication years, genres, or varieties — US English, Mexican Spanish, Austrian German, etc.
- in the case of the core corpus, performing the queries on original works, translated works or both. In the case of the Europarl supplement, this can be done by selecting the corresponding language variety/varieties in the field “dialectal version”
- searching for a specific expression in one language which has (or does not have, see below) a specific equivalent in the other language, by placing each expression in the corresponding language field.

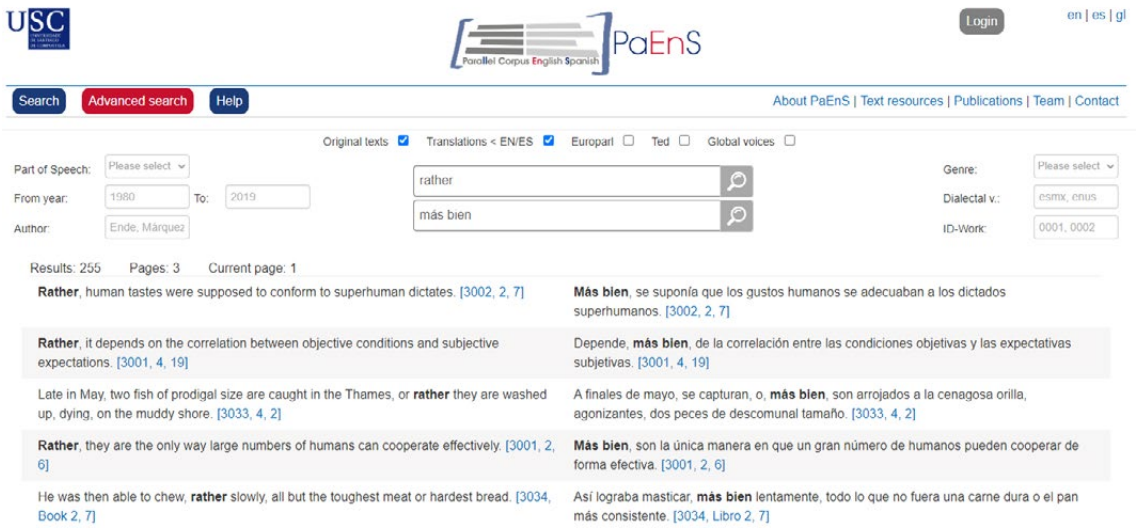


Figure 7. Advanced search interface in the PaCorES corpora (PaEnS).

The third or "expert" level does not have a specific search interface. Expert level queries can be performed both in the standard and in the advanced search interface. At this level, the user (typically a linguistics, modern language, or translation studies scholar) can take full advantage of the corpora by using the powerful query syntax of the underlying query tool SolR (Version 7.5.0), and if needed, in combination with regular expressions (Regex). Some clarifications are pertinent here:

- Expert searches can of course be combined with the possibilities of fine-tuned queries offered by the advanced search interface.
- The [SS] operator (meaning "SolR search") must precede any query chain at the expert level.
- The expert search operators are also used in browsers and bibliographic databases, so the expert user may already be acquainted with them. They include the wildcards * (for multiple characters) and ? (for any single character), the tilde ~ (either as the fuzzy search operator and as part of the distance operator ~1, ~2, etc.), as well as the Boolean operators NOT and OR (the Boolean operator AND underlies any search input consisting of two or more character-chains separated by a whitespace).
- On the Help page for each corpus a number of simple-word, multi-word and bilingual sample queries are displayed and explained in different tables for the user to copy and paste into the search fields. He or she can then observe the results and build his or her own queries by adapting or enlarging the samples.[28]

[28] See, for example, the Help page at the PaGeS corpus: https://www.corpuspages.eu/corpus/help/help?lang=en&format=

6.2 Display features

Display features are also oriented to make interacting with the PaCorES corpora amenable to different user groups, as will be explained in this subsection.

On the one hand, the following display features are oriented towards the general user (an example of these features can be seen in Figure 7, above):

- Matches are shown in a side-by-side display that is easier to process visually than the KWIC display typical of monolingual corpora (Doval & Jiménez Juliá, 2019: 314-315).
- The left column corresponds to the original text and the right column corresponds to the translated text, be they English or Spanish (for example in the case of PaEnS);
- Matches appearing in the original texts are always shown first.
- The queried expression(s) appears in bold, regardless of whether it appears in the original texts, in the translated texts, or in both.
- Matches are presented in groups of 100; to avoid over-representation of a specific work/author in the query results, the matches are randomized and shuffled for each query. That means that querying the same expression twice or more will present the user with different results each time.

On the other hand, the following display features might be of interest for specific, more advanced user groups:

- Users involved in scholarly writing who include examples in their texts obtained from querying the PaCorES corpora will find that for each match the bibliographical reference of both the original and the translated part of the bisegments (author, original title, translated title, place of publication of both original and translation, and the part and/or chapter to which the match belongs) are available. This information can be accessed in a new window via a short link placed after the matched text (see Figure 8). Moreover, this window features a context selector widget, offering the user the ability to choose between three context widths.

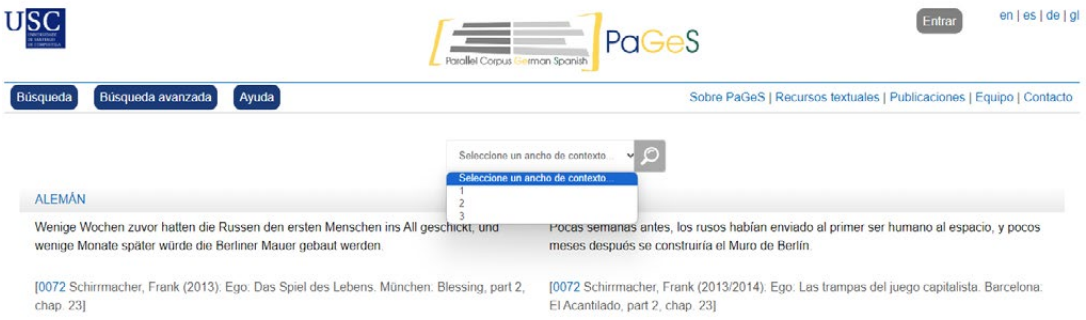


Figure 8. Bibliographic information and context width selector (PaGeS).

- In combination with the advanced search, the bibliographical information is of special interest for expert users performing dialectally and temporally focused searches.
- Registered users can download a CSV file with search results for further processing.[29]
- For those users interested in Translation Studies, signs of translator intervention have been preserved with the help of the labels denoting additions and omissions (see Section 5); similarly, the lack of immediate (preceding or following) context is signaled as well with the label n_i_t (non-included text).

7. Summary and outlook

In this article, we have provided an overview of the PaCorES collection (core corpora and supplements) offering a glimpse into its features and the possibilities it holds for various user groups. Now we will summarize the specificities that set it apart within the broader landscape of parallel corpora.

PaCorES is not a multilingual corpus but a collection of bilingual corpora with Spanish as the central language. To the best of our knowledge, it is the only project with Spanish as its core language. Moreover, it offers a particular language pair, Chinese/Spanish, which is a very uncommon resource and holds great promise in terms of the potential number of users.

On the other hand, the PaCorES corpora are fully accessible and stable. Accessibility is due to the fact that the corpora can be freely queried online on a browser-independent basis. Stability is warranted as the PaCorES corpora are successively released in clearly identified versions, so that researchers can keep track of the source of their findings.

As for the central focus of the project, the core corpora, PaCorES includes a sizeable collection of contemporary prose texts (fiction and non-fiction), which are seldom found in the online parallel corpora currently available. Nor do available online parallel corpora usually include fictional informal spoken language, a kind of register that is particularly frequent in children's and young adult literature. Thus, these resources represent a highly valuable asset in our bilingual corpora. All texts in the core corpora offer proven quality and provide reliable human translations. Additionally, all text processing, including alignment, has been subjected to a comprehensive revision.

The core corpora are annotated with rich meta information, documenting not only the full source of the texts, but also other data such as translation direction, directness, and translator intervention.

[29] Registration is free. Unregistered users can only view the first 10 results. For more information about the terms of use and copyright see https://www.corpuspages.eu/corpus/about/privacyterms?lang=en, https://www.corpuspaens.eu/corpuspaens/about/privacyterms?lang=null.

PoS-tagged texts have not been implemented in the search yet, although we plan to do so in the near future. This will enable the user to search by morpho-syntactic categories. Additionally, we plan to offer several sorting options for the results display, specifically by the preceding and following context.

Finally, not only the PaCorES components but the project itself are designed with flexibility in mind, as potentially new language pairs can be added within the same corpus architecture and new texts can be added to the individual components.

All these features make the PaCorES corpora a truly multifunctional resource that caters to a diverse range of users. They meet the needs of linguistic specialists across various fields such as NLP, lexicography, contrastive linguistics, translation studies, or language and translation teaching. Moreover, the user-friendliness of its search and display features along with the speed of recall enable the PaCorES collection to be used as a teaching resource in the language and translation classroom. Here, intermediate to advanced learners can discover a plethora of translation suggestions for a given item, directly presented through reliable examples of use.

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Los verbos del corazón en el CORDANA (Corpus Diacrónico Andalusí del Árabe): un marcador de posición epistémica

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Resumen: El presente estudio aborda el uso de dos verbos del corazón o verbos mentales de expresión de duda, *ẓanna* 'pensar/creer' y *ḥasiba* 'pensar/suponer', en primera persona del singular y en árabe clásico dentro del contexto peninsular ibérico. El objetivo principal es mostrar la relevancia del análisis de estos verbos para perfilar la autoexpresión en la producción andalusí. En primer lugar, se explica el proceso de construcción del CORDANA (Corpus Diacrónico Andalusí del Árabe) y los parámetros culturales que se han tenido en cuenta. Posteriormente, se desgrana la presencia de la falsa primera persona en el corpus y se organizan las instancias correspondientes a la voz autorial de los dos verbos, identificando patrones relevantes. Finalmente, se discuten los datos analizados, contextualizando las prácticas de autores destacados y poniendo en valor el desempeño sintáctico de estos verbos en la definición de su posición epistémica. Los resultados muestran el uso de los verbos del corazón en presente para expresar opinión y duda, en relación con determinados dominios, géneros y épocas, así como una gradación de la incertidumbre proyectada sobre las proposiciones, en función de su posición respecto a estas y de la intervención de ciertos elementos léxicos que refuerzan o mitigan la duda.

Palabras clave: *verbos mentales, punto de vista, árabe clásico, estudios ibéricos, lingüística de corpus.*

The verbs of the heart in the CORDANA (Diachronic Andalusi Corpus of Arabic): a marker of epistemic position

Abstract: The present study addresses the use of two verbs of the heart or mental verbs of expression of doubt, *ẓanna* 'to think/believe' and *ḥasiba* 'to think/suppose', in the first person singular and in Classical Arabic within the Iberian context. The main goal is to show the relevance of analyzing these verbs for shaping self-expression in the Andalusi production. First, it explains the building process of the CORDANA (Diachronic Andalusi Corpus of Arabic) and the cultural parameters that have been considered. Subsequently, it unpacks the presence of the false first person in the corpus and organizes the instances corresponding to the authorial voice of the two verbs, identifying relevant patterns. Finally, it discusses the analyzed data, contextualizing the practices of prominent authors and highlighting the syntactic performance of these verbs in defining their epistemic position. The results show the use of the verbs of the heart in the present tense to express opinion and doubt in connection with domains, genres, and periods, as well as a gradation of the uncertainty projected on the propositions, depending on their position and the intervention of certain lexical elements that reinforce or mitigate the doubt.

Keywords: *mental verbs, stance, Classical Arabic, Iberian Studies, Corpus Linguistics.*

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1. Introducción

El estudio de la codificación de la posición individual del hablante en su uso del lenguaje a través de la lingüística de corpus tiene ya cierto recorrido, desde el trabajo seminal de Biber y Finegan (1989) sobre el punto de vista (*stance*), en el que se identificaron una serie de marcadores gramaticales y semánticos en lengua inglesa pertenecientes a las dos áreas de la evidencialidad y el afecto. La evidencialidad es una categoría lingüística que indica la fuente de información, el modo en que esta es adquirida (Aikhenvald, 2005, pp. 3-4). Dentro de la evidencialidad se distinguía entre la certeza y la duda, categorizando una serie de adjetivos, verbos, adverbios y marcas modales. Los verbos de certeza y de duda como 'saber' y 'creer' forman parte de los llamados 'verbos mentales' o 'psicológicos', que, en primera persona del singular, constituyen una de las marcas explícitas de expresión subjetiva, pues, a través de estos, el sujeto sitúa su experiencia individual del mundo pensado o sentido, constituyéndose como agente epistémico.

La gramática funcional distingue entre cláusulas de procesos mentales y cláusulas materiales, pues, mientras las segundas atienden a nuestra experiencia del mundo material, las primeras se centran en nuestra experiencia del mundo de nuestra propia consciencia.[1] Las cláusulas mentales están conformadas por un sintiente (agente), un proceso (verbo) y un fenómeno, donde el participante que interviene en el proceso mental (el sintiente o cognoscente) es un agente consciente que siente, piensa, quiere o percibe. Estas cláusulas pueden ser de cuatro tipos, con distintos verbos que hacen la función de proceso: perceptivas (percibir, sentir, oler, etc.), cognitivas (creer, suponer, imaginar, recordar, etc.), desiderativas (creer, desear, rechazar, etc.) o emotivas (amar, odiar, etc.). Estos tipos no son excluyentes unos de otros, sino que pueden coincidir en un mismo proceso, como cuando 'ver' significa 'percibir visualmente' y 'comprender' al mismo tiempo (Halliday y Matthiessen, 2014, pp. 245-258).

En la gramática de la lengua árabe, a gran parte de estos verbos que intervienen en los procesos mentales y cognitivos se les designa como 'verbos de certeza y duda' (*afʿāl al-yaqīn wa-l-šakk*) y suelen tomar un sujeto y dos acusativos a modo de complementos. Los primeros gramáticos árabes los llamaron 'verbos del corazón' (*afʿāl al-qulūb*), para señalar que el acto cognitivo se ejerce a través de un sentido interior u oculto (*bāṭin*) –que hoy designamos como mental–, pues son acciones que no trascienden del sujeto a otros –no forman parte del mundo material–, sino que tienen lugar en su propia alma (*nafs*), como el conocimiento (*ʿilm*), la creencia (*ẓann*) y la duda (*šakk*). Los verbos de certeza más comunes son: *raʾà* 'ver/percibir'; *ʿalima* 'saber'; *darà* 'saber', *waǧada* 'encontrar/percibir; y los de duda son *ẓanna* 'pensar/creer', *ḥasiba* 'pensar/suponer', *zaʿama* 'pensar/creer', *ʿadda* 'contar/tener por', *iʿtabara* 'considerar' (Saad, 1982, p. 56; Galāyīnī, 1994, vol. 1, pp. 36-41; Ibn Yaʿīš, 2001, vol. 4, p. 318).

[1] "While 'material' clauses are concerned with our experience of the material world, 'mental' clauses are concerned with our experience of the world of our own consciousness" (Halliday y Matthiessen, 2014, p. 245).

Los verbos de duda constituyen la categoría gramatical conocida como *ẓanna* y sus hermanas (*ẓanna wa-aḫawātuhā*), de los llamados 'términos cancelatorios' (*nawāsiḫ*), que entran a la oración nominal[2] abrogando su sintaxis básica (Paradela, 2005, p. 75). La cancelación se traduce en el cambio de la flexión nominativa del sujeto y el predicado nominal de estas oraciones a la flexión acusativa, que señala la transformación de estos componentes oracionales en complementos de estos verbos o, dicho de otro modo, indican que la duda de dichos verbos se ha proyectado sobre esa proposición, como en las oraciones (1) y (2).

(1) *Zayd-un aḫuka*
Zayd es tu hermano

(2) *ẓanantu Zayd-an aḫāka*
creí [que][3] Zayd era tu hermano

Los verbos de duda *ẓanna* y *ḥasiba* tienen una diferencia de matiz semántica. *Ḥasiba* comparte raíz (*ḥ-s-b*)[4] con el verbo *ḥasaba* 'contar' e implica un proceso racional de valoración, mientras que *ẓanna* hace referencia a la confusión mental motivada por cualquier causa (Sāmirrāʾī, 2014, vol. 1, pp. 333-334) –analizaremos la relevancia de estos verbos en contextos de producción de conocimiento científico y de aplicación de la jurisprudencia. Los verbos 'creer' (*think*; *believe*) y 'suponer' (*suppose*) forman parte de la clase de predicados asertivos débiles no fácticos, según la clasificación de Hopper (1975, pp. 92-102). Los predicados asertivos son aquellos en los que el sujeto de la oración tiene una opinión –un acto mental, un proceso o una actitud– afirmativa respecto al valor de verdad de la proposición del complemento. En el caso de estos verbos, el sujeto puede tener ciertas reservas respecto a dicha proposición, que no considera una declaración de verdad absoluta. En la lengua inglesa, el uso óptimo de esta clase de predicados se da en el presente simple con un sujeto en primera persona del singular –veremos si también es el caso en la árabe.

Los estudios sobre los verbos mentales se suelen centrar en las lenguas modernas (García-Miguel y Comesaña, 2004; De Saeger, 2007; El-Kassas, 2007; Verdaguer, 2010) y, en menor medida, en las clásicas, como el latín (Risco García, 2022). El presente estudio trata de paliar esta laguna abordando el uso de los dos verbos de duda *ẓanna* y *ḥasiba* en primera persona del singular y en árabe clásico dentro del contexto peninsular ibérico, utilizando además la lingüística de corpus como método de investigación. El objetivo principal es mostrar la relevancia del análisis de los verbos del corazón para delimitar el fenómeno de la autoexpresión individual en la producción andalusí. En este sentido se busca responder a las siguientes preguntas: ¿qué utilidad puede tener la construcción y uso de un corpus

[2] En árabe, la oración nominal está conformada por un sujeto seguido de un predicado nominal (sin nexo verbal) o verbal –a diferencia de la oración verbal, donde un verbo antecede al sujeto (Paradela, 2005, p. 65).

[3] Se ha puesto la conjunción 'que' entre corchetes para señalar que es un añadido de la traducción al español y que, por lo tanto, no tiene un elemento equivalente en la sintaxis de la oración original en árabe.

[4] Sobre la morfología del árabe y su sistema raíz-paradigma, véase: Ryding (2005, pp. 44-49).

histórico representativo para sondear un fenómeno lingüístico que codifica la expresión subjetiva?, ¿en qué se traduce la consideración de los verbos del corazón como marcadores de posición epistémica desde el punto de vista lingüístico y contextual en dicho corpus?, ¿en qué medida influye su posición sintáctica y la intervención de ciertos elementos léxicos en la expresión autorial de distintos grados de certeza o duda?, y ¿qué relación guarda su uso con determinados dominios del conocimiento, géneros, tipología de autores o etapas históricas de la producción intelectual representada por este corpus? El estudio se divide en tres secciones más conclusiones. En la primera sección, se explica el proceso de construcción del Corpus Diacrónico Andalusí del Árabe (CORDANA). En la segunda, se organizan los datos extraídos de los dos verbos en función de los dominios, géneros, autores y siglos abarcados por el corpus, tratando de identificar patrones de uso, y, en la tercera, se discute la relevancia de los resultados en conexión con el objetivo del estudio.

2. Datos y metodología

Para el estudio del uso de los verbos del corazón en árabe en al-Ándalus, se ha construido un corpus diacrónico de textos andalusíes extraídos del proyecto OpenITI (OpenITI: Versión 2022.1.6; Nigst et al., 2022), un macro corpus de textos árabes premodernos (Belinkov et al., 2016). Utilizando el buscador del proyecto KITAB,[5] se han buscado en el OpenITI aquellos textos en cuyos metadatos figura 'born@andalus'[6] y, por lo tanto, producidos por autores andalusíes nacidos en territorio ibérico. El resultado de la búsqueda se ha descargado en formato Excel con 508 líneas de coincidencias. La selección de textos resultante ha pasado por un proceso de depuración en el que se han excluido aquellos textos que estaban desprovistos de contenido en GitHub, así como aquellos digitalizados con Kraken (Kiessling et al., 2017) y que no habían sido revisados todavía, es decir, no habían sido cotejados con la edición impresa para corregir posibles errores producidos en el reconocimiento óptico automático de caracteres. El corpus de textos resultante es el CORDANA.[7]

Posteriormente, se han revisado todos los autores que quedaban en la selección, y sus obras, comprobando sus biografías en las bases de datos HATA (Fierro, 2014–2019)[8] y PUA (Ávila et al., 2014),[9] en la DB-e[10], en la *Biblioteca de al-Andalus* (Lirola Delgado y Puerta Vílchez, 2004–2012)[11] y en Tarajm.[12] En esta segunda depuración se han identificado algunas inconsistencias, como la presencia de autores orientales o de autores repetidos con errores en la fecha de defunción. Igualmente, se han excluido aquellos autores que no

[5] https://kitab-project.org/metadata/

[6] Esta búsqueda evita otros metadatos como 'visited@Andalus', que identifica a autores no andalusíes que visitaron al-Ándalus. Se ha descartado el metadato 'died@Andalus', porque de los 220 etiquetados con 'died@', solo 3 llevaban esta etiqueta.

[7] Una puesta a prueba de este corpus se presentó en el *14th International Conference on Corpus Linguistics (CILC2023)*, Universidad de Oviedo (10-12 de mayo): https://cilc2023.wordpress.com/book-of-abstracts/.

[8] https://www.eea.csic.es/red/hata/

[9] https://www.eea.csic.es/pua/

[10] https://dbe.rah.es/

[11] https://ibntufayl.org/bibliotece-de-al-andalus/

[12] https://tarajm.com/about

se han podido identificar, textos de autoría dudosa, etc. El corpus resultante consta de un total de 253 textos de 75 autores nacidos en al-Ándalus, cuyas vidas transcurrieron entre los siglos IX y XV. La mayoría de los autores son nacidos en Córdoba (21), Granada –o la antigua Elvira– (15) y Sevilla (7). La Tabla 1 muestra su distribución temporal:

Tabla 1. Número de autores en orden decreciente y según el siglo de su muerte en el CORDANA.

Siglo (m.)	Nº Autores
XI	23
XII	17
X	10
XIII	10
XIV	9
XV	4
IX	2
Total	75

Para poder comprender las dimensiones del corpus y realizar búsquedas significativas en el mismo, se ha optado por el gestor y analizador de corpus AntConc,[13] que permite el manejo de textos árabes (habilitando una lectura de derecha a izquierda). Para que AntConc pudiese procesar los textos del CORDANA extraídos del OpenITI y construir una base de datos, hubo que convertirlos primero al formato TXT. En varios casos, existían varias versiones de una misma obra correspondientes a distintas ediciones o liberarías electrónicas, por lo que se ha optado por aquellas que habían sido extraídas de al-Maktaba al-Shamila,[14] indicada en el nombre del archivo con siglas como: Shamila o Sham.[15] Los documentos de OpenITI vienen con una serie de metadatos (nombre del autor, título de la obra, editor, edición impresa, fuente de la edición electrónica, etc.), así como con anotación estructural conocida como mArkdown[16] que marca diversos aspectos formales (secciones, párrafos, líneas, volúmenes y paginación de la edición impresa, notas de la edición, paratexto, etc.). Para que las búsquedas en el CORDANA no estuviesen contaminadas, se ha eliminado toda esta información adicional, así como las introducciones modernas de los editores de las obras impresas, sus notas, índices y apéndices. En otras palabras, solo se han mantenido los textos árabes premodernos sin ninguna intervención identificable. Toda esta labor se ha llevado a cabo de forma manual, tras la cual el tamaño del CORDANA, según el AntConc, quedó en 37.316.948 unidades lingüísticas (*tokens*).

[13] https://www.laurenceanthony.net/software/antconc/

[14] https://shamela.ws/

[15] Para una información detallada sobre la estructura y organización de OpenITI, véase la documentación del proyecto (https://openiti.org/documentation/), donde vienen indicadas las tres fuentes principales de OpenITI (Sham, JK y ShiaOL), además de información sobre siglas y archivos en GitHub.

[16] https://alraqmiyyat.github.io/mARkdown/

2.1 Dominios y géneros en el CORDANA

En el Excel generado a través de la búsqueda inicial en OpenITI, venía un apartado con el nombre 'Tags', donde figuran una serie de etiquetas relativas a la temática de la obra, al siglo de la hégira de su producción o, como ya se ha indicado, al lugar de nacimiento (born@andalus) o defunción del autor, entre otros. Con el apoyo de las bases de datos y enciclopedias mencionadas, se ha añadido y precisado información relativa a los autores y textos, como la ciudad de nacimiento, el año de defunción de la era cristiana, la dedicación del autor y dos aspectos fundamentales en la construcción del corpus: el dominio (temática general del texto) y género de cada texto. La definición de los dominios y géneros del CORDANA ha venido dada por la propia tipología y temática de los textos que configuran el corpus, en base a conocimientos previos y a los análisis aportados en la *Biblioteca de al-Andalus*, así como a recientes obras que ofrecen clasificaciones útiles, como las relativas a las fuentes jurídicas (Martos, 2022, vol. 1, pp. 46-56).

La Tabla 2 muestra los dominios del CORDANA y el número de obras que figuran en cada de uno de estos:[17]

Tabla 2. Dominios del CORDANA y número de obras en cada uno.

Dominio	Nº Obras
derecho	62
varios	34
religión	34
historia	30
lengua	28
literatura	28
filosofía	21
otros	5
ciencia	4
geografía	2
medicina	2
misticismo	2
política	1
Total	253

En cuanto a los géneros, se ha seguido en su determinación un criterio externo (Biber, 1988, p. 170), fundamentalmente cultural, basado en los títulos que los propios autores dieron a sus obras, en las referencias a estos por parte de los conformantes

[17] Conviene especificar que el dominio 'ciencia' incluye la astronomía, la agronomía, entre otras, como la botánica y la farmacología; 'derecho' hace referencia al islámico (*fiqh*); 'historia' incluye tanto crónicas y narraciones históricas como diccionarios biográficos, entre otros; dentro de 'lengua', tenemos la lexicografía, la gramática, la retórica y la prosodia, y 'literatura' hace referencia a las bellas letras.

de su tradición o en su contenido. Se ha identificado una amplia variedad de géneros (véase Anexo 1), siempre teniendo en cuenta que las obras medievales suelen ser de carácter misceláneo.

Los datos recogidos muestran la presencia dominante de géneros como la *risāla* (epístola literaria o tratado) y el *talḫīṣ* (resumen o paráfrasis) en el dominio 'filosofía', la *tarǧama* (biografía) en 'historia', el *šiʿr* (poesía) en 'literatura' y el *tafsīr* (exégesis coránica) en 'religión'.

3. Análisis

El verbo en árabe solo se conjuga en pasado y en presente, así que, por medio de AntConc, se ha realizado una búsqueda de las instancias de los dos verbos de duda *ẓanantu* 'creí' y *ḥasibatu* 'supuse' en primera persona del singular, tanto en su conjugación en pasado como en presente: *aẓunnu* 'creo' y *aḥsabu* 'supongo'. Esto se ha hecho así porque, como se ha mencionado, existen en inglés importantes diferencias de uso entre ambos tiempos y se ha querido comprobar si es también el caso en árabe.

Antes de comenzar el análisis, conviene señalar una de las características fundamentales del CORDANA, que es la presencia de la falsa primera persona, que hace referencia a aquella que no representa la voz autorial.

3.1 La falsa primera persona en el CORDANA

El CORDANA es una muestra amplia de lo que podemos encontrar en la producción textual medieval en árabe clásico y, como suele también ocurrir en otras producciones europeas de la época, se aqueja de un problema fundamental, la intertextualidad, pero este no es el único motivo de la presencia de la falsa primera persona. El análisis de las concordancias[18] de los verbos del corazón objeto del presente estudio ha permitido desentrañar la idiosincrasia del corpus en el análisis de la autoexpresión, poniendo en entredicho las estadísticas generadas en AntConc. Por poner un ejemplo rápido, de las 992 instancias de *ẓanantu*, solo 11 responden a la voz autorial –el porcentaje es mayor en presente, como veremos más adelante; esto responde a numerosos factores de los que se destacarán aquí los más relevantes.

Los libros de gramática (*naḥw*) y de exégesis (*tafsīr*) tratan la categoría de '*ẓanna* y sus hermanas' ofreciendo numerosos ejemplos en primera persona del singular del tipo de la oración (2). Es decir, las obras de gramáticos andalusíes –como Ibn ʿŪṣfūr (m. 1271), Ibn Mālik (m. 1274) y Abū Ḥayyān al-Ġarnāṭī (m. 1344)– así como sus comentarios posteriores (*šarḥ*) –como *Šarḥ Alfiyyat Ibn Mālik* de al-Šāṭibī (m. 1388)–, junto con los análisis morfosintácticos de El Corán –como *Iʿrāb al-Qurʾān* de Ibn Sīda (m. 1066)–, contaminan los resultados de AntConc. En este sentido, resulta interesante que la mayoría de los ejemplos de uso de estos verbos aportados por estos autores en sus obras sean en primera persona

[18] Las concordancias de un término son sus apariciones en un corpus dentro de su contexto, donde figuran unas cuantas palabras a la izquierda y a la derecha de este (Baker et al., 2006, pp. 42-43).

del singular, lo cual refuerza el carácter cognitivo, subjetivo e individual de su uso. De hecho, la categoría gramatical misma figura como '*ẓanantu* y sus hermanas', siendo *aḫawātuhā* 'sus hermanas' la décima colocación[19] de este verbo en AntConc.

Otro aspecto a tener en cuenta es la transcripción de diálogos de personas distintas al autor que hablan en primera persona. Esto sucede en los hadices, en conversaciones de personajes destacados que se repiten en las obras de *adab* –como ocurre en *al-ʿIqd al-farīd* de Ibn ʿAbd Rabbihi (m. 940)–, en antologías poéticas –como en *al-Murqiṣāt wa-l-muṭribāt* de Ibn Saʿīd al-Maġribī (m. 1286)–, y en obras de derecho donde se recogen opiniones de juristas –como en *Taḥqīq al-maḏhab* de Ibn Ḫalaf al-Bāǧī (m. 1081).

Además de los diálogos, también se transcribe correspondencia ajena, que tiene el mismo efecto en los resultados. Asimismo, nos encontramos con la falsa primera persona en la casuística de los manuales de jurisprudencia, que se pone en boca de un supuesto litigante –como en *al-Bayān wa-l-taḥṣīl* de Ibn Rušd (m. 1126)–, en otras voces autoriales –como las de Galeno o al-Rāzī en la obra de Ibn al-Bayṭār (m. 1248)–, en las citas de El Corán que emulan la voz de un supuesto creyente/pecador, y en poesía ajena en diccionarios bio-bibliográficos –como en la *Iḥāṭa* de Ibn al-Ḫaṭīb (m. 1372).

Por otra parte, la normalización del árabe en los textos de los corpus digitales implica la eliminación de diacríticos (Habash, 2010, pp. 21-23); estos incluyen los grafemas auxiliares de las vocales breves (Corriente, 2002, pp. 45-46), que aportan, en nuestro caso, ambigüedad en la determinación de la persona en la conjugación de los verbos. El verbo *ẓanantu* 'yo creí', que deriva del desdoblamiento de la segunda radical de la raíz geminada *ẓ-n-n*,[20] puede confundirse con *ẓananta* 'tú creíste' –o *ẓananti*, en femenino–, pues, en ambos casos, todas las vocales transliteradas son breves y se representan con signos diacríticos, es decir, ambos tienen la grafía *ẓ-n-n-t* (ظننت). Esta confusión sucede, por ejemplo, cuando la voz narradora se dirige a un lector anónimo para convencerle de una materia –como en *al-Radd ʿalà al-Kindī* de Ibn Ḥazm (m. 1064)– o al corregir creencias ajenas con expresiones del tipo *laysa kamā ẓananta* 'no es como crees'. Conviene apuntar aquí que, en algunos casos, esta segunda persona podría considerarse una primera que se manifiesta a modo de diálogo interiorizado.

Otra persona con la que se puede confundir la primera, en el caso de *ḥasiba*, es la tercera del singular femenino. Por la misma razón anterior, *ḥasibtu* 'yo supuse' se confunde con *ḥasibat* 'ella supuso', teniendo ambos verbos la grafía *ḥ-s-b-t* (حسبت). Y, en esta tónica, *ḥasiba* 'suponer' también se puede confundir con *ḥasaba* 'calcular', conjugada en varias personas –ya se ha señalado que comparten raíz–, e incluso con la pasiva *ḥusibat* 'fue calculada'. Otra fuente de confusión para este verbo es el adjetivo de color *aḥsab* 'pelirrojo' –como en el *Iʿrāb* de Ibn Sīda.

[19] Las colocaciones son las palabras que coocurren con mayor frecuencia dentro de la vecindad de otra palabra conocida como el nodo (véase Baker et al., 2006, pp. 36-8; Brezina, 2018, p. 67).

[20] Por lo general, las consonantes duplicadas no implican repetición del grafema que las representa, sino un signo diacrítico sobre este.

3.2 Los verbos *ẓanantu y ḥasibtu*

Una vez identificadas y descartadas las concordancias con una falsa primera persona, a través de una lectura de cerca de cada de una de ellas, se procede al análisis de los resultados obtenidos. Los verbos *ẓanna* y *ḥasiba* en primera persona del singular son mucho menos frecuentes en pasado que en presente. Si en el caso de *ẓanantu* tenemos 11 instancias significativas de un total de 992, en el de *ḥasibtu* son 5 de 271, es decir, menos del 2%.

De los 11 usos de *ẓanantu*, 5 se encuentran en verso. En cuanto a la prosa, tenemos usos en correspondencia personal y otras más relevantes, como la instancia usada en una respuesta del autor a una consulta que se le formula sobre un tema escatológico (3) –en una epístola de Ibn Ḥazm–, o en una obra de derecho donde el autor justifica la copia e inclusión de un fragmento de otro autor –en *al-Tāǧ wa-l-iklīl* de al-Mawwāq (m. 1492). En cuanto a *ḥasibtu*, 4 instancias de las 5 se encuentran en divanes de poesía (4) –verso de Ibn Darrāǧ al-Qasṭallī (m. 1030). En general, el uso tan limitado de estos verbos de duda en pasado no permite ir más allá, hacia el análisis de patrones que veremos a continuación.

(3) *fa-mā ẓanantu qaṭṭ anna muslim-an yasʾalu hāḏā l-suʾāl*
y nunca pensé que un musulmán haría esta pregunta

(4) *ḥattà ḥasibtu ʿidāya qad mātū bi-dāʾī*
hasta que creí [que] mis enemigos habían muerto de mi afección

3.3 El verbo *aẓunnu*

En el caso del verbo *ẓanna* en primera persona del singular y en presente, *aẓunnu*, el porcentaje de instancias significativas asciende al 19% del total de concordancias extraídas por AntConc, 133 de 710 –18 de las cuales no han podido ser clasificadas por necesitar una lectura profunda de la obra para clarificar si la voz corresponde a la autorial. Conviene señalar aquí que, en todo caso, se han descartado las voces de autores andalusíes presentes en la muestra de su producción que se incorpora a sus biografías en los diccionarios. Es decir, en el caso de los diccionarios bio-bibliográficos, solo se ha atendido a las voces de sus compositores.

En general, los usos de este verbo en presente tienen lugar cuando los autores albergan dudas sobre la autenticidad de cierta información que incluyen en sus obras o quieren expresar sus opiniones respecto a una materia. Su presencia reiterada en una obra está relacionada con la fiabilidad del método de composición del autor –como ocurre en *Ǧaḏwat al-muqtabis* de al-Ḥumaydī (m. 1095)– (5-7) y con el posicionamiento que el autor muestra respecto al conocimiento que trasmite –esto último se puede apreciar en las numerosas instancias que atraviesan la producción de Ibn ʿAbd al-Barr (m. 1071).

(5) *wa-anā aẓunnu anna fī-l-isnād nuqṣān-an*
y creo que hay una falta en la cadena de transmisión

(6) *wa-mā aẓunnu [anna][21] riwāyat Musabbiḥ illā wahm-an*
y no creo [que] el relato de Musabbiḥ sea más que una ilusión

(7) *anā aẓunnu hāḏā l-ism wa-llaḏī qablahu wāḥid-an*
yo creo que este nombre y el que lo precede son el mismo/uno

Este verbo en presente se podría considerar una marca de opinión –como en algunos usos de Abū Ḥayyān al-Ġarnāṭī– (8-9) o estar relacionado con la memoria, cuando no hay seguridad sobre cierta información recordada, que constituye la causa de la duda –como en el *Šarḥ* de al-Šāṭibī– (10).

(8) *wa-mā kuntu aẓunnu anna miṯl mā ḥakà Qatāda yaqaʿu fī ḏālika l-zamān*
y no pensaba que algo como lo que contó Qatāda sucediera en aquel tiempo

(9) *wa-mā aẓunnu hāḏā l-raǧul aḫaḏa hāḏā l-ḥukm wa-lā banāhu illā ʿalà mā ruwiya fī ḏālika*
y no creo [que] este hombre tomase esta regla ni la formulase sino sobre aquello que se relató sobre ello

(10) *wa-ḏālika annī aẓunnu annahu marra ʿalà mā taqaddama fī kalām Ibn al-Ǧinnī*
y es que creo que [lo que voy a relatar] venía en lo previamente narrado, en el discurso de Ibn al-Ǧinnī

En cuanto a la distribución de las instancias en función de los dominios y géneros del CORDANA, el mayor uso se encuentra en el dominio 'derecho', seguido de 'historia' (Tabla 3). El Anexo 2 muestra la distribución de las instancias extraídas, indicando la obra que las contiene,[22] su dominio y género.

Los géneros en 'derecho' son principalmente 'hadiz', pero también encontramos *šarḥ* y 'otros', donde figuran manuales de jurisprudencia o tratados de carácter jurídico. El grueso de las instancias se centra en el siglo XI, debido a que un autor de amplia producción –el tradicionista Ibn ʿAbd al-Barr– hace uso extensivo de este verbo en diversas obras. El resto de las instancias se reparten de forma más o menos similar entre los siglos XII y XIV –donde destacan el místico Ibn ʿArabī (m. 1240), el polígrafo Ibn al-Ḫaṭīb y el alfaquí al-Šāṭibī. Si analizamos de cerca las instancias correspondientes al autor del siglo XI, que se concentran en dos de sus obras en los dominios 'derecho' –*al-Istiḏkār*– e 'historia' –*al-Istīʿāb*–, no se aprecia una diferencia temática de uso. El autor utiliza *aẓunnu* en modo afirmativo y negativo –precedido de la partícula *mā*– para expresar, en su obra sobre derecho, su opinión (11), su duda (12) o su creencia (13).

[21] En esta oración existe un fallo sintáctico que los editores de la obra corrigen eliminando la partícula *anna* (Ḥumaydī, 2008, p. 502).

[22] Cada obra viene identificada con el nombre abreviado del archivo en el corpus (sin la fuente de procedencia del texto digitalizado o sus extensiones). Por ejemplo: '0421IbnDarrajQastali.Diwan' indica que se trata del diván de Ibn Darrāǧ al-Qasṭallī, que murió en el año 421 de la hégira.

Table 3. Número de instancias del verbo *aẓunnu* por dominio.

Dominio	Nº Instancias
derecho	54
historia	27
lengua	17
misticismo	12
literatura	10
varios	7
religión	4
filosofía	1
ciencia	1
Total	**133**

(11) *wa-mā aẓunnu ʿAbd al-Malik wa-ʿulamāʾ ʿaṣrihi naqaṣū šayʾ-an min al-aṣl*

y no creo [que] ʿAbd al-Malik y los ulemas de su tiempo hayan restado algo del original

(12) *wa mā aẓunnu illā wa-qad rawaytu ḏālika, w-Allāh aʿlam*

y no creo sino haberlo mencionado, y Dios sabe más

(13) *aẓunnu l-sāʾil allaḏī ašāra ilayhi Ibn ʿUyayna bi-l-ḏikr huwa Ibn Ǧarīḥ*

creo [que] el interpelante, a quien señala Ibn ʿUyayna en su mención, es Ibn Ǧarīḥ

Lo mismo ocurre en la que versa sobre historia, del género *tarŷama*, variando los objetos sobre los cuales recae su duda: la certeza de una fecha (14), un nombre (15) o un dato de los personajes biografiados (16). En este segundo dominio, las opiniones propiamente dichas son menos abundantes, pero su presencia es estructural, figuran en la introducción de la obra (17).

(14) *wa-qīla: kānat sanat yawm qutil ḫams-an wa-sabʿīn, wa-mā aẓunnu ḏālika ṣaḥīḥ-an*

se dijo: el año del día en que fue asesinado era el setenta y cinco, y no creo [que] eso sea cierto

(15) *[al-Munḏir bin ʿAbd Allāh] huwa al-Munḏir bin ʿUbād, fī-mā aẓunnu*

[al-Muḏir bin ʿAbd Allāh] es al-Munḏir bin ʿUbād, según creo

(16) *rawà ʿanhu ibnuhu, wa-Muḥammad bin al-Munkadir ḥadīṯ-an wāḥid-an, wa-mā aẓunnu lahu ġayrahu*

su hijo y Muḥammad bin al-Munkadir transmitieron de él un único hadiz, y no creo [que] tenga otro

(17) *wa-mā aẓunnu ahl dīn min al-adyān illā wa-ʿulamāʾuhum maʿniyyūn bi-maʿrifat aṣḥāb anbiyāʾihim*

y no creo [que] la gente de cualquier religión sino sus ulemas interesados en conocer a los compañeros de sus profetas / y no creo sino [que] los ulemas de cualquier religión están interesados en conocer a los compañeros de sus profetas[23]

3.4 El verbo *aḥsabu*

Las instancias de *aḥsabu* en voz autorial en el CORDANA ascienden a 164 de las 442 que identifica AntConc, quedando 15 pendientes de un amplio contexto para ser clasificadas. Los dominios con más número de instancias son, de nuevo, 'derecho' e 'historia', seguidos de 'varios' y 'filosofía' (Tabla 4).

Table 4. Número de instancias del verbo *aḥsabu* por dominio.

Dominio	Nº Instancias
derecho	53
historia	44
varios	21
filosofía	14
literatura	11
lengua	11
misticismo	5
ciencia	2
religión	2
geografía	1
Total	**164**

En cuanto a los géneros, de nuevo se repiten el 'hadiz' y el *šarḥ* en el dominio 'derecho', entre otros, la *tarǧama* en 'historia', y emerge la *risāla* en 'filosofía'. Esto último se debe a que el autor que más destaca en el uso de este verbo –Averroes– concentra un alto número de instancias en 'derecho' y 'filosofía', elevando su mayor uso en el siglo XII, seguido del XIII –con autores como Ibn al-Abbār (m. 1260)– y, en menor medida, del XI –donde Ibn ʿAbd al-Barr tiene también una posición relevante pero menos destacada que en el caso de *aẓunnu*. En el Anexo 3 se puede ver una relación de las obras con su número de instancias, indicando dominio y género.

En el dominio 'derecho', tenemos la más alta concentración de instancias en una obra –*Bidāyat al-muǧtahid* de Averroes, donde expone las diferencias entre las escuelas jurídicas–, básicamente, porque el autor utiliza la expresión *fī-mā aḥsabu* 'según supongo/

[23] Véase la oración (25) en la sección 'Discusión'.

creo' para expresar su creencia respecto a un asunto (18), que implica su posicionamiento en una discusión que mantienen varios ulemas, o para manifestar su duda sobre la información que aporta (19).

(18) *wa-raʾà anna ẓāhira hāḏā l-ḥadīṯ yūğibu naǧāsat suʾrihi, wa-anna luʿābahu huwa al-naǧis lā ʿaynahu, fī-mā aḥsabu*

y opinó que el significado aparente de este hadiz impone la impureza de sus sobras y que su saliva es la impura, no su ojo, según creo

(19) *qāla Abū Ḥanīfa: yaǧūzu; wa-manaʿahu Mālik wa-l-Šāfiʿī, fī-mā aḥsabu*

Abū Ḥanīfa dijo: es lícito; y Mālik y al-Šāfiʿī lo prohibieron, según creo

Esta expresión vuelve a estar en uso en el dominio 'filosofía' en la obra del mismo autor (20) –donde explica la *Demostración* de Aristóteles–, y en el de 'historia', un siglo más tarde –en la *Takmila* de Ibn al-Abbār–; en este segundo caso, su uso se limita a mostrar duda sobre algún dato aportado sobre los biografiados en el diccionario (21).

(20) *yurīdu, fī-mā aḥsabu, anna ṣināʿat al-milāḥa hiya allatī tuṯbitu bi-l-taǧriba azmān ṭulūʿ kaṯīr min al-kawākib*

quiere [decir], según creo, que el oficio de la navegación es el que demuestra, con la experiencia, los tiempos de salida de muchos planetas

(21) *Sulaymān bin Aḥmad al-Quḍāʿī, min ahl Saraqusṭa, fī-mā aḥsabu*

Sulaymān bin Aḥmad al-Quḍāʿī, de la gente de Zaragoza, según creo

Dado que el 77% de las instancias del verbo *aḥsabu* corresponden al uso de esta expresión, se ha prestado atención al 23% restante en busca de algún patrón significativo. Un tercio de estas instancias se encuentra en poesía con un uso reiterado de la expresión *mā kuntu aḥsabu* 'no creía' (22) –verso de Ibn al-Ḫaṭīb. El resto de los usos son semejantes a los encontrados en *aẓunnu*, cuando esta precede a una oración nominal –como en los diccionarios de Ibn Sīda y de al-Bakrī (m. 1094)– (23-24).

(22) *mā kuntu aḥsabu qabla dafnika fī l-ṯarà … anna l-luḥūda ḫazāʾinu l-aʿlāqi*

no creía, antes de tu entierro, … que las tumbas fueran las alacenas de lo preciado

(23) *wa-l-šaʿwaḏa, al-surʿa, wa-lā aḥsabu l-šaʿwaḏa min kalām ahl al-bādiya*

y *al-šaʿwaḏa* es la velocidad, y no creo [que] *al-šaʿwaḏa* sea [una palabra] del habla de la gente del desierto

(24) *awān:* [..] *wa-anā aḥsabu anna l-rāʾ qad saqaṭat min bayn al-wāw wa-l-alif, wa-annahu bi-ḏà awrān*

awān: [..] y yo creo que la [letra] *rāʾ* [r] se ha caído/elidido de entre la *wāw* [w] y la *alif* [ā], y es, con esta, *awrān*

4. Discusión

El análisis previo proyecta luz sobre una serie de puntos que merecen discusión. En primer lugar, se aprecia que los autores andalusíes hacen uso extensivo de los dos verbos del corazón relacionados con la duda, *aẓunnu* y *aḥsabu*, conjugados en presente, tanto para expresar sus opiniones sobre distintos asuntos como para manifestar su duda de la absoluta veracidad de la información que aportan. Por un lado, el uso de estos verbos refuerza su autoridad intelectual, al posicionarse de forma individual en una materia de su especialidad, generando conocimiento nuevo en base al previo; pues, como dice De Saeger (2007, p. 271), una opinión es un compromiso epistémico en el que el hablante cree que su proposición es verdad, y los oyentes pueden considerarla una afirmación genérica. Por otro lado, al mostrar su incertidumbre respecto a cierta información, distinguen aquella que procede de su propia memoria, convirtiéndolos en fuentes informativas dentro de su tradición cultural, cuya fiabilidad entre sus lectores depende de un prestigio consensuado. Sus proposiciones, en este caso, expresan una realidad posible, no única (De Saeger, 2007, p. 273), avalada por la categoría social e intelectual del hablante/autor.

Por los datos extraídos y analizados, podemos decir que los dos verbos son intercambiables en el CORDANA, en el sentido de 'creer', y que el uso de *aẓunnu* es más extensivo que el de *aḥsabu*, en tanto que canceladores de la oración nominal, dado que *aḥsabu* figura con más frecuencia en la expresión *fī-mā aḥsabu* 'según creo', que suele suceder a aquello sobre lo que se proyecta la creencia o duda. En este punto, conviene tener en cuenta que cuando estos verbos figuran tras la oración nominal, pierden, por lo general, su función de abrogación de su sintaxis y funcionan como sintagma adverbial del predicado de esta oración, es decir, *aẓunnu* 'creo' equivaldría a *fī ẓannī* 'según mi creencia', y, en este caso, se considera que su acción es más débil al alejarse del objeto sobre el que recae la acción de 'dudar' (Ibn Yaʿīš, 2001, vol. 4, p. 329). Se entiende, por lo tanto, que el hablante/autor inicia su discurso con la proposición en una posición de certidumbre y, posteriormente, le sobreviene la duda sobre su certeza (Sāmirrāʾī, 2014, vol. 1, p. 351). Por lo que podríamos decir que, en el CORDANA, el uso de *aḥsab* en voz autorial encierra, con mayor frecuencia, una duda débil o un grado de duda menor, en comparación con *aẓunnu*.

Hemos visto también que ambos verbos tienen un amplio uso en obras que versan sobre derecho, cuya materia requiere autentificación y explicación. En este dominio, los autores más destacados tienen perfiles intelectuales muy concretos, son auténticos pensadores. Ibn ʿAbd al-Barr es un tradicionista (experto en hadiz) del siglo XI que vivió la caída del califato de Córdoba y recibió el sobrenombre de *imām muǧtahid* (Fierro *et al.*, 2014, p. 576), es decir, un imán capaz de ejercer el *iǧtihād*, un término técnico de la jurisprudencia islámica que hace referencia al razonamiento individual, también conocido como *raʾy* 'opinión' (Schacht y MacDonald, 1986). Este ejercicio de interpretación independiente comenzó a estar limitado en el mundo islámico a partir del siglo IX, lo cual remarca todavía más la excepcionalidad de este autor y de su empleo de estos verbos en su producción. En cuanto a Averroes, su valor como comentarista de Aristóteles en tiempos almohades (siglo XII) le valió ese nombre en el mundo latino –su nombre árabe es Ibn Rušd– y su renombre en el

pensamiento universal. El hecho de que Averroes hiciese mucho mayor uso de *aḥsabu* que de *aẓunnu* podría estar relacionado con aquello que señalaba al-Sāmirrāʾī (2014, vol. 1, pp. 333-334) sobre el proceso racional que encierra la semántica de la raíz del verbo (*ḥ-s-b*), a diferencia de *ẓ-n-n*, que se suma a la debilidad de la duda expresada con su posición sintáctica más frecuente.

Asimismo, en el dominio de la historia, esta diferencia de uso se mantiene ejemplificada por el mismo Ibn ʿAbd al-Barr, junto con el alfaquí al-Ḥumaydī, del mismo siglo XI, frente al erudito Ibn al-Abbār, ya del siglo XIII, que vivió la conquista cristiana de su territorio tras el declive almohade. En este caso, la acción de estos verbos del corazón recae más sobre la duda en el dato histórico que sobre la opinión, pero no deja de ser un patrón destacable de uso.

Por otro lado, si nos centramos en el patrón sintáctico en el cual estos verbos preceden a la oración nominal, nos encontramos con otros dos patrones de uso: uno –el más frecuente– donde el verbo está sucedido directamente por el sujeto y el predicado de la oración nominal, manteniendo su función de abrogación de esta, y otro en el que está separado de la misma por la partícula *anna*, que forma parte de otro grupo de canceladores conocido como *inna wa-aḫawātuhā* '*inna* y sus hermanas', por lo que pierde, de nuevo, dicha función en favor de esta partícula. Estas partículas pueden funcionar como elementos de énfasis –el caso de *inna*– o como conjunciones subordinantes –el caso de *anna*– (Badawi et al., 2016, p. 363). En el primer caso, donde el verbo mantiene su función canceladora, recordemos que tanto el sujeto como el predicado de la oración nominal se convierten en complementos del verbo de duda, con caso acusativo –en la gramática árabe, ambos reciben el término *mafʿūl bi-hi*, literalmente, 'hecho en él', es decir, ambos reciben pasivamente la acción del verbo, cuyo sujeto duda de algo (predicado de la oración nominal) sobre algo/alguien (sujeto de la oración nominal).

En cambio, si se interpone *anna*, que se traduce como la conjunción 'que', se entiende que tanto esta como la oración nominal que la sigue hacen en conjunto la función de complemento (Ibn Yaʿīš, 2001, vol. 4, p. 325), y las marcas flexivas de los componentes de la oración subordinada cambian, porque se rigen por la partícula en lugar del verbo. Por lo general, *anna* introduce una oración que hace la función de complemento de verbos de información o de percepción sensorial –dentro de los cuales se incluyen los verbos del corazón que estamos tratando–, y, al igual que sus hermanas, cambia el caso del sujeto de la oración nominal a acusativo, manteniendo el predicado nominal en nominativo (Versteegh, 2007, p. 355). Es decir, cambia la marca flexiva de los complementos, pero no el sentido de la oración. En las oraciones (23) y (24), podemos apreciar cómo el uso de *aḥsabu*, con y sin *anna*, se traduce de igual manera al español, con la conjunción 'que' y la oración subordinada sustantiva que la sigue. Dicho esto, tampoco se aprecia en el CORDANA ninguna pauta que explique el uso de un patrón (verbo + oración nominal) en detrimento del otro (verbo + *anna* + oración nominal).

No obstante, existe un uso frecuente con negación en el cual no se acepta gramaticalmente la intermediación de *anna*, que es cuando se utiliza la partícula *illā* 'sino/ salvo', que expresa excepción. Las oraciones (6) y (12) ejemplifican este uso, donde el verbo *aẓunnu* va precedido por la partícula de negación *mā* y la partícula *illā* se emplaza entre el sujeto y el predicado de la oración nominal. El caso de la (17) es particular, porque el predicado de la oración subordinada es otra oración nominal introducida por una *wāw* que se conoce como *wāw al-ḥāl* 'la *wāw* de estado' (Paradela, 2005, p. 142), y una reconstrucción de la oración sin esta partícula sería la (25).

(25) *wa-mā aẓunnu ʿulamāʾ ahl dīn min al-adyān illā maʿniyyīn bi-maʿrifat aṣḥāb anbiyāʾihim*

y no creo [que] los ulemas de la gente de cualquier religión sino interesados en conocer a los compañeros de sus profetas

La agramaticalidad del uso de *anna* en construcciones con esta doble negación podría apuntar a que dicha partícula enfatiza, en algún grado, la duda proyectada a través de esta por el verbo del corazón que la precede sobre la proposición que la sigue. De este modo, se aproximaría a su hermana *inna,* cuya traducción suele ser 'ciertamente', como en el ejemplo (26), y que, a diferencia de *anna*, puede figurar al inicio de la oración sin requerir un verbo previo.

(26) *inna Zayd-an aḫuka*

ciertamente, Zayd es tu hermano

Su hermana *inna* también se utiliza para el estilo indirecto con el verbo *qāla* 'decir' (*qāla inna* 'dijo que'), justificándose su uso aquí en lugar de *anna* con que se trata de una acción de la lengua (*lisān*), mientras que para una acción de creencia (*ẓann*) del corazón (*qalb*) se requiere el uso de la partícula *anna* (Ibn Yaʿīš, 2001, vol. 4, p. 325), lo cual refuerza su posición de enfática de la incertidumbre. En otras palabras, la doble negación que aportan *mā* e *illā* (no .. sino) en la oración (6) no parece equivaler a la misma en modo afirmativo (27), sino que estamos, de nuevo, ante una construcción que entraña un grado de duda menor o una duda débil. La partícula *illā* mitiga la duda o refuerza la veracidad de la proposición.

(27) *wa-aẓunnu riwāyat Musabbiḥ wahm-an*

y creo [que] el relato de Musabbiḥ es una ilusión

Además de estos usos, existen algunos excepcionales donde se elide el sujeto de la oración nominal, cuyo predicado puede ser un sintagma nominal o verbal. En este caso, la gramática árabe tiende a suponer el elemento elidido, justificando la construcción en función de la estructura original (verbo del corazón + oración nominal). Las oraciones (28) –de Ibn ʿAbd Rabbihi–, (29) –de Ibn ʿArabī– y (30) –de Averroes– muestran distintos usos en este sentido que, si algo aportan a la expresión es un sentido de inmediatez del discurso. El

caso de la (12) es destacable en este sentido, pues es de los pocos casos en los que el sujeto de la subordinada es el mismo sujeto del verbo del corazón, por lo que la reconstrucción sería: *aẓunnu-n-ī* 'creo [que] yo'.

(28) *mā aẓunnu [aḥad-an] rawà ʿanhu ġayrahu*

no creo [que nadie] haya transmitido de él aparte de él / no creo [que nadie] más haya transmitido de él

(29) *aẓunnu[-hu waqaʿa] sanat ṯalāṯ wa-tisʿīn wa-ḫamsimiʾa*

creo [que sucedió] el año quinientos setenta y tres

(30) *aḥsabu[-hu] yušīru ilà l-kaldāniyyīn*

creo [que él] hace referencia a los caldeos

5. Conclusiones

Retomando las preguntas planteadas al inicio del estudio, podemos decir que la construcción de un corpus como el CORDANA es de gran utilidad para el estudio de cualquier fenómeno lingüístico en lengua árabe dentro del contexto ibérico. Los datos extraídos de este corpus pueden ser contextualizados temporalmente y relacionados con una materia, un género, una comunidad de autores o un lugar geográfico concreto dentro de la Península. No obstante, ha quedado patente que, sin una anotación mucho más profunda del contenido y la estructura de los textos del CORDANA, los análisis estadísticos del AntConc –o de cualquier otra herramienta similar– no son representativos de la realidad del uso del árabe clásico en al-Ándalus. La amplia intertextualidad que caracteriza la producción de la época, que suele ser un reto en los corpus históricos, hace necesaria la identificación de obras orientales (en derecho islámico y en misceláneas literarias) y clásicas (los comentarios a obras griegas de filosofía, medicina y astronomía).[24] En el presente estudio, la desambiguación de instancias se ha llevado a cabo de forma manual, a través de una lectura de cerca que ha permitido identificar los casos en los que se da la falsa primera persona en el estudio de los dos verbos del corazón abordados.

En cuanto a estos verbos mentales (*ẓanna* y *ḥasiba*), su función de marcador de posición epistémica ha quedado demostrado, pues ha permitido identificar autores y textos de alto contenido subjetivo en el corpus en relación con determinados dominios, géneros y épocas en el desarrollo de la cultura andalusí. Asimismo, se ha mostrado la utilidad de distinguir entre opinión y duda en el uso de estos verbos en primera persona del singular y en presente, cuya presencia determina marcos temáticos, abundando la opinión en derecho y filosofía, en tratados de creación autorial, mientras que la duda está más presente en historia y lengua, en obras de referencia. Su uso también puede ser estructural, señalando la relevancia de considerar los prólogos en determinados análisis.

[24] El proyecto KITAB tiene en el punto de mira la detección automática de los sistemas circulatorios intertextuales en la tradición árabe: https://kitab-project.org/about/

La identificación de la expresión de opiniones es fundamental en la decodificación de la expresión subjetiva, así como la determinación del grado de incertidumbre que los sujetos autores proyectan sobre sus proposiciones. En este sentido, nos encontramos con una gradación en la expresión de duda a través de los verbos del corazón analizados, en función de su posición respecto a la oración nominal, es decir, de la subordinación o no de esta al verbo; de la presencia de ciertos elementos léxicos, como la partícula *anna*, y del uso de determinadas construcciones, como la señalada con la doble negación. Aquí, se ha observado que el verbo *aḥsabu*, utilizado ampliamente por el filósofo Averroes (siglo XII) en su producción, tiende, por su posición en el discurso, a expresar una duda sobrevenida tras la certidumbre; mientras que la duda de *aẓunnu*, verbo utilizado con frecuencia por el tradicionista Ibn ʿAbd al-Barr (siglo XI), gobierna con mayor fuerza sobre los componentes de la oración nominal. Por otro lado, las partículas *anna* e *illā* parecen ejercer funciones opuestas en la proyección de duda por los verbos del corazón, reforzando o mitigando su acción sobre la proposición.

Los resultados logrados en este estudio abren varias líneas de acción futura. Por un lado, sería interesante analizar en el CORDANA el uso de otros verbos del corazón, como los de certeza: *raʾà* 'ver/percibir' y *ʿalima* 'saber', y trazar una comparación con los de duda. Tenemos algún estudio sobre el primero desde la lingüística cognitiva (Jumaah et al., 2020). Por otro lado, se puede ahondar en una escala de gradación de la incertidumbre, atendiendo a la sintaxis de estos verbos en conexión con el léxico que los rodea. Para ello, sería necesario analizar las otras hermanas de *ẓanna* y ampliar la casuística más allá de la voz autorial, de la primera persona o del mismo CORDANA. Aún más, se podría construir un corpus especializado sobre derecho y buscar la relación de estos marcadores con el ejercicio del *iǧtihād* y en qué medida determinan la existencia de pensamiento individual en la jurisprudencia islámica. En definitiva, este estudio ha proyectado luz sobre una de las diversas manifestaciones lingüísticas de la autoexpresión en árabe en nuestro contexto peninsular, y pretende haber allanado algo más el camino hacia su decodificación.

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Anexo 1

Variedad de géneros identificados en el CORDANA:

- *adab*: miscelánea didáctica de bellas letras.
- *aḥkām*: normas legales que se extraen del texto sagrado.
- diccionario: no necesariamente de lengua, puede ser de alimentos y medicamentos, como sucede en algunas obras de botánica y farmacología.
- *fahrasa* –también conocido como *barnāmağ*–: relación de maestros y de obras transmitidas, que incluye datos biográficos sobre los maestros; una especie de currículum medieval.
- fetuas: colecciones de dictámenes jurídicos.
- hadiz: se ha utilizado para obras que versan sobre la tradición del profeta Muḥammad y que, por lo tanto, contienen muchos hadices.
- *ḫabar*: semejante al género de *tārīḫ* (narración histórica), pero más breve, a modo de opúsculo.
- *maqāla*: se entiende como 'tratado' (Díaz Esteban, 2000, p. 32); suele encontrarse en los dominios de filosofía y ciencia.
- *maqāma*: epístola literaria en prosa rimada de contenido ficticio, por lo general.
- *naḥw*: equivale a 'gramática' y distingue, en el dominio 'lengua', entre un diccionario y una obra con este contenido.
- otros: cuando no ha sido posible identificar el género.
- *radd*: la respuesta de un jurista a una consulta (*suʾāl*) sobre una materia legal.
- *riḥla*: relato de viaje.
- *risāla*: una epístola literaria y, a veces, también un tratado.
- *šarḥ*: un 'comentario' a la obra de otro autor (ej.: Averroes comentando obras de Aristóteles) o de una obra propia; puede estar escrito en prosa o en verso.
- *sīra*: normalmente se refiere a la del profeta Muḥammad, pero se puede aplicar a cualquier biografía que constituya una obra independiente.
- *šiʿr*: se han etiquetado con este género los divanes y los poemas didácticos, pero las obras medievales árabes contienen poesía casi siempre.
- *taʿlīq*: la añadidura de notas y adiciones a una obra (ej.: el *taʿlīq* de al-Maŷrīṭī al *Planisferio* de Ptolomeo).
- *tafsīr*: exégesis coránica; suele incluir aspectos léxicos y dogmáticos del texto.
- *talḫīṣ*: un resumen (como *mulaḫḫaṣ*), pero también puede ser una paráfrasis (Lirola et al., 2006, p. 594).

- *tārīḫ*: crónica o narración histórica.
- *tarǧama*: biografías de personajes ilustres, que puede incluir muestras de producción en poesía y prosa.
- varios: cuando incluye más de un género.
- *waṣiyya*: un género literario consistente en un testamento moral (Ibn ʿAzzūz, 2003).

Anexo 2

Distribución de las instancias de *aẓunnu*, indicando la obra que las contiene, su dominio y género.

Obra	Nº	Dominio	Género
0421IbnDarrajQastali.Diwan	1	literatura	*šiʿr*
0444AbuCamrDani.JamicBayanFiQiraatSabc	1	varios	otros
0456IbnHazm.JamharatAnsab.	1	historia	otros
0456IbnHazm.MaratibIjmac	1	religión	otros
0456IbnHazm.RaddCalaKindi	1	filosofía	*risāla*
0456IbnHazm.TawqHamama	3	literatura	*risāla*
0458IbnSidaMursi.MuhkamWaMuhi	4	lengua	diccionario
0458IbnSidaMursi.Mukhassas	2	lengua	diccionario
0463IbnCabdBarr.InbahCalaQabail	1	historia	otros
0463IbnCabdBarr.IsticabFiMacrifatAshab	10	historia	otros
0463IbnCabdBarr.IstidhkarJamic	20	derecho	otros
0463IbnCabdBarr.Istighna	2	historia	otros
0463IbnCabdBarr.JamicBayan	1	religión	otros
0463IbnCabdBarr.MasailMustaghriba	2	derecho	hadiz
0463IbnCabdBarr.TamhidMuwatta	18	derecho	hadiz
0463IbnZaydun.Diwan	1	literatura	*šiʿr*
0474IbnKhalafBaji.MuntaqaSharhMuwatta	1	derecho	*šarḥ*
0476AclamShantamari.AshcarShucara	1	varios	*šarḥ*
0488IbnFutuhHumaydi.JadhwatMuqtabis	8	historia	*tarǧama*
0520IbnRushdJadd.BayanWaTahsil	4	derecho	otros
0520IbnRushdJadd.Muqaddimat	1	derecho	otros
0540IbnBadhish.IqnacFiQiraat	2	derecho	*radd*
0540IbnBadhish.IqnacFiQiraat	1	varios	otros
0541IbnCatiyyaAndalusi.MuharrarWajiz	1	religión	*tafsīr*
0543IbnCarabiIshbili.AhkamQuran	1	derecho	*aḥkām*

Tabla Anexo 2, continúa en la página siguiente.

Tabla Anexo 2, continúa de la página anterior.

Obra	Nº	Dominio	Género
0543IbnCarabiIshbili.MasalikFiSharhMuwatta	1	derecho	*šarḥ*
0581AbuQasimSuhayli.RawdUnuf	1	derecho	*šarḥ*
0595IbnRushdHafid.BidayatMujtahid	1	derecho	otros
0595IbnRushdHafid.DaruriFiUsulFiqh	1	derecho	otros
0614IbnJubayr.Rihla	1	literatura	*riḥla*
0638IbnCarabi.Diwan	2	misticismo	*šiʿr*
0638IbnCarabi.FutuhatMakkiyya	10	misticismo	otros
0639AbuBakrMalaqi.MatlacAnwar.	2	historia	*tarǧama*
0646IbnBaytarAndalusi.JamicLiMufradat	1	ciencia	diccionario
0649IbnSahlAndalusi.Diwan	2	literatura	*šiʿr*
0745AbuHayyanGharnati.TadhyilTashil	2	lengua	*naḥw*
0745AbuHayyanGharnati.TafsirBahrMuhit	1	religión	*tafsīr*
0776LisanDinIbnKhatib.Diwan	2	literatura	*šiʿr*
0776LisanDinIbnKhatib.Ihata	3	historia	*tarǧama*
0776LisanDinIbnKhatib.RayhanatKitab	4	varios	varios
0790IbnMusaGharnatiShatibi.SharhAlfiyyatIbnMalik	9	lengua	*šarḥ*
0897IbnYusufCabdariGharnati.TajWaIklilLiMukhtasarKhalil	1	derecho	*šarḥ*

Anexo 3

Distribución de las instancias de *aḥsabu*, indicando la obra que las contiene, su dominio y género.

Obra	Nº	Dominio	Género
0328IbnCabdRabbihi.CiqdFarid	1	literatura	*adab*
0328IbnCabdRabbihi.Diwan	2	literatura	*šiʿr*
0444AbuCamrDani.JamicBayanFiQiraatSabc	1	varios	otros
0449IbnBattalQurtubi.SharhSahihBukhari	1	religión	*šarḥ*
0458IbnSidaMursi.Mukhassas	5	lengua	diccionario
0463IbnCabdBarr.InbahCalaQabail	1	historia	otros
0463IbnCabdBarr.IsticabFiMacrifatAshab	4	historia	otros
0463IbnCabdBarr.IstidhkarJamic	5	derecho	otros
0463IbnCabdBarr.TamhidMuwatta	4	derecho	hadiz
0487AbuCubaydBakri.MucjamMaIstacjama	1	geografía	diccionario
0520IbnRushdJadd.BayanWaTahsil	3	derecho	otros
0521IbnMuhammadBatalyawsi.Iqtidab	6	varios	*šarḥ*

Tabla Anexo 3, continúa en la página siguiente.

Tabla Anexo 3, continúa de la página anterior.

Obra	Nº	Dominio	Género
0521IbnMuhammadBatalyawsi.RasailFiLugha	1	lengua	*risāla*
0578IbnBashkuwal.Sila	1	historia	*tarğama*
0581AbuQasimSuhayli.RawdUnuf	6	historia	*tafsīr*
0595IbnRushdHafid.BidayatMujtahid	41	derecho	otros
0595IbnRushdHafid.MaqayisMukhtalata	1	filosofía	*maqāla*
0595IbnRushdHafid.SharhBurhan	9	filosofía	*šarḥ*
0595IbnRushdHafid.TalkhisHassLiAristu	1	filosofía	*talḫīṣ*
0595IbnRushdHafid.TalkhisKhitaba	8	varios	*talḫīṣ*
0595IbnRushdHafid.TalkhisSafsata.	1	filosofía	*talḫīṣ*
0595IbnRushdHafid.TalkhisSamaWaCalam	2	filosofía	*šarḥ*
0595IbnRushdHafid.TalkhisShicrLiAristutalis	3	varios	*talḫīṣ*
0638IbnCarabi.Diwan	2	misticismo	*šiʿr*
0638IbnCarabi.FutuhatMakkiyya	3	misticismo	otros
0638IbnCarabi.Tafsir	1	religión	*tafsīr*
0646IbnBaytarAndalusi.JamicLiMufradat	2	ciencia	diccionario
0649IbnSahlAndalusi.Diwan	4	literatura	*šiʿr*
0658IbnAbbar.HullaSiyara	2	varios	varios
0658IbnAbbar.MucjamAshab	3	historia	*tarğama*
0658IbnAbbar.TakmilaLiSila	27	historia	*tarğama*
0658IbnAbbar.TuhfatQadim	1	varios	varios
0776LisanDinIbnKhatib.Diwan	1	literatura	*šiʿr*
0776LisanDinIbnKhatib.Ihata	2	historia	*tarğama*
0776LisanDinIbnKhatib.NufadatJirab	3	literatura	*šiʿr*
0790IbnMusaGharnatiShatibi.SharhAlfiyyatIbnMalik	5	lengua	*naḥw*

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Análisis discursivo de la interacción del terapeuta en la terapia de pareja: reformulación y repetición

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Resumen: Esta investigación, enmarcada en el Análisis del Discurso, toma como objeto de estudio dos entrevistas de terapia de pareja, grabadas y transcritas, en las que intervienen dos terapeutas distintas. Las terapeutas utilizan el mismo modelo terapéutico *EFT* (*Emotionally Focused Therapy)* con el fin de que las parejas logren una desescalada del conflicto y mejoren su relación vivencial. En la parte teórica se describe esta entrevista terapéutica como un género triádico, conformado por las intervenciones de la terapeuta y de los dos miembros de la pareja. Las terapeutas gestionan la interacción discursiva de los turnos de habla de la pareja a modo de intervenciones en paralelo con cada uno de los miembros para evitar el desacuerdo entre ellos. En esa gestión del turno deviene fundamental la estrategia de retomar y reformular lo dicho por los miembros de la pareja para reconducir la narrativa. Y, por ello, este artículo presenta como objetivo analizar las intervenciones de las terapeutas y, en especial, de cómo retoman las intervenciones precedentes de los dos miembros de la pareja. Se partía de la hipótesis de que las dos terapeutas emplearían recursos lingüísticos similares, ya que participaban del mismo enfoque terapéutico.

Palabras clave: *análisis del discurso, reformulación y repetición, conflicto lingüístico, la terapia de pareja como género discursivo, estrategia pragmalingüística.*

Discursive analysis of the therapist's interaction in couple therapy: reformulation and repetition

Abstract: This research, framed within the framework of Discourse Analysis, takes as its object of study two couple therapy interviews, recorded and transcribed, in which two different therapists intervene. The therapists use the same therapeutic model *EFT* (*Emotionally Focused Therapy*) with the aim of helping the couples to de-escalate the conflict and improve their experiential relationship. In the theoretical part, this therapeutic interview is described as a triadic genre, formed by the interventions of the therapist and the two members of the couple. The therapists manage the discursive interaction of the couple's turns of speech by means of parallel interventions with each of the members in order to avoid disagreement between them. In this turn management, the strategy of taking up and reformulating what has been said by the members of the couple in order to redirect the narrative becomes fundamental. Therefore, the aim of this article is to analyze the interventions of the therapists and, in particular, how they take up the previous interventions of the two members of the couple. It was hypothesized that the two therapists would use similar linguistic resources, since they participated in the same therapeutic approach.

Keywords: *discourse analysis, rephrasing and repetition, linguistic conflict, couple therapy as a discursive genre, pragmalinguistic strategy.*

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1. Introducción. La terapia de pareja como género triádico: una entrevista libre a dos bandas

En esta investigación se analizan los discursos producidos en una intervención terapéutica (terapia de pareja), a la que acuden distintas parejas (conformadas, por hombre y mujer) para, en principio, intentar resolver sus conflictos o problemas relacionales. Las terapias de pareja estudiadas se constituyen como un género discursivo triádico, en el que participan tres sujetos: la pareja (M, mujer, y H, hombre) y el terapeuta (T). Son los miembros de la pareja quienes cuentan sus experiencias al terapeuta y apenas interaccionan entre ellos. En concreto, en las muestras de habla registradas, el terapeuta es el que gestiona los turnos a través de preguntas o intervenciones, en las que suele seleccionar al interlocutor siguiente, y alterna la elección de los interlocutores para que los dos miembros de la pareja (M y H) respondan, tal y como se comprueba en la Figura 1:

TERAPEUTA: Turno 1. Pregunta a M

MIEMBRO DE LA PAREJA-M: Turno 2. Responde a T con su narrativa

TERAPEUTA: Turno 3. Pregunta a H

MIEMBRO DE LA PAREJA-H: Turno 4. Responde a T con su narrativa

Figura 1. Entrevista libre a dos bandas.

El terapeuta gestiona el turno de palabra y, en este sentido, presenta cierta *dominancia interaccional* sobre los miembros de la pareja, ya que actúa como entrevistador: realiza las preguntas o comentarios y los miembros de la pareja le responden de un modo consecutivo en sus turnos de habla.

Sin embargo, aunque la entrevista sea a dos bandas, el miembro de la pareja que no es interpelado directamente (Kerbrat-Orecchioni, 1986, p. 32) se convierte también en receptor (y *destinatario indirecto*) de ese intercambio entre terapeuta y sujeto interpelado, considerado como *destinatario directo* (Querol, 2023). Este hecho es determinante en la interacción comunicativa terapéutica. Aunque el miembro de la pareja no sea el sujeto interpelado directamente, su papel como *destinatario indirecto* del intercambio comunicativo es esencial, ya que debe escuchar de un modo activo la narrativa contada por su cónyuge y la intervención del terapeuta como una parte del proceso terapéutico.

Se considera como *entrevista libre,* porque no existe *a priori* un cuestionario preestablecido, sino que la interacción se va generando sobre la marcha: el terapeuta guía la interacción a partir de las respuestas de los miembros de la pareja. Es más, el terapeuta suele retomar esta respuesta de los dos miembros de la pareja para reconducir la entrevista. Cabe precisar que, a pesar de clasificarse como *entrevista libre*, las preguntas e intervenciones del terapeuta siempre giran en torno a aquellos aspectos que inciden en la relación de la pareja.

De hecho, el objetivo de la presente investigación es registrar y caracterizar las estrategias lingüísticas de las que se vale el terapeuta para retomar las intervenciones de los dos miembros de la pareja, en la línea de lo analizado por Lourdes Artigas et al. (2019) en lo considerado como *Método de Investigaciones Dialógicas de Cambio (IDC)*, en el marco del *Enfoque dialógico abierto,* procedente de la escuela de Finlandia, ya aplicado a un estudio de caso:

> Desde esta perspectiva, las respuestas que los terapeutas brindan en la conversación con la pareja en tratamiento son consideradas elementos esenciales en la creación de un nuevo lenguaje común para describir el sufrimiento del paciente, [...]. (Artigas et al., 2019, p. 212)

Artigas et al. (2019, p. 212) diferencian tres tipos de dominancia: a) *dominancia cuantitativa* (quién habla más en la conversación); b) *dominancia semántica* (quién introduce nuevos temas); c) *dominancia interaccional* (quién influye en las acciones comunicativas y regula el turno de habla). Y, destacan que la *dominancia interaccional* por parte del terapeuta puede constituir una respuesta efectiva para gestionar el flujo de la conversación. Es más: «Esto confirma los hallazgos anteriores que indican que el dominio interaccional por parte de los terapeutas puede ser una estrategia para poner fin a una escalada de conflictos que tiene lugar en la conversación de una pareja.» (Artigas et al. 2019, p. 221).

La asistencia a la terapia presupone por parte de la pareja una voluntad de solucionar sus conflictos y una aceptación de las condiciones discursivas emitidas por el terapeuta. Los miembros de la pareja miran y contestan al terapeuta en esta tríada discursiva oral. Por ello, se puede describir la intervención terapéutica como una especie de turnos paralelos consecutivos de respuesta a una pregunta anterior, tal y como se muestra en la Figura 1. Se entenderá por *turno* la ratificación o escucha activa por parte de los receptores a una *intervención*, esto es, emisión de un fragmento fónico de un hablante, según el sistema de unidades articulado por el Grupo Valesco (2014), para el análisis de la conversación coloquial:

> La *intervención* es la unidad monológica máxima estructural, generalmente asociada al cambio de emisor, que se caracteriza por ser o por provocar una reacción, prototípicamente, lingüística. (…) en el *turno*, al cambio de interlocutor, se suma el reconocimiento y aceptación de dicha emisión por parte del resto de interlocutores, de modo que el criterio para identificar el turno es el de la aceptación, que da cuenta del carácter social de esta. (Grupo Valesco, 2014, pp. 17-24)

En una entrevista, las intervenciones se suelen ratificar como turno; en cambio, en una conversación coloquial pueden existir intervenciones que no se convierten en turno al no ser atendidas por los interlocutores. La terapia de pareja se caracteriza como un tipo singular de entrevista libre oral en la que se intenta evitar que los miembros de la pareja interaccionen entre sí con el fin de no generar enfrentamientos o conflictos verbales, ya habituales en la pareja, por los que justamente se inicia la terapia.

En este estudio se pretende, pues, dar cuenta de las estrategias interaccionales de dos terapeutas, en concreto, de cómo retoman y reformulan las intervenciones precedentes emitidas por uno de los miembros de la pareja. Se parte de la hipótesis de que las estrategias serán similares al basarse las dos terapeutas en el mismo enfoque terapéutico, tal y como se explicará posteriormente.

El artículo consta de cuatro apartados. Se desarrolla un marco teórico inicial en el que se revisan y describen las principales aportaciones del Análisis del Discurso a la descripción de la reformulación y de la repetición como principales modos de retomar intervenciones anteriores. En un segundo apartado, se explica brevemente cómo se han obtenido los datos, objeto de investigación y el tipo de terapia utilizada; en un tercer apartado, se procede al análisis de las dos entrevistas terapéuticas, y se extraen las correspondientes conclusiones al final.

1. Marco teórico y objeto de estudio. Retomar, reformular y repetir como técnicas de entrevista

El Análisis del Discurso y, en particular, el Análisis de la Conversación pueden habilitar herramientas descriptivas para desentrañar la dinámica discursiva que acontece en una intervención terapéutica cuando se intentan resolver conflictos de pareja. La presente investigación se centra en la caracterización de cómo el terapeuta retoma o reformula las intervenciones de los distintos miembros de la pareja. Y, para ello, se parte de la descripción de estudios previos, entre otros, los centrados en sus funciones interactivas en discursos orales (Garcés, 2002, 2007; Camacho 2009) o en géneros más singulares, como el interrogatorio judicial (López Samaniego, 2022).

Estos estudios plantean tres parámetros para delimitar la tipología de reformulaciones y repeticiones:

1. repetición del enunciado emitido por el mismo interlocutor o por otro: *heterorrepetición* (o *alorrepetición, repetición dialógica, repetición de otro, resonancia dialogal, heteroiniciada*), frente a *autorrepetición (autoiniciada):* «*autoiniciada*, cuando el hablante es el responsable de volver a emitir un segmento o un enunciado anterior, y *heteroiniciada*, cuando la repetición surge como una reacción a lo que ha dicho su interlocutor» (Garcés, 2002, p. 440).
2. *repetición inmediata* o *consecutiva* del enunciado frente a *distanciada:* si se repite la intervención anterior o, por el contrario, median entre ambas otras intervenciones.
3. *repetición literal* o *no literal* del enunciado anterior: «la repetición es literal, cuando las mismas palabras son pronunciadas con idéntica curva melódica, y es no literal, cuando se introducen variaciones o modificaciones que pueden ser de distinto tipo» (Garcés, 2002, p. 444).

En relación con sus funciones, Pilar Garcés (2002) establece una tipología general, como es, lograr cohesión entre las distintas partes (mantener la continuidad del tema); funciones conversacionales, en especial, vinculadas a la toma de turno; y funciones interactivas para mostrar acuerdo o desacuerdo. Y Anna López Samaniego (2022, p. 248) singulariza estas funciones en el género del interrogatorio judicial: reformulaciones llevadas a cabo por fiscales y abogados a las respuestas de los declarantes con distintos objetivos como registrar lo dicho por el declarante y mostrar comprensión de esto; invitar al interlocutor (interrogado) a reparaciones, como confirmar, aclarar o rectificar el contenido o sentido exacto de una respuesta; o establecer una comprensión empática (interesada) para modificar la argumentación.

En especial, nos interesa la consideración de un tipo de repetición no literal, la *reformulación,* como un procedimiento discursivo para presentar lo ya dicho desde una óptica distinta y la etiqueta de *proceso retroactivo*:

> La reformulación es un procedimiento de organización del discurso que permite al hablante volver sobre un segmento anterior para reinterpretarlo y presentarlo desde una perspectiva distinta. Lo que caracteriza a la reformulación, en contraste con otras funciones discursivas es el proceso retroactivo que permite explicar, rectificar, reconsiderar, recapitular o separarse de la formulación anterior. Este proceso puede iniciarlo el hablante [...], o puede ser un hablante distinto del que ha emitido la expresión de referencia el que reformule lo previamente expresado para asignarle una interpretación adecuada. (Garcés, 2007, pp. 529)

Sin embargo, desde un punto de vista teórico la delimitación del concepto de *reformulación* ha suscitado incluso debates entre distintos autores (Pons, 2013, 2017; Murillo, 2016) al establecer qué se entiende exactamente por reinterpretar y por presentar desde una perspectiva diferente, y cuál es la tipología de reformulaciones.

Téngase en cuenta igualmente que en la progresión temática en un diálogo se suele partir de lo dicho para avanzar y, en este sentido, siempre subyace un proceso de partir de lo ya enunciado. Es más, una forma de reconocer que una intervención deviene un turno de habla es porque en la intervención posterior se retoma algo de la intervención del hablante anterior. Es a lo que Garcés (2002) llamaba *mantener la continuidad del tema* y el Grupo Valesco, *marcas de continuidad léxica*:

- las reformulaciones, matizaciones o adiciones de información a ideas o elementos aparecidos en la intervención previa, confirmarán que tales intervenciones son también turnos;
- la repetición léxica, que indica coincidencia en el vocabulario y en la temática, son marcas de continuidad léxica y, por tanto, señales de que se ha atendido la intervención anterior, de que se reconoce como turno (Grupo Valesco, 2014, p. 30)

Por supuesto, desde la labor de mediación en terapia ya se reconoce este valor de la reformulación como una intervención eficaz. En una reciente tesis doctoral se aborda el análisis de la técnica de reformulación en mediación (Rolán, 2021, p. 49), en la que se destaca su función determinante, junto con la escucha activa: «En conclusión, la escucha activa es una habilidad interna de las personas, y la reformulación es una manifestación externa del lenguaje mediante la cual se vuelve a formular un enunciado previo.» Es más, según Katia Rolán (2021) esta reformulación posibilitará un cambio de marco (o encuadre) desde la que el paciente conceptualiza el problema y será esencial la capacidad del mediador para reformular aquellas palabras de valoración afectiva negativa frente a positiva (valencia) y de intensidad baja frente a elevada: esto se ejemplificaría con *apuñalar* (negativa y alta) frente a *dormir* (positiva y baja). En concreto, el estudio se lleva a cabo a partir de la sustitución de unos verbos por otros:

> El profesional de la mediación tiene que ser capaz de reconocer el lenguaje que debe ser reformulado. Debe poseer la habilidad para identificar las palabras de la persona mediada que puedan reflejar una construcción emocionalmente *intensa* y *negativa* del conflicto, para proponerle una nueva formulación que favorezca el tránsito hacia narrativas que faciliten un proceso de desescalada del nivel de hostilidad. (Rolán, 2021, p. 141)

En síntesis, partimos de la hipótesis de que el terapeuta retomará el turno anterior como una técnica de mediación, de validación y de objetivización del discurso de los interlocutores, ya que se trata de una voz autorizada para orientar las visiones y narrativas de los pacientes y que, en principio, la formalización lingüística de la reformulación será similar en todos los terapeutas si forman parte de la misma escuela.

2. Metodología

2.1 Corpus de entrevistas de terapia de pareja E(f)FECTS

En esta investigación se analizan dos entrevistas terapéuticas con dos terapeutas distintas (en adelante, entrevista Málaga y entrevista Madrid). Dichas entrevistas forman parte del corpus E(f)FECTS (*Emotionally Focused Couple Therapy in Spanish*), corpus elaborado en el marco de un proyecto de investigación[1] (Ensayo clínico NCT04277325) que tiene como objetivo validar este tipo de modelo o enfoque terapéutico en distintos países en los que se habla español (México, Argentina, Guatemala, Costa Rica y España), ya que el modelo fue desarrollado en los años ochenta por Sue Johnson (2019) y Les Greenberg, pero en inglés. El coordinador del proyecto para España, Martiño Rodríguez-González ha firmado un convenio de colaboración con el proyecto ESPRINT, al que pertenecemos. Dicho convenio nos permite el acceso al corpus para el análisis lingüístico de las entrevistas. Así, como parte básica del modelo (Rodríguez-González et al., 2022), las terapeutas son las que

[1] Se describe esta terapia del siguiente modo: «La Terapia de Pareja Centrada en las Emociones (EFT, por sus siglas en inglés) es un modelo empírico de terapia de pareja basado en el apego que combina teorías experienciales, de sistemas y de apego con el objetivo de fomentar el desarrollo de un contacto seguro, la accesibilidad y la capacidad de respuesta en ambos miembros de la pareja.» Página web del proyecto: < https://ichgcp.net/es/clinical-trials-registry/NCT04277325>. Véase también la página web promocional sobre este enfoque terapéutico en España: <https://terapiafocalizadaenlasemociones.es/>

dirigen la entrevista a dos bandas y van alternando el turno de habla de los dos miembros de la pareja de un modo equilibrado a lo largo de las 20 sesiones. Las sesiones se organizan en torno a 9 pasos secuenciados que, como si fuera una coreografía, posibilitan que los miembros de la pareja desactiven su ciclo negativo en una desescalada del conflicto, en la que van desde los pasos más sencillos a otros más complejos, siempre en el marco de una actuación en la que se sientan cómodos y seguros por la mediación de la terapeuta.

Las terapias se han desarrollado en una sala de un gabinete y han sido grabadas con una cámara que enfoca a la pareja, sentada en un sofá. La terapeuta está situada en una silla enfrente de la pareja. En esta investigación, se ha seleccionado una sesión (de aproximadamente una hora de duración) de cada terapia para poder cotejar los resultados. Se trata, pues, de un estudio de caso. Se ha elegido la primera sesión de la primera terapia porque presentaba un gran interés al establecer la terapeuta de un modo explícito la dinámica discursiva; y la séptima de la segunda, ya que no todas las sesiones se han transcrito.[2] De hecho, para la investigación se ha combinado la visualización de las imágenes con la revisión de la transcripción del audio. En esta línea, se sigue la investigación realizada por Sara Greco (2011, p. 156) al analizar casos de cómo la argumentación sirve como estrategia de mediación en diversos contextos comunicativos (educativos, negocios o familiares) a partir de la transcripción de los datos orales: «The texts to be analysed, being mediation sessions, are typically oral texts. This kind of data needs some preparatory work in order to make it suitable for analysis; in particular, the texts have to be transcribed in such a way that allows maintaining the oral traits as much as possible.»

2.2 Intervención retroactiva del terapeuta como objeto de análisis

Como ya se ha indicado, en la terapia de pareja el terapeuta interviene para retomar la respuesta de los dos miembros de la pareja y crear un discurso que permita mejorar su relación de pareja. Justamente, en esta investigación se pretende precisar cómo es el tipo de reformulación del terapeuta y, quedaría pendiente evaluar en qué medida la selección de una estructura lingüística determinada consigue que el posible conflicto entre los participantes de la terapia de pareja se atenúe y mejore su relación de apego (Johnson, 2008; 2019).

Para ello, tras una cuantificación previa de las intervenciones realizadas por los diferentes interlocutores (terapeuta y pareja) y su duración, el estudio se centrará en las intervenciones realizadas por las terapeutas (en los dos casos, se trata de una mujer), en las que estas terapeutas repiten, retoman o reformulan lo dicho por los miembros de la pareja (*heterointervenciones*) en sus intervenciones precedentes (*inmediatas* o *discontinuas*). En estas intervenciones de las terapeutas se tendrá en cuenta si es una mera *repetición* formal de carácter fático y discursivo (que favorece la progresión temática) o se produce una *modificación* de la intervención anterior (que añade o modifica algún elemento) con una función pragmática más específica, por ejemplo, para cambiar algún elemento del relato

[2] Las grabaciones se han transcrito a partir del sistema del Grupo Valesco (Briz & Grupo Valesco, 2002).

y crear una narración distinta, o un punto de vista diferente que permita una visión más positiva de las vivencias de la pareja. A esto se le ha considerado como *reformulación*. De este modo, seguimos los parámetros[3] estipulados por López Samaniego (2022) para el interrogatorio judicial.

Por ello, el ejemplo (1) será considerado como *reformulación* porque para la mujer (M) la conexión con la pareja es un hecho del pasado; por el contrario, la terapeuta (T) lo modifica y lo convierte en una acción inacabada que podría continuar hasta el presente:

(1) M: pues teníamos conexión mucha conexión
T: empezasteis a conectar
M: entonces ahí

No obstante, también contemplaremos en este marco de estudio aquellas intervenciones de las terapeutas que retoman algo de lo dicho con anterioridad (continuidad temática) por algún miembro de la pareja para matizar algo, empatizar, etc. sin ser exactamente una repetición: en estas intervenciones no siempre se reformula la intervención precedente desde una nueva perspectiva. Así en el ejemplo (2), se parte de la intervención anterior (se subraya el fragmento idéntico) para añadir algo o matizar. La terapeuta (T) retoma parte de la intervención[4] de la mujer (M), suprime el adjetivo *cómodo*, y añade la idea explícita de falta unión en la actualidad (*no hay tanto que os una a día de hoy)* y el compartir como pareja (*¿no? como que / falta / eso de pareja ¿no? eso de dos eso de compartir eso de- emh*) no solo para registrar estos hechos, sino también para clarificar los sentimientos de apego a modo de conclusión final: *es mi percepción, tenemos percepciones distintas* (dicho por M) frente a *tú sientes, esa es tu sensación* (dicho por T):

(2) M: esa es mi percepción que yo creo que él no la tiene o sea él está cómodo como está y creo que lo estaría igual // eh aún sin niños
T: mmh
M: o sea yo creo que- que tenemos percepciones
T: mmh
M: muy diferen[tes]
T: [tú crees que] él estaría igual aún sin niños pero tú sientes que si no estuviesen ahí *Encarna* y *Alfonso* no hay tanto que os una a día de hoy
M sí
T: esa es tu sensación

[3] «Se ha manejado un concepto estrecho de *repetición* como eco literal o parcial del turno repetido, que puede incorporar únicamente variaciones mínimas. [...] se han considerado *(re)formulaciones* las paráfrasis de algún turno previo del declarante que entrañan procesos de transformación, como la sustitución o adición de algunas palabras o expresiones, reformulaciones recapitulativas o la formulación de inferencias o conclusiones derivadas del material repetido.» (López Samaniego, 2022, p. 750).

[4] Téngase en cuenta que, aunque hablamos de *intervención* de M en el caso anterior, se trataría en sentido estricto de un caso de *intervención discontinua* (Grupo Valesco, 2014, p. 23), ya que se mantiene la misma fuerza ilocutiva en las tres intervenciones seguidas de M solo segmentadas por el breve refuerzo fático de la terapeuta (*mmh*). Sin embargo, en el análisis se han computado como tres intervenciones.

M: mmh

T: ¿no? como que / falta / eso de pareja ¿no? eso de dos eso de compartir eso de- emh

3. Análisis de la intervención del terapeuta en la interacción: análisis de dos casos

Así pues, el objetivo de este estudio es analizar las estrategias lingüísticas de las que se vale cada una de las dos terapeutas en la terapia de pareja al retomar las palabras de sus interlocutores.

3.1 Entrevista terapéutica Málaga

3.1.1 Intervenciones de la terapeuta: cuantificación, tipología y funciones

De las distintas sesiones de la terapia se ha seleccionado la primera al ser la que se establecía de un modo explícito la tipología discursiva: una entrevista libre. Desde una perspectiva cuantitativa las intervenciones de los tres hablantes (T, mujer terapeuta; M, mujer; H, hombre) son las que se representan a continuación (Tabla 1), divididas en intervenciones totales e intervenciones que ocupaban al menos 3 grupos entonativos con el fin de comprobar la duración de la intervención:

Tabla 1. Número de intervenciones e intervenciones de 3 grupos entonativos.

Sujetos	**Intervenciones**			
	Totales		3 > grupos entonativos	
T terapeuta	367	37,7%	37	19,3%
M mujer	312	32%	70	36,5%
H hombre	294	30%	85	44,3%
Total	972		192	

Como se puede apreciar en la tabla, en la primera sesión la terapeuta es la que más toma la palabra, pero sus intervenciones, como muestra la frecuencia de grupos entonativos, son las más breves; en cambio, las intervenciones de los miembros de la pareja son más extensas, en especial, las del marido, ya que justamente es la pareja la que debe construir el relato de sus vivencias.

Si se cuantifican las 367 intervenciones de esta terapeuta en la primera sesión desde una perspectiva más formal, quedarían reflejadas del siguiente modo en la Tabla 2:

Tabla 2. Tipología formal de intervenciones de la terapeuta.

Intervenciones breves fáticas (*ya, claro*)	152	41,4%
Onomatopeyas/ risas fáticas	25	6,8%
Intervenciones diversas (empáticas, gestión turno, etc.)	123	33,5%
Intervención retroactiva: repetición y reformulación	77	21%
Total	367	100%

En el ejemplo (3), la terapeuta (T) inicia las sesiones con la alusión explícita a que la pareja (H, hombre; M, mujer) acude a terapia para mejorar su relación y, para ello, se trabajará para edificar un nuevo sistema de comunicación, ya que la finalidad de la asistencia a la terapia es justamente experimentar y compartir sus emociones (sentimientos) y crear un vínculo más seguro en la pareja:

(3) T: entonces / primero que qué bien que hayáis caído en el grupo de tratamiento estoy muy contenta de que estéis en el grupo de tratamiento y- y bueno que que trabajemos en en mejorar / vuestras relaciones y que os sintáis mejor también el uno con el otro / entonces yo estoy aquí para ayudaros en / todo lo que pueda / ya sabéis que estas sesiones son confidenciales / que lo que pasa aquí dentro aquí dentro se va a quedar / y quee / y bueno que espero que esto sea una herramienta buena para vosotros para que os acerque / y os ayude a comunicaros desde otro lugar diferente a donde lo estáis haciendo ahora mismo

M: ojalá

T: ojalá ¿verdad?

M: mhh

También en el ejemplo (4), la terapeuta explica la dinámica interaccional que tendrá lugar en una intervención muy extensa de forma excepcional: una entrevista libre, en la que los miembros de la pareja irán construyendo el relato de sus vivencias:

(4) T: entonces la sesión de hoy / más que nada el primer contacto es ver un poco más de vuestra historia aunque ya el primer día estuvimos hablando / de alguna cosita pero bueno entender un poquito más lo que ha sido vuestra historia desde que os conocisteis hasta el presente /

H: mmh

T: entender pues cuáles son vuestras dificultades ahora mismo en el presente / qué es lo que os ha traído hasta el presente / y conoceros un poquillo más / entonces una entrevista un poco libre para que vosotros me contéis lo que vosotros consideréis [más] importante o

H: [mmh]

T: lo importante es que os sintáis cómodos y que os sintáis también en un espacio seguro

(…)

H: [pregúntale] a ella a ver cuándo fue y dónde y esto que [se acuerda de todo]

T: [<risas/>] de fechas quieres tú que le pregunté [<risas/>]

H: [sí de fechas] / [no-] no sé qué te interesa quiero decir no

M: lo importante es que nos conocimos qué más da ¿no?

H: sí

T: claro y además mayúsculas ¿no? / porque lo has dicho como en plan titular *nos conocimos* ¿no? / porque ¿qué situación era? M ¿dónde os conocisteis?
M: que hable [él]

La terapeuta utiliza su intervención con distintos fines o funciones, como son la gestión y distribución del turno *(M ¿dónde os conocisteis?)* o la búsqueda de la elaboración de una imagen positiva de la relación de pareja (*en plan titular*), funciones que se pueden superponer, tal y como se comprueba en el ejemplo anterior.

A continuación, se analizarán las distintas funciones que asumen las intervenciones de la terapeuta, las cuales se pueden dar de forma simultánea.

i. Función de gestión discursiva de la entrevista

i.i. Gestionar y equilibrar las intervenciones o turnos de los miembros de la pareja

La terapeuta va distribuyendo el turno mediante preguntas dirigidas a uno de los miembros de la pareja. Así, en (5), T interviene para que M continúe con su turno, ya que H había hablado antes y es una forma de cederle el turno a M:

(5) T: y tú también lo hacías desde entonces

T suele realizar preguntas para que uno de los miembros de la pareja destaque los aspectos positivos del otro (hablar bien del otro), como sucede en (6):

(6) T: y qué pasó en ese momento tú ¿qué viste en H? te llamó la atención en ese primer momento

(…)

T: y dice[5] *era un hombre divertido* ¿no? hay mucha complicidad entre vosotros ¿no?

i.ii. Hacer avanzar o progresar temáticamente el discurso

La terapeuta se suele valer de elementos existentes en el discurso previo para hacer progresar la narración y, de este modo, aparece la conexión discursiva mediante cierta repetición de elementos anteriores o reformulación. En este caso, frente a la narración extensa de H, la terapeuta reconduce con la partícula *entonces* (como elemento derivado de lo anterior) para centrar el tema y permitir el avance temático, como acontece en (7):

(7) H: y ella me lo contaba ¡*ay! porque ((habla muy bien ahora)) no sé qué no sé cuántos ((patatín patatán))/ M no sé qué no sé cuántos* y yo decía *bueno a ver si acaba ya y nos vamos / aa a aa dar una vuelta* ¿no?

T: entonces os conocíais de oída porque claro tu amiga te hablaba

i.iii. Mostrar una escucha activa y empática

[5] El estilo directo se marcará en cursiva.

La terapeuta ratifica su escucha activa, comprensiva y de acuerdo con las intervenciones de la pareja mediante elementos fáticos (*ya, claro, ya claro*), risas, onomatopeyas (*mmm*), como se muestra en el ejemplo (8). De hecho, casi el 50% de las intervenciones de esta terapeuta se clasifican de esta forma:

(8) H: porque si no no sé si me da tiempo porque anda que no hay tráfico aquí
T: ya ya ya [<ininteligible/>]
H: [si no ten]dría que ir a otro sitio a coger el tren a lo mejor yo qué sé no sé iremos viendo
T: claro

También muestra una escucha activa mediante la repetición de alguno de los términos empleados por sus interlocutores en el ejemplo (9):

(9) H: mmh yo vengo directo del trabajo y ella vienee en tren
T: en tren
H: yo trabajo aquí en Málaga

ii. Función de mediación discursiva: atenuar desacuerdos, mejorar la imagen e intensificar lo positivo de las vivencias y del relato

T interviene, siempre de forma empática, para consolidar un clima de acuerdo, con valoraciones (adjetivaciones) positivas, tal y como se indica en el ejemplo (10):

(10) T: tú fijáte que se unió un grupo de mujeres qué bonita la experiencia

La mediación se logra también mediante la reformulación, tal y como se indicará en el apartado posterior.

3.1.2 Tipología de intervenciones retroactivas (repetir, reformular o retomar)

En este apartado, nos centraremos en las 77 intervenciones retroactivas —son reactivas frente a las meras iniciativas— que retoman lo dicho, sean o no reformulaciones en sentido estricto (59 recurrencias) o de mera repetición léxica (18 recurrencias). Casi todas ellas son *heterorrepeticiones* o *heterorreformulaciones* continuas, es decir, se retoma la intervención del hablante anterior. En el caso de las 18 repeticiones, predomina una función fática (55,6%) para confirmar una escucha activa por parte del terapeuta y favorecer que se prosiga con el turno de habla, tal y como se señala en (11):

(11) T: claro y además mayúsculas ¿no? porque lo has dicho como en plan titular *nos conocimos* ¿no? porque ¿qué situación era? M ¿dónde os conocisteis?
M: que hable [él]
H: [en Ali]cante
M: <risas/>
T: en Alicante

En el caso de las 59 reformulaciones o intervenciones retroactivas predomina la reformulación meliorativa (35,7 %), seguido de la progresión discursiva (25,3 %) y de la atenuación del desacuerdo (15,2 %) y diversos (6,8 %), si bien es cierto que en algunos ejemplos se constata un solapamiento funcional, ya que en la misma intervención se superpone el valor meliorativo con los de progresión discursiva (11,9 %) y atenuación (5 %). Esto supondría que el valor de progresión discursiva se incrementaría e igualaría el de reformulación meliorativa.

Un ejemplo de progresión y atenuación del desacuerdo es en el que T reformula las intervenciones de los dos miembros de la pareja (*novia, amante, rollo,* con risas), con el marcador del discurso, *o sea,* ya que los miembros de la pareja estaban empezando a entrar en conflicto y, además, distribuye el turno con una pregunta directa (¿*no*?):

(12) H: y yo- yo conocía de su existencia por- [por la amiga]
M: [que era su novia] ¿no?
H: <susurro>si bueno yo</susurro> no era su- no era
M: bueno era su amante
H: era
M: bueno era suu rollo <risas/>
T: o sea que cuando tú conociste a Jaime lo conociste a través dee su novia su amante o su novia ¿no?
(…)
M: hombre pero Ramón ya no era su pareja ya
H: sí que era su pareja claro que era su pareja
T: entonces como una amiga especial ¿no? y esa amiga especial fue la que

Y, en (13) no solo se reformula (con un verbo de lengua expreso, *lo has dicho*), sino que además se considera que se ha enunciado en *plan titular*. Se reformula a mejor (es *meliorativa* porque se trata de que la historia contada se transforme en un elemento más positivo) y se pretende que la pareja acepte esa nueva visión de su relación (¿*no*?) y, de un modo simultáneo, se favorece la progresión discursiva desde esta nueva visión de la relación, con una pregunta explícita[6] *(¿dónde os conocisteis*?)

(13) M: lo importante es que nos conocimos qué más da ¿no?
H: sí
T: claro y además mayúsculas ¿no? porque lo has dicho como en plan titular *nos conocimos* ¿no? porque ¿qué situación era? M ¿dónde os conocisteis?

[6] Normalmente, las intervenciones reactivas se convierten en reactivo-iniciativas (Grupo Valesco, 2014) al retomar lo anterior y elaborar una intervención que intenta provocar que su interlocutor reaccione.

En el caso de los ejemplos de reformulación para mejorar el relato, la estructura habitual de la intervención de T es la que se muestra en el Esquema 1, con una manifiesta estrategia para conseguir la resolución del conflicto de la pareja a partir de una nueva formulación de las vivencias:

T: la terapeuta

[ya] [claro] (*acepta empáticamente la intervención anterior*)

[entonces] (*conecta la intervención que sigue de un modo consecutivo a partir de la interpretación de lo dicho*)

[fíjate] (*llama la atención del interlocutor e intensifica el miembro del discurso que sigue*)

reformula (*reconstruye la intervención anterior y mejora el relato*)

[¿no? / **¿verdad**?] (*solicita confirmación atenuada con su reconstrucción y facilita el cambio de turno*)

Esquema 1. Estructura de intervenciones.

Nótese el inicio empático de la intervención: con *claro* se muestra de forma explícita el acuerdo enfático con el hablante anterior y la consideración de evidencia del miembro del discurso que introduce (Martín Zorraquino & Portolés 1999, p. 4150; Pons, 2008).

Como otro ejemplo de esta construcción, se reproduce la siguiente muestra de habla en (14), en la que se reformula el decir del marido (*es lo que tú dices*), incluso en estilo directo con la voz de él (*que encuentro, con la que necesito*), se añade un elemento afectivo (*que echo tanto de menos*) y se pide confirmación (¿*no*?). Ese elemento afectivo de refuerzo positivo de apego de la pareja estaba presente en intervenciones anteriores de él, aunque no se decía de ese modo (*conectas / te vuelves a unir*):

(14) H: y a mí no me importa ((que haya una carrera))

T: claro porque fíjate H al final es lo que tú dices aunque tengas que vivir en una puta carrera como dices tú pero *es la única manera que encuentro en poderme escapar un poquito a esa M que echo tanto de menos* ¿no?

H: claro

T: *con la que necesito / volver a ((ser)) y pues con la que necesito volver a hacer cosas*

Téngase en cuenta que en las reformulaciones la terapeuta utiliza en 18 ocasiones *claro* y, en 12, *ya* (como parte de esa intervención y no como intervención independiente fática); *entonces,* en 50 (de las 56 presentes en toda la interacción); *fíjate,* en 25 ocasiones; en 106 ocasiones, el marcador de confirmación ¿*no*?; y en 19, ¿*verdad*?, considerado como apelación al oyente para solicitar una confirmación de manera atenuada y una cesión de turno (Llopis, 2008) y, para este tipo de terapias, como «señales de petición de afiliación al receptor y de alineamiento con respecto al relato estratégicamente diseñado para desactivar el conflicto» (Querol, 2023, p. 288).

Como variante de esta estructura también puede aparecer en algunas ocasiones el marcador *pero* en inicio de intervención a modo de contraargumentación, *ya pero*… Es como una aceptación (*ya*) solo inicial porque seguidamente aparece el marcador *pero.* De hecho, *pero* aparece en 140 recurrencias, tal y como se muestra en el ejemplo (15), en el que M muestra su insatisfacción con su forma de convivencia actual y T muestra acuerdo inicialmente (*ya*) y enseguida aparece el *pero* para reconducir la argumentación y retomar el aspecto positivo del decir de ella en intervenciones anteriores, incluso en estilo directo (*para mí es muy importante nuestra relación*):

(15) M: no quiero que en mi casa se viva solo de mi manera

T: ya pero aquí lo importante es lo que estás diciendo ojalá a Jaime le esté llegando lo que estás diciendo *es igual que yo me tengo que apuntar mis cosas para que no se me olvide porque para mí es muy importante nuestra relación*

Otras muestras de reformulación serían las siguientes. En (16) T reformula el turno anterior en «dos personas a las que quería y las quería unir», con el marcador de carácter consecutivo *entonces* y lo reconduce para centrarse en la opción meliorativa de «unir a la pareja» frente a «reticencia del sujeto a encontrar una nueva pareja». Obsérvese el valor de sentido consecutivo débil, el cual permitiría tomar como antecedente la intervención del hablante anterior sin necesidad de comprometerse con la verdad de lo dicho (Martín Zorraquino & Portolés, 1999, pp. 4105-4106):

(16) H: y me hablaba mucho de ella y yo creo que me estaba intentando / es decir yo era como un poco reticente a la vez

T: yaa entonces como dos personas a las que quería ¿no? como que [quería]

H: [mmh]

T: uniros un [poco ¿no? como acercaros ¿no?]

H: [sí e- yo creo que sí] / yo creo que sí no me lo dijo así y tal pero yo creo que sí

En (17), T reformula lo anterior (*hombre divertido*), pero incorpora la existencia de complicidad entre los miembros de la pareja y, de nuevo, solicita confirmación *¿no?*. Además, en este caso, como en otros ejemplos, al reformular las palabras del miembro de la pareja, parte de su reproducción literal a través de un verbo de lengua (*y dice*) para generar un relato positivo de la pareja. De este modo, se puede concluir que en la reformulación (*heterorreformulación*) se retoman las palabras del interlocutor (incluso con el verbo *decir*) para reconstruir la narrativa de las vivencias de la pareja desde una nueva percepción más positiva. De hecho, *dices* presenta 21 recurrencias:

(17) H: mmh yo era un hombre divertido

T: [en pasado]

H: [<ininteligible/>]<susurro>sí tonterías</susurro>

T: y dice *era un hombre divertido* ¿no? hay mucha complicidad entre vosotros ¿no?

Y en esa estrategia de canalizar una narración empática (meliorativa), T vuelve a intervenir en (18) y emplea *fíjate* en su propio discurso para llamar la atención del interlocutor (de H como destinatario y de M como receptora), una llamada de atención para acercar al ámbito del hablante una información no esperada o una contraexpectativa (Guillén Escamilla, 2018; 2023). T repite y reformula las palabras de H con un verbo de lengua (*nos lo cuentas*) porque apunta una imagen valorativa positiva de M, pero añade (*ilusión, pasión, emoción*) e, incluso, realiza una pregunta de confirmación (¿*verdad*?) para que M se incorpore a ese relato positivo y explicite sus sentimientos de apego:

(18) H: sí sí además es que o sea una andaluza guapa que iba con su pantalón así apretadito rojo / y te- tenía unos rizos / preciosos y se acercó a mí y dije y además es que me sorprendió

(…)

T: y de- de ese y fíjate nos lo cuentas además que parece que estés delante de esa fotografía de esa mujer con ese pelo rizao esos pantalones rojos y al mismo tiempo lo cuenta

H: sí sí no fue encantador

T: con esa ilusión con esa / pasión también provocas también emoción en M ¿no? porque ¿qué está pasando M dentro de ti ahora? / tienes mucha emoción ¿verdad?

Lo mismo sucede en (19) con el marcador *fíjate*, la reconstrucción meliorativa del relato (*tú dices*) del sentimiento de apego y la petición de confirmación (¿*no*?), con la inclusión de una polifonía textual al retomar la voz y el decir de H (Borreguero, 2017):

(19) T: ya y fíjate H en lo que dices tú ahora mismo *haría cualquier cosa/ sacar tiempo de donde no lo tengo/ pero lo único que más deseo en el mundo es poder reencontrarme con M y que de nuevo sentirme bien con ella* ¿no? *sentir que ((esto)) fluya o sentir que que de nuevo nos tratamos como nos tratábamos antes* ¿no?

3.2 Entrevista terapéutica Madrid

3.2.1 Intervenciones de la terapeuta: cuantificación y tipología

Se ha seleccionado la entrevista séptima de Madrid (de las 20 grabadas), en la que se han obtenido los siguientes datos en relación con las intervenciones de los tres sujetos:

Tabla 3. Número de intervenciones e intervenciones de 3 grupos entonativos.

Sujetos	**Intervenciones**			
	Totales		3 > grupos entonativos	
T terapeuta	226	43, 8 %	36	37, 9%
M mujer	183	35, 4 %	22	23,1 %
H hombre	107	20,7 %	27	28,42 %
Total	516		95	

Y para las intervenciones de la terapeuta estos son los resultados de las 226 intervenciones, en la Tabla 4:

Tabla 4. Tipología formal de las 226 intervenciones de la terapeuta.

Intervenciones breves fáticas (*ya, claro*)	57	25,5%
Onomatopeyas/ risas fáticas	7	3,1%
Intervenciones diversas (empáticas, gestión turno, etc.)	60	26,9%
Intervenciones retroactivas: repetición y reformulación	102	45,7%
Total	226	100%

En principio, las intervenciones de la terapeuta, como en el caso anterior, son más frecuentes en porcentaje que las de los dos miembros de la pareja, si bien la terapeuta de Madrid presenta unas intervenciones más extensas. Y, en relación con la tipología de sus intervenciones, los porcentajes también difieren, ya que se constatan menos intervenciones fáticas y más intervenciones reactivas que en la terapeuta de Málaga. Cabe decir también que, más allá de que no se haya podido elegir la misma sesión en cada terapia,[7] existen otras variables que pueden incidir en la interacción discursiva en la terapia, aunque ambas terapeutas sigan el mismo enfoque, tengan una edad y nivel sociocultural similares:

a. la singularidad discursiva de cada terapeuta: su forma de expresarse, su modalidad geolectal (la zona de Málaga frente a la zona de Madrid)

b. la singularidad discursiva de cada pareja: así, por ejemplo, el marido en la entrevista Madrid emplea *o sea* en más de 90 ocasiones y recurre a *yo, creo, yo tengo la sensación, yo lo veo así*; y la mujer emplea *yo creo* y *mi sensación es*, lo que muestra estilos discursivos específicos respecto a la pareja de Málaga.

c. el conflicto mayor o menor presente en cada pareja: la pareja de Madrid muestra un nivel de conflictividad mayor.

En este sentido, destacan en esta entrevista terapéutica de Madrid cuatro transgresiones de esta interacción a tres bandas, ya que los miembros de la pareja interaccionan entre ellos en diferentes turnos y se produce una escalada del conflicto[8] (Briz, 2003), que la terapeuta intenta evitar con una reconducción de la entrevista (*entonces*…), tal y como se muestra en (20):

(20) H: [(( ))] a mí me has dicho que te da igual

M: claro es que cuando yo no estoyy // claro o sea si yo estoy alejada / pues no lo busco // pero lo que a mí me gustaría sería (( ))

[7] En la primera terapia se ha elegido la primera sesión y en esta segunda terapia se ha seleccionado la séptima.

[8] Se entiende por *conflicto lingüístico* un elemento desencadenante emitido por *y* que provoca una reacción emocional negativa en *x*. (Briz, 2003), frente a otras aproximaciones más genéricas y multimodales y sin caracterización negativa, como la de Maria Sifianou (2019). En general en un conflicto se culpabiliza a la otra parte de que las expectativas u objetivos no se han conseguido alcanzar, de ahí esa reacción emocional. De hecho, en otras sesiones de esta misma terapia se ha detectado que la terapeuta también ha recurrido a la estrategia recurrente de solicitar tiempo *(¿os parece que vayamos un poquito más despacio?)* como un modo de desescalar el conflicto (Querol, 2023; López Samaniego e.p.). Sin embargo, en la sesión analizada no se ha documentado esta estrategia de petición de tiempo.

T: entonces / [(( ))]

La tipología de funciones discursivas generales de las interacciones de esta terapeuta resulta similar a las ya descritas en la terapeuta anterior como gestora y mediadora del turno.

3.2.2 Tipología de intervenciones retroactivas (repetir, reformular o retomar)

Así pues, nos centraremos en las 102 intervenciones que retoman lo dicho, sean o no reformulaciones en sentido estricto (88 recurrencias) o de mera repetición (14 recurrencias). Casi todas ellas son, como en el caso anterior, *heterorrepeticiones* o *heterorreformulaciones* continuas o próximas, es decir, se retoma la intervención del emisor anterior. En el caso de las 14 repeticiones, también predomina una función fática a modo de escucha activa por parte del terapeuta, que favorece la continuidad del turno de habla del otro, como sucede en (21):

(21) M: hacen los deberes sales de casa tal / ellos están más irascibles nosotros también / ¿no? // las vueltas (( )) son duras

T: son duras

M: sí

En el caso de las 88 reformulaciones o intervenciones retroactivas[9] predomina, a diferencia del caso anterior, la finalidad de favorecer el mero registro objetivo de lo dicho como un modo de clarificar los sentimientos de apego (48,8%), seguido de conseguir la progresión discursiva (19,3%), la atenuación de lo dicho (5,6%) y para resumir lo dicho (5,6%).

Así pues, no se busca tanto la reformulación meliorativa de lo dicho y la progresión discursiva, sino que se plantea un modo clarificador de lo dicho con la petición también de confirmación.

A modo de esquema prototípico de este tipo de intervenciones vendría a responder a los siguientes movimientos:

[9] De hecho, López Samaniego (e.p.) analiza las 20 entrevistas de esta misma pareja y detecta 31 situaciones de conflicto con 173 movimientos de respuesta de la terapeuta. De los 173 movimientos, considera que 37 son no empáticos: petición de tiempo (56,8%) o cambio de turno (16,2 %) como los más frecuentes; y 136 son *empáticos* (al ocasionar una muestra verbal de comprensión, alineamiento, compasión o afiliación con la interpretación de los hechos relatados propuesta por alguna de las partes o con alguna emoción relatada o experimentada por ellas). Y, entre los empáticos, destaca las interpretaciones (55,2 %), las peticiones de ampliación (20 %), repeticiones o reflejos (12,5 %) y declaraciones de comprensión (6,6 %). Además, clasifica las 75 interpretaciones: 18 formulaciones, 29 reformulaciones, 13 reemplazos y 15 reencuadres. Entiende por *reformulación* T parafrasea algo dicho por las partes, con modificaciones que buscan aumentar la precisión o disminuir la intensidad emocional.

T: la terapeuta

[yo lo que entiendo] **[entiendo]** (*expresa la intervención anterior como algo subjetivo y, por ende, atenuado*)

[y por ahí me corriges si me equivoco] (*incluso se apunta la posibilidad de equivocación]*

reformula (*reconstruye la intervención anterior a modo de registro clarificador*)

[¿no?] (*solicita confirmación de la comprensión y facilita el cambio de turno*)

Esquema 2. Estructura de intervenciones

De este modo *entiendo*[10] presenta más de 25 recurrencias. Otro de los elementos singulares lo constituye la polifonía que a veces emplea la terapeuta, la cual juega con la reproducción del decir del otro en (22), con el empleo de varias voces, con la reproducción literal del *decir*:

(22) T: yo lo que te entiendo y por ahí me corriges si me equivoco H es que / en el plano más como afectivo dices *ahí yo no noto / como tanta diferencia en mí en estos años / quizá un poco más en el- en el plano sexual* ¿no? *de- de haberme acercado y sentir como que no era el momento que no no sé que*

(…)

T: ¿no? / entiendo // y por eso / cuando / deja de ir al fútbol y se queda en casa pero no aparece ese momento o ese abrazo ese compartir es estar juntos dices *es que no es eso / no es que esté comoo // es que está hablando de cuerpo presente* (( )) ((RISAS)) perdón [((RISAS))] no es solo que esté él / sino sentir ¿no? ese calor es- esa es la parte que echas en falta y- y dices *si no es algo que él no tenga porque yo lo he visto lo ha tenido conmigo en unos minutos lo veo con nuestros hijos pero como que no siempre lo siento ahí // está / pero yo no siempre siento ese calor* ¿es un poco así?

E incluso con el *oír* en (23), a veces precedido de *pero* (se registra en 119 ocasiones) y, de ese modo se produce como una reestructuración que permite una nueva argumentación en la que lo esencial se introduce después de este marcador:

(23) T: pero entonces H yo te oigo dos cosas ¿vale? // te oigo por un lado decir como emh // *wow esto es un problema porque ((RISAS)) tengo la sensación de que el listón está como por aquí y no sé- no sé si llego ¿no? o si la relación llega o si podemos llegar juntos o si- no- no lo pongo en ti ¿no? pero como que no sé*

(…)

[10] Rolán (2021, p.58) ya reconoce esta estructura: «a los estudiantes de mediación se les enseña a reformular con el clásico [Si no he entendido mal] o [Si he entendido bien], los cuales encabezan con esas palabras casi todas sus reformulaciones, enfatizando la importancia del resto de palabras que acompañan su ilocución.»

T: [((RISAS))] no pero yo te oigo ¿no? como diciendo *emh si nos manejamos bien ¿no? en lo práctico es una relación bastante cómoda ¿no? tenemos nuestros encontradillas* pero el- el problema que yo entiendo para ti no está tanto ahí / ¿no? como en esta sensación de que estáis como muy desligados el uno del otro ¿no? que os complementáis bien

Así pues, los verbos *oír* y *entender* se convierten en evidenciales de una polifonía para retomar de un modo atenuado una selección de la información dada por los interlocutores: se trata de un fragmento discursivo de interés para poder llevar adelante la intervención y la ayuda terapéuticas.

4. Conclusiones

A partir del análisis anterior, se puede concluir que las dos terapeutas formadas en el mismo modelo de terapia de pareja, *Terapia Focalizada en las Emociones* o *Terapia Centrada en las Emociones* (*Emotionally Focused Therapy*), presentan pautas comunes y cierta especificidad en su interacción discursiva para conseguir mejorar el apego entre los dos miembros de la pareja a partir de la expresión de sus emociones en un clima de seguridad comunicativa y a partir de una desescalada del conflicto que pueda producirse o aumentar en ciertos momentos de la entrevista.

De este modo, de acuerdo con lo analizado, las terapeutas gestionan y equilibran las intervenciones de los miembros de la pareja y hacen avanzar el discurso; además, también muestran una escucha activa y empática en sus intervenciones para favorecer un clima distendido, de ahí sus numerosas intervenciones fáticas (*ya, claro, ya claro*), con risas u onomatopeyas (*mmm*), o con meras repeticiones. Y, por último, las terapeutas se convierten en mediadoras del discurso: atenúan posibles desacuerdos e intensifican lo positivo de las vivencias y del relato.

Además, las dos terapeutas en las sesiones analizadas retoman lo dicho por los miembros de la pareja si bien en la primera, Entrevista Málaga, se sirve especialmente como estrategia de la función *meliorativa*, es decir, pretende que la experiencia narrada sea más positiva, en especial cuando la imagen del otro queda afectada; y, para ello, se vale del *claro (comparto lo que dices), pero fíjate en cómo lo reformulo y reconstruyo la historia.* En cambio, la terapeuta de la Entrevista Madrid suele retomar lo dicho por los sujetos como un modo de registrar y clarificar lo enunciado si bien atenuándolo mediante un verbo de comprensión *entender*: *yo he entendido lo siguiente de lo que tú me has contado, pero puede que me equivoque.*

Así pues, el hecho de retomar lo dicho constituye un mecanismo constante de la intervención terapéutica con distintas funciones y formas de expresión, a modo de patrón discursivo estratégico, en el que planea también como nota común el hecho de incorporar las palabras del *decir* en una clara polifonía textual. De esta manera, se inserta en la intervención de las terapeutas la voz de los dos miembros de la pareja en un intento de ser lo más objetivo (positivo) posible y de hacerles conscientes de esas palabras. Se trata de un

decir totalmente distinto y opuesto al que surge cuando, en las interacciones conflictivas de pareja, un miembro de esta afirma y reinterpreta las palabras del otro: *tú has dicho x* –o has querido decir x–; a las que se replica y responde a veces con enfado: *yo no he dicho eso* (Sanmartín & Albelda, 2023).

Sin embargo, en las entrevistas terapéuticas ese *decir* contextualizado, ese registro de palabras, formulado por la entrevistadora (con poder epistémico) les hace a los miembros de la pareja darse cuenta de sus emociones, canalizarlas y les permite poder expresar su apego desde otra óptica: desde el tamiz imparcial de la terapeuta que verbaliza sus sentimientos.

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Transitivity and lexical cohesion in Biden's and Putin's televised speeches on Russia's war against Ukraine

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Abstract: The present study explores the interplay of Transitivity and lexical cohesion in the President Biden's and President Putin's televised speeches on 24 February 2022 aiming at legitimizing their actions, following the announcement of the Russian politician's invasion of Ukraine and the American politician's condemnation of the attack. A further objective is to investigate whether the Transitivity and lexical cohesion analyses illustrate the politicians' ideological positions and how lexical cohesion contributes to the process of ideological construction in the speeches. Within the general framework of Systemic Functional Linguistics (SFL), we first obtain the results for Transitivity following Halliday's Transitivity system and add a study of the interplay with lexical cohesion. The results reveal that both politicians used Transitivity differently: Biden effectively utilized Material clauses to portray Russia as the aggressor, while Putin employed Relational and Mental constructions to craft a narrative that justifies Russia's actions and present it as a victim. These linguistic choices contribute to their respective ideological representations of reality. The results also show that Transitivity and lexical cohesion were used as an ideological tool to persuade the audience of the legitimacy of war.

Keywords: *transitivity, lexical cohesion, persuasion, metaphorical themes, political language, political speech, ideology.*

Transitividad y cohesión léxica en los discursos televisados de Biden y Putin sobre la guerra de Rusia contra Ucrania

Resumen: El presente estudio explora la interacción de la Transitividad y la cohesión léxica en los discursos televisados del presidente Biden y del presidente Putin el 24 de febrero de 2022, con el objetivo de legitimar sus acciones, tras el anuncio de la invasión de Ucrania por parte del político ruso y la condena del ataque por parte del político estadounidense. Otro objetivo es investigar si los análisis de Transitividad y cohesión léxica ilustran las posiciones ideológicas de los políticos y cómo la cohesión léxica contribuye al proceso de construcción ideológica en los discursos. Dentro del marco general de la Lingüística Funcional Sistémica (SFL), primero obtenemos los resultados de la Transitividad siguiendo el sistema de Transitividad de Halliday y añadimos un estudio de la interacción con la cohesión léxica. Los resultados revelan que ambos políticos utilizaron la Transitividad de manera diferente: Biden utilizó cláusulas Materiales para retratar a Rusia como el agresor, mientras que Putin empleó construcciones Relacionales y Mentales para crear una narrativa que justifica las acciones de Rusia y presentarla como víctima. Estas elecciones lingüísticas contribuyen a sus respectivas representaciones ideológicas de la realidad. Los resultados también muestran que la Transitividad y la cohesión léxica se utilizaron como una herramienta ideológica para persuadir a la audiencia de la legitimidad de la guerra.

Palabras clave: *transitividad, cohesión léxica, persuasión, temas metafóricos, lenguaje político, discurso político, ideología.*

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1. Introduction

A wealth of literature (Cabrejas-Peñuelas & Díez-Prados, 2014; Díez-Prados, 2016; Oddo, 2011; Scott, 2003) has uncovered various linguistic strategies used by politicians (e.g., political implicatures, evaluative language, lexical choice, metaphors, metonymies, among others) to systematically manipulate language with a view to legitimizing their actions. One of such devices is Transitivity, which reveals "how discourse is used by different social groups in order to communicate specific ideologies to ingroup and outgroup members" (Li, 2010, p. 3446). Unlike lexically-based strategies, Transitivity shows "consistent patterns of grammatical relations that reflect the world-view of the producer(s) of the discourse" (Scott, 2003, p. 13).

Lexical cohesion – defined as "the overt linguistically-signalled relationship between propositions" (Widdowson, 1978, p. 31) - is a phenomenon that may further contribute to the process of ideological construction within a text. Indeed, it is through lexical choice and cohesion that speakers/writers "construct meanings about discourse that transcend the referential meanings of each individual word through a deliberate interplay of lexical items that are semantically and pragmatically related" (Li, 2010, p. 3454). Through repetitions of lexical items that are collocationally related lexical cohesion is created. Lexical cohesion may be used to construct a particular version of reality that blames Their actions, which are eminently evil, and legitimizes Our decisions, even if that involves getting involved in a war (Kitis & Milapides, 1997; Li, 2010).

The language of politics is especially suited for the use of lexical choice hiding a specific ideology and Transitivity, since politicians need to offer a distinct picture that is unlike that of other politicians. Through lexical choice, politicians highlight their positive traits and the negative traits of their opponents (e.g., heroes vs. terrorists (van Dijk, 2011, p. 14-15)) and construct the Us vs. Them ideological polarization, while through different Transitivity patterns, politicians show the Us vs. Them division in an attempt to persuade the audience of the validity of their arguments and, thus, ensure support for their political actions (Cabrejas-Peñuelas, 2023; Li, 2010; Scott, 2003). Also, through lexical choice and specific lexicogrammatical choices politicians overtly set out to legitimize their actions, which, on occasions, involve defending a war that has dramatic human consequences.

War declaration speeches are a "genre in its own right" (Oddo, 2011, p. 289) aiming at legitimating violence. Indeed, "as a dangerous, deadly activity, war must be assigned *legitimacy* before it is undertaken" (2011, p. 289; italics in original). For that purpose, politicians "construe the war as a legally and morally acceptable project" (Chouliaraki, 2007, p. 3) before the audience by resorting to "highly moralized lexical resources" (Oddo, 2011, p. 294) and to various lexicogrammatical choices reflecting the politicians' ideological stance (Scott, 2003). Both seem to work together to "make the unpleasant realities of war seem necessary" (Oddo, 2011, p. 308) and, thus, politicians use them to garner support for military actions.

Transitivity has been a focus of attention in English and Spanish political speeches (Cabrejas-Peñuelas, 2023; Scott, 2003) and in different text types (e.g., newspaper articles, television interviews, courtroom talk, the language of scam, to name but a few), often combined with evaluation (Bartley, 2017; Oktar, 2001). However, to our knowledge, no study has attempted to analyze the role of lexical cohesion as a complementary analysis in English and Russian political speeches to check their role for positive self-presentation and negative other-deprecation (Oktar, 2001), for persuasion (Li, 2010; Scott, 2003) and for ideological positioning (Li, 2010). With the aim of providing a contrastive perspective, the present study examines President Putin's announcement of the invasion of Ukraine in a televised address and President Biden's speech condemning Russian military forces' attack. In his political speech, Putin attempted to convince the audience that his decision to invade Ukraine was not but an effort to stop the NATO's hostile expansion in the East, one that was getting close to Russia's borders. In contrast, Biden's speech served to denounce Putin's attempt to go back to the former Soviet Union, while he also announced a round of severe sanctions against Russia and President Putin. In a bid to uncover the politicians' lexicogrammatical and lexical choices aiming at legitimizing their actions, the present study attempts to answer the following research questions:

1. What type(s) of transitivity patterns as found in the Hallidayan Transitivity system (Halliday, 1994; Halliday & Matthiessen, 2004, 2014) are used in the American and Russian political speeches? Do they reflect the ideological stance of the speeches?
2. How does lexical cohesion contribute to the processes of ideological construction in the speeches aiming to legitimize politicians' actions?

To give an answer to the first research question, President Putin's address to Russia, announcing an attack over Ukraine, and President Biden's speech to the US condemning the attack, are analyzed, following the Hallidayan Transitivity system (Halliday, 1994; Halliday & Matthiessen, 2004, 2014). The analysis of transitivity patterns serves to "describe the lexicogrammatical choices that are made in strategic ways for the purposes of legitimizing [a] war" (Scott, 2003, p. 31) against Ukraine and of legitimizing the coordinated response to Russia over launching an invasion. It seems therefore that Transitivity contributes to an understanding of how ideologies are constructed in the speeches. In respect of the second research question, the repetitions of lexical items forming collocations are examined to check any metaphors that contribute to dominant themes in the speeches and that reveal the ideological construction of those in power (also, Li, 2010). Indeed, lexical choice depends not only on "setting, participants and goals", but also "on the knowledge and ideologies of the dominant authors and their groups" (van Dijk, 2011, p. 39). We believe that complementing an analysis of Transitivity with an analysis of lexical cohesion can help to uncover the ideologies underlying the Russian and American Presidents' speeches aiming to manipulate the audience's perception. We hypothesize that their interplay achieves semantic amplification and, thus, reinforces ideological perspectives that legitimize the narrative of war.

Section 2 gives a short account of the political background of Putin's and Biden's speeches. As part of the literature review, section 3 deals with call-to-arms legitimation and the discursive strategies that politicians use to justify their actions in a war situation. It also describes lexical cohesion as a complementary analysis of Transitivity to reveal inherent ideologies in political texts. Section 4 deals with the methodology of the study. Section 5 attempts to shed some light into how President Putin and President Biden express their ideological orientation in their speeches and, finally, section 6 provides the conclusions to the study.

2. Socio-political background of the speeches

The origins of Russia's invasion of Ukraine lie on Russia's opposition to Ukraine's request to become a member of the Western defensive alliance (NATO) and on Russia's invasion of Crimea in 2014. For Russia, the acceptance of Ukraine in NATO as well as the acceptance of other Eastern European countries that were former Russian allies threatens its security (Mearsheimer, 2014, p.77). Another reason for the full-scale war lies on Russia's accusations of genocide in the eastern part of Ukraine, although such accusations have been claimed to be unfounded (see Kirby, 2022). Also, Russia's involvement in a war against Ukraine and his annexation of Crimea are legitimized on the grounds that Russia is within the bounds of international law, unlike the NATO countries and the US.

On 24 February 2022 President Vladimir Putin announced Russia's invasion in a televised address, which followed his address on 21 February 2022, in which he declared that the Russian government would give the Ukrainian separatist regions of Donetsk and Luhansk formal recognition. Putin's announcement of a "special military operation" (Putin, 2022) on 24 February continued with bombings of major Ukrainian cities, such as Kyiv, in an attempt to "demilitarize and denazify Ukraine" (Putin, 2022). Ukraine's President Zelensky responded to the invasion by declaring martial law and by offering weapons to Ukrainians wanting to defend their country. Also, European countries responded to the war by imposing sanctions on Russian individuals, businesses and financial institutions seeking to isolate Russia.

In the face of a full-scale Russian invasion of Ukraine, President Biden gave a speech at the White House on 24 February, in which he denounced Putin's attack and announced a round of financial sanctions that the US and the European allies hoped would cripple the Russian economy. Also, he announced a deployment of additional troops to Germany, but these would not be involved in the war. The sanctions on Russia were meant to punish rather than to prevent Putin's actions, although how much they could alter his decisions was still to be seen. Biden also expressed his concern that the Russian-Ukrainian conflict would mean rising gas prices for the US, although he intended to limit them (Biden, 2022).

The Russian troops obtained some big victories in the first months of the war, such as the city of Mariupol in Donetsk; however, the arrival of Western artillery soon took its toll, while the Ukrainian troops began a counter-attack and regained some territories. And yet, Russia was not the only one struggling: there was also a risk of a global food crisis looming

after a few months of the war had passed; also, in August 2022 Russia shut down the Nord Stream gas pipelines to increase pressure on Europe, which led to immediate price surges. One year and a half since the invasion, Ukraine was in control of cities of strategic value, although neither side was making significant progress. Despite Putin's nuclear threats and his efforts to gain military control of parts of Ukraine, he was failing to win the war. Also, Sweden and Finland applied to join NATO in May 2022, alarmed by Russia's attacks and, thus, his effort to push back NATO seemed to be failing as well (Askew, 2023). And yet, there is no end for the war in sight. The West has taken a cautious approach to supporting Ukraine for fear of provoking World War III. While the Biden Administration has had a major role in keeping Ukraine in the fight, the future is uncertain regarding how much support it will provide, with some believing that the most likely result is a frozen conflict with unforeseen consequences (Hooker, 2023).

3. Theoretical review

3.1.War legitimation

Legitimation refers to "discourse that explains and justifies social practices" (Simonsen, 2019, p. 505) and, thus, it involves providing "good reasons, grounds, or acceptable motivations for past or present action" (van Dijk, 1998, p. 255). It also provides an answer to the question "Why should we do this?" or "Why should we do this in this way?" (van Leeuwen, 2007, p. 93). Legitimation is frequent when political leaders make controversial decisions, such as wars, which need public support. For that purpose, they use soft power – an ability to persuade others to follow their own course of action (Chouliaraki, 2007, p. 1) -, which comes with their status or rank, but also with their privileged access to mass media, enabling them to reach large audiences (van Dijk, 1998).

War legitimization implies a conflict between good and evil. There is an in-group category that is identified with good, often "the free Western world" (Simonsen, 2019, p. 511), and an out-group that is identified with enemies, who are "the thoroughly evil aggressors" (Oddo, 2011, p. 289). They are described as "terrorists" and only verbs of mental processes (e.g., "**do not believe** women should be educated", "**want** to dictate how to think, "**celebrate** the murder of innocent people" (Reyes-Rodríguez, 2006, p. 373; bold in original) are used in their descriptions. This suggests "extreme subjectivism since [...] beliefs and ways of thinking are questions of perspective (i.e., western)" (2006, p. 373). At the same time, in wars involving Western countries the in-group "transcends geographical borders [...]; [that is], [it] establishes a symbolic in-group consisting of states and populations that identify with similar social categories typically associated with 'Western values', for example, modernity, liberalism and democracy" (Simonsen, 2019, p. 511). Such values contrast with those which the out-group identifies with; that is, anti-modernity, anti-democracy and, often, religious fundamentalism.

Political leaders waging war use various discursive strategies to convince the audience of the legitimacy of their purpose (see Oddo, 2011; van Leeuwen, 2007 for a review of some common strategies), the most important of which is the Us vs. Them ideological

polarization. This involves positive self-presentation and negative other-presentation (Oddo, 2011; van Dijk, 1998) to appeal the audience emotionally (Reyes-Rodríguez, 2006). For that purpose, Their criminal acts against innocent people are explained in great detail and are presented as intentional and perverse, while Our acts - even if violent - are shown to restore the moral balance (Lazar & Lazar, 2007, p. 49). Conceptual metaphors - defined as "understanding one conceptual domain in terms of another conceptual domain" (Kövecses, 2002/2010, p. 4) – are also used with a (de)legitimizing role of political actions (Arcimavičienė, 2019; Chilton, 2004) as part of their persuasive power. This is due to their ability to address complex or abstract issues (e.g. immigration, terrorism) in simple or concrete terms, to emphasize certain aspects while downplaying others and to evoke emotional responses (Charteris-Black, 2004; Flusberg et al. 2018; Kövecses, 2002/2010; Lakoff & Johnson, 1980; to name just a few). For example, in 'we have *covered* a lot of ground', the journey metaphor serves to highlight the issue of progress (Kövecses, 2002/2010, p. 80; italics in original), while at the same time conjuring up feelings of completeness and achievement. Metaphors also fulfill an evaluative function (Ferrari, 2007; Neagu, 2013) and, thus, politicians use them to highlight Our actions (and, thus, legitimize them) and to deemphasize Their actions (and, thus, delegitimize them), since they "feel a strong pressure to justify [them] in terms of oppositions between right and wrong" (Chilton, 2004, p. 199). This happens by challenging the current status quo of "the amoral other" (Arcimavičienė, 2019, p. 109), who is the enemy and perpetrator of violent acts, and a victimized self, who is the victim and the defender of the oppressed (e.g. "*they use force* against foreign states (NATIONS ARE PERSONS); "If Russia *takes that path* [...] we will lift our sanctions" (POLITICS IS A MORAL JOURNEY) (2019, p. 112; italics in original). This way, by presenting Us positively and in danger of being attacked by the evil Them, be it through detailed descriptions of Their/Our actions and/or through metaphors, violent action against Them is considered necessary and inevitable.

At the discourse level, politicians also employ two legitimation strategies: "legitimation by moral evaluation" and "legitimation by instrumental rationalization" (Simonsen, 2019; van Leeuwen, 2007). In legitimation by moral evaluation, "political leaders [...] replac[e] concepts with negative connotations, for example, 'war', 'attack' or 'violence'[1] with morally praiseworthy ones in order to shift the audience interpretation of an event from potentially illegitimate to legitimate" (Simonsen, 2019, p. 509). For example, after the September 11th terrorist attacks on American soil President Bush avoided the word "war" in his speech and used instead war metaphors (e.g. "our very freedom came under *attack* today" (AMERICA IS A VICTIM) (Bush, 2001). By describing the terrorists *attacking* Americans' freedom, President Bush stressed the legitimacy of Americans' self-defense. War metaphors are effective in communication for several reasons: (1) the schematic structure of a prototypical war is well known (i.e., there are two opposing sides involving good and evil engaged in a fight; they require strategic decisions; unfold over time; end in victory

[1] While 'war', 'attack' and 'violence' can be literal when they involve people fighting using military means and, thus, they are non-metaphorical, there can also be metaphorical uses of the words, as in 'freedom is at war'. These could be regarded as a metaphorical extension of a literal war.

or defeat; and evoke emotions, such as fear and threat); (2) there is widespread awareness of a prototypical war; and (3) many topics (e.g. sports, politics, illnesses) resemble wars (Flusberg et al., 2018, pp. 8-11). Legitimation by instrumental rationalization "legitimates war by reference to its goals, purposes and effects and, accordingly, is founded on the principle of utilitarianism" (Simonsen, 2019, p. 519). The objectives sought for call-on-arms legitimation are to "obtain calm, to improve the security situation" (2019, p. 510), to "protect civilian life", to "restore human rights" (Lazar & Lazar, 2007, p. 50) and "even [to achieve] peace" (Simonsen, 2019, p. 510). However, the self-defense argument is "the most prevalent legitimation in Western public discourse for the use of violence" (2019, p. 505).

3.2 Transitivity and lexical cohesion in political discourse

A body of literature (Bartley, 2017; Li, 2010; Scott, 2003) taking a Systemic Functional Linguistics (SFL) perspective have examined the Experiential and Textual metafunctions of language (Halliday & Matthiessen, 2004, 2014) in different text types (e.g., newspaper articles, political speeches) to uncover the ideologies and power relations underlying a text. Experiential meanings are realized through the grammatical system of Transitivity, which allows speakers to linguistically encode reality and represent human experiences through Processes, Participants, and Circumstances. Textual meanings are realized, among other aspects, through lexical cohesion, which helps to ensure that the text is coherent (Halliday & Matthiessen, 2004, p. 30). By analyzing two aspects of clause grammar —Transitivity and lexical cohesion—, the speakers' ideological positions can be revealed in their lexicogrammatical choices: the former by overtly constructing a particular version of reality that justifies Our activities and blames Their activities, and the latter by subtly shaping the audience's perceptions (Li, 2010; Scott, 2003). When both are combined, semantic amplification is achieved and, thus, they play a significant role in legitimizing the political status quo (Li, 2010).

Through Transitivity, Their actions are restricted by using a choice of Processes and negative qualities are assigned to Them while positive qualities are ascribed to Us (Abrafi-Adjei & Ewusi-Mensah, 2016; Scott, 2003). Thus, Transitivity influences the audience's perception through the grammatical construction of sentences. Indeed, through negative Relational Attributive clauses (i.e., clauses in which one entity is assigned an attribute), Their enemies are characterized negatively (e.g., "Iraq *has been* an aggressor") (Scott, 2003, p. 126). Also, through Material clauses, the active role of a government toward the resolution of a conflict is emphasized (e.g., "General Powell *sent* a letter to the Chinese") (Li, 2011, p. 214), while through passive structures they are shown as victims of the actions of the opposing group (e.g., "All 24 diplomats *are being held* in China"), thus eliminating the government's responsibility in the events (2011, p. 214). Lexical cohesion is achieved through the constant repetition of certain word combinations, often metaphorical, that create a sense of unity and coherence and contribute to the themes of the text adding, thus, to the processes of ideological construction within a text (Li, 2010, p. 3545). This happens by using concepts in the source domain that are associated with a certain emotional state (e.g. danger, brutality, fear) in human experience which are then mapped to a target

domain. For example, juxtaposing terms such as "swarms", "hordes", "herds" and "hunt" (IMMIGRANTS ARE ANIMALS) and "flows", "waves", "tides" (IMMIGRANTS ARE FLOODS) when referring to immigration strengthens the text's overall cohesion (see more about ontological metaphors in Kövecses, 2002/2010; Lakoff & Johnson, 1980). Indeed, the repetitive use of such conceptual metaphors creates dominant themes in the text (e.g. violence) that bind the text together, as well as offering an implicit way of understanding reality that is ideological in nature: that immigrants are dehumanized beings and, due to their unpredictability, they are a threat to the host nation; it also suggests that immigration is dangerous and should be stopped. Therefore, it seems that "it is precisely these metaphors that underpin and sustain an implicit but consistent argument seeping through the configuration of [...] the text" (Kitis & Milapides, 1997, p. 567). When metaphorical lexical cohesion is combined with Transitivity (e.g. use of the verbs "flocked" or "flooded" to refer to immigrants; use of the active voice to highlight the actions of immigrants and, thus, their agency, among others) politicians can guide the audience's interpretation of the information provided, predisposing them to see certain aspects of reality in specific ways, even without their conscious awareness (also, in Li, 2010). This makes of the interaction of Transitivity and lexical cohesion a powerful tool of political persuasion.

4. Methodology

The speeches of Biden and Putin on 24 February 2022 were initially examined to determine whether Halliday's Transitivity system (Halliday, 1994; Halliday & Matthiessen, 2004, 2014) accurately reflects the producers' worldview and whether Transitivity and lexical cohesion combine to illustrate the politicians' ideological stance.

Putin's speech, consisting of 3,761 words (Putin, 2022), was sourced from The Kremlin's webpage, which publishes transcripts in English of the President's addresses. Similarly, Biden's statement in response to the Russian President's announcement of an attack on Ukraine, totaling 1,998 words, was obtained from The White House's webpage (Biden, 2022). To analyze Transitivity, we followed Scott's (2003, p. 36) approach and manually divided each text into ranked clauses and rank-shifted clauses, focusing solely on clause rank.[2] We used letters for the clause complex and numbers for the individual clauses in the texts. Once both texts had been divided into clauses, we uploaded them to the UAM corpus tool (O'Donnell, 2012) for analysis using a modified version of the built-in Transitivity network that excluded circumstance. We utilized Halliday's Transitivity network (Halliday, 1994; Halliday & Matthiessen, 2004, 2014), which differentiates between process, participant, and circumstance (see Figure (1) below with examples taken from Biden's and Putin's speeches):

[2] According to SFG, all languages have a rank scale in their grammar, which, in English, consists of clause, phrase/group, word, and morpheme. Each rank contains one or more units of the rank below it, and rank shifting is also possible. This means that a unit of one rank can be downranked or downgraded to function in the structure of a unit of its own rank or of a rank below it (Halliday & Matthiessen, 2014, p. 9-10). In SFG, the term "clause complex" is used instead of "sentence," and it refers to "a number of clauses linked together grammatically" (2014, p. 8).

Table 1. Transitivity network (Bartley, 2017; Halliday & Matthiessen, 2014).

Transitivity Types	**Material** Clauses of "doing & happening" (H & M, 2014, p. 224). They express concrete actions. Ex: "*They sought* (Material process) *to destroy our traditional values* (Scope)" (Putin)		Participant: Actor Other participants Process	goal scope beneficiary
	Mental Clauses of internal processes	*Mental cognition process*: The clause brings ideas into existence, but the idea may or may not be true. The ideas (i.e. the content of one's thoughts or beliefs) are projected in clauses. Verbs: think, believe. Ex: "*We all kn*ow (Mental cognition process) *that [having justice and truth on our side] is [what makes us truly strong]* (Phenomenon)" (Putin)		
		Mental desiderative process: The clause brings ideas into existence. The ideas denote action that is yet to be carried out (H & M, 2014, p. 140). Verbs: want, hope for. Ex: "*Putin chose this war*" (Biden)		
		Mental emotive process: The clause can only project pre-existing facts. The clauses can be graded: "Do you love me?" Verbs: like, fear. Ex: "*However, Russia cannot feel safe*" (Putin)		
		Mental perceptive process: The clause can only project pre-existing facts. The clauses cannot be graded: "Can you see me?" Verbs: see, hear. Ex: "*We saw a staged political theater in Moscow*" (Biden)		
		Participant: Senser Process Participant: Phenomenon		
	Relational Clauses of being. They serve to "characterize and to identify" (H & M, 2014, p. 259).	*Relational attributive process*: There is a relationship between two entities. One of them is assigned an attribute. Ex: "*This is a premediated attack*" (Biden)	Participants: Carrier Attribute Process	Relational intensive Relational possessive Relational circumstantial
		Relational identifying process: One of the entities is given an identity. Unlike in relational attributive classes, a unique identity is inferred. Ex: "*Putin is the aggressor*" (Biden)	Participants: Token Value Process	Relational intensive Relational possessive Relational circumstantial
	Verbal Clauses of "saying" (H & M, 2014, p. 302). Ex: "*To reiterate* [Verbal process]: *they have deceived us* [Verbiage]" (Putin)		Participant: Sayer Participant: Target/recipient Participant: Verbiage Process	
	Behavioral Clauses of "physiological and psychological behavior, like breathing, coughing, smiling and staring" (H & M, 2014, p. 301)		Participant: Behaver Process	
	Existential Clauses of existence. They take the form "there is/was". Ex: "*There are many examples of this*" (Putin)		Participant: Existent Process	

Due to space limitations, the system of circumstance was not included in this study. Therefore, we conducted a manual annotation (an excerpt of which is shown in (1)), as the process of verbs in ambiguous cases can be difficult to distinguish (see Bartley, 2017 for examples of such difficulties).

(1) M 18 In the late 1980s, the Soviet Union grew weaker [*Relational attributive clause*]

19 and subsequently broke apart. [*Material process*]

20 That experience should serve us as a good lesson for us, [*Mental cognitive clause*]

21 because it has shown us [*Mental perceptive clause*]

22 that the paralysis [of power and will] is the first step [towards a complete degradation and oblivion]. [*Phenomenon*]

Putin's 2022 speech

To ensure consistency in the analysis, one researcher analyzed the entire debate while another researcher analyzed 30 % of it to ensure inter-rater reliability. The two researchers agreed in 84.35 % of the cases in the Transitivity analysis. When discrepancies arose, they were discussed until a consensus was reached. However, dividing Biden's and Putin's speeches presented some difficulties, such as how to handle a succession of verbal clauses or cases that did not fit neatly into the Transitivity network. Therefore, some methodological decisions were made.

The first methodological decision concerned the analysis of phrasal verbs or set phrases and the selection of the most appropriate process type, based on their meaning (e.g., In "Our Allies have also been stepping up", "step up" is a Material process as it involves increasing the amount of something).

The second methodological decision concerned the division of verbal clauses. In (2), we decided to embed clauses of verbiage (see 59.1 and 59.2 below) "as [they] could all be interpreted as the 'something'" that the speaker says, and they "should remain attached at the same level as the Receiver" (Scott, 2003, p. 36), which is 'I':

(2) AQ 59 As I said on Tuesday, [$^{59.1}$ these are people [$^{59.1.1}$ who personally gain from the Kremlin's policies]] [$^{59.2}$ and they should share in the pain] (Biden).

The third methodological decision involved calculating the percentages of each clause type (i.e., Material, Mental, Verbal, Behavioral, Existential, and Relational) relative to the total number of words in the text. The purpose was to be able to make comparisons between participants, since the speeches have different lengths (see Table 2 below). The final methodological decision in the Transitivity analysis involved using the chi-square test to determine whether any differences between the political candidates were significant or due to chance.

To analyze lexical cohesion, we examined Biden's and Putin's speeches to identify any linguistic expressions that could not be taken literally and, hence, an abstract concept was understood by resorting to another "more concrete, physical, or tangible" (Kövecses, 2002/2010, p. 7); for example, LOVE IS A JOURNEY. Following Kövecses (2002/2010, p. 5), for the identification of metaphors the procedure used was that employed by the Pragglejaz Group (2007); that is, the Metaphor Identification Procedure (MIP), since there is a wealth of literature that has utilized or referred to it (e.g. Díez-Prados, 2016; Kövecses, 2002/2010) (for other analytical frameworks for the study of metaphor, see Charteris-Black's (2004) Critical Metaphor Analysis Approach and Steen et al. (2010) Metaphor Identification Procedure of VU University (MIPUV)):

1. Read the whole text to understand the overall meaning.
2. Determine the unit of analysis: a lexical unit.
3. Establish the contextual meaning of the lexical unit being examined.
4. Determine the basic meaning of the lexical unit (more concrete, human-related, and more precise).
5. Decide whether the basic meaning of the lexical unit differs from the contextual meaning, although both share similarities.
6. Mark the word as a metaphorical expression.

Once the words had been marked as metaphorical expressions, the source domain and the target domain were distinguished. Next, a set of correspondences were laid out between the constituent elements of the source and the target domains. Distinguishing between literal and metaphorical uses of lexical units involved a careful examination of content, their conceptual domains, and their basic and contextual meanings (e.g. "attack" has a literal meaning to refer to an act of aggression and a metaphorical meaning to describe being non-physically violent, but aggressive in nature). The analysis combined the source-based and target-based orientations, since the combined approach made it possible to appreciate the origins of metaphors and their impact on the target domain. One researcher manually analyzed both speeches for metaphors; however, to achieve interrater reliability, we had another researcher, who was also well acquainted with political discourse, manually analyze 30 % of the speeches. Both researchers reached 75.30 % agreement. Those cases for which there was no agreement were discussed until a consensus was reached. Next, we analyzed the ideological meanings of the conceptual metaphors found, following Lakoff & Johnson's (1980) Conceptual Metaphor Theory. We also considered the pragmatic criteria of metaphor, especially its evaluative role. Finally, we focused on linguistic expressions that contained repetitions of collocationally related lexical items and analyzed them for dominant metaphors that permeated the speeches and created organizing themes (also, Li, 2010). The metaphors were thematically linked and served a common purpose (see for example Li's (2010, p. 3454) metaphors of flood, fire, and untamed animals, which

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contribute to the overarching theme of portraying protests as violent and uncontrollable). They functioned as a set of related metaphors, rather than as a single metaphor that was elaborated throughout a single text (see Kövecses, 2020).

The study of lexical cohesion in the American and Russian speeches also entailed making some methodological decisions. The first methodological decision involved determining the unit of analysis, which was the lexical unit. Following the Pragglejaz Group (2007), to determine whether a lexical unit coincided with a word or phrase, dictionary entries were used. Single headwords were regarded lexical units (2007, p. 15); however, words that could not be "analyzed through the meaning of its constituent parts" (2007, p. 5) were also regarded as a single lexical unit; e.g., *cut off*. The second methodological decision referred to classifying the conceptual metaphors found into themes that helped to comprehend Biden's and Putin's understanding of the events reported. This entailed extracting all metaphors in the speeches and categorizing them based on their source domains. Once we extracted the themes, these helped us to compare and contrast between speakers.

5. Results and discussion of findings

This section has been divided into two parts: we first present the quantitative results for the study of Transitivity in Biden's and Putin's speeches; then, we analyze lexical cohesion.

5.1 Results from the study of Transitivity

In this subsection, we present and discuss the main findings regarding Biden's and Putin's frequency of Transitivity processes so as to answer our first research question. The results are those obtained after analyzing the politicians' speeches, following Halliday & Matthiessen's (2014) framework. We only mention the results that proved statistically significant (see Table 2).[3]

When contrasting the six Transitivity types, Biden uses Material clauses most frequently, which accounts for almost 50 % of all clauses, followed by similar rates of Mental, Relational, and Verbal clauses. The rate of Existential clauses is very low and Behavioral clauses are non-existent. In contrast, Putin uses similar rates of Material and Relational clauses, followed in order of occurrence by Mental, Verbal, Existential, and Behavioral clauses. The results obtained reveal significant differences between the politicians in Material and Relational clauses, but not in Mental, Verbal, Behavioral, and Existential clauses and, thus, they may have used such Transitivity types in a similar manner (see Table 2). As in previous research (Bartley, 2017; Scott 2003), Material clauses prevail over the rest or are one of the most common Transitivity types used, as they are concerned with actions and events undertaken by politicians and citizens (e.g., protect, work, write).

[3] In this study, we take $p<0.05$; that is, a significance level of 95 %, which is considered significant in social sciences (Dörnyei, 2007, p. 210). This suggests that there is a 95 % level of confidence that the results are not due to random chance and, thus, they are statistically significant.

Closer examination of the results reveals that the American and Russian politicians rely on different uses of Transitivity to legitimate their actions in times of war by making particular choices in the language they use. Biden uses more Material clauses (9.02 % for Biden *versus* 4.85 % for Putin) (χ^2 = 35.757, p<.00) and, thus, more Material processes (3.51 % for Biden *versus* 2.18 % for Putin) (χ^2 = 5.547, p<.00), to denounce Putin's invasion of Ukraine and to announce a round of sanctions (see (3) and (4) and Table 2 below):

(3) The Russian military has begun [*Material process*] a brutal assault on the people of Ukraine without provocation, without justification, without necessity [*Material clause*] (Biden).

(4) It was [*Relational identifying intensive clause*] always about [...] Putin's desire for empire [by any means necessary] by bullying [*Material process*] Russia's neighbors [through coercion and corruption] [*Material clause*], by changing [*Material process*] borders [by force] [*Material clause*] [...] (Biden).

In (3) and (4), Biden uses Material clauses to explain that the Ukraine war is the result of Putin and his government's actions. Their actions are described negatively and, thus, they shed a negative light upon *Them*. The invasion leads to "the rescue scenario" (Lakoff, 2013, p. 8) on the part of the US, its Allies, and partners; that is, imposing a wage of measures targeting Russian financial institutions and elite families. The Transitivity results suggest that, in his attempts at "justify[ing] a war on moral grounds" (2013, p. 8), Biden makes systemic choices in his language to construct a particular version of reality in which the US, its Allies and partners' involvement in the conflict over Ukraine is justified through Russia committing an offence against an innocent victim and the demonization of the enemy.

The Transitivity results further reveal that Biden emphasizes the active role of *Us* (i.e., the President, the Democratic party and, on occasions, the NATO countries), who bring about changes in Material clauses (3.01 % for Biden *versus* 1.41 % for Putin) (χ^2 = 13.133, p<.00). Indeed, "we/I /my administration" were labelled as actor in 41.67 % of the cases, while 45.45 % of the elements in Material clauses had other participant roles (2.51 %, χ^2 = 8.998, p<.00), especially scope (1.95 %, χ^2 = 6.679, p<.00) (see (5)):

(5) We [*Material: Actor*] will limit [*Material: Process*] Russia's ability [*Material: Scope*] [to do business in Dollars, Euros, Pounds, and Yen] [to be part of the global economy]. We [*Material: Actor*] will limit [*Material: Process*] their ability [*Material: Scope*] [to do that] (Biden).

In (5), Biden announces strict sanctions on the part of the NATO allies against Russia in an effort to isolate Moscow from the global economy. To do that, he uses Material clauses, which have *Us* as the subject. Also, *Our* actions are for the benefit of others, rather than ourselves, all of which adds to Our positive self-presentation. Indeed, *Our* actions contribute to forcing the Kremlin to pull back its troops and, thus, restoring the moral imbalance that Putin and his government had created (Lakoff, 2013).

Table 2. Transitivity network (Bartley, 2017; Halliday & Matthiessen, 2014).

	Biden		Putin		Statistics		% per 100 words of text	
Feature	N	%	N	%	Chi square	Sig	[Transitivity processes / total number of words] x 100	
TRANSITIVITY - TYPE	N=407		N=679				**B %**	**P %**
Material	180	44.23%	182	26.80%	34.757	+++	**9.02**	4.85
Mental	81	19.90%	166	24.45%	2.993	+	6.78	4.42
Relational	72	17.69%	211	31.08%	23.660	+++	3.61	**5.62**
Verbal	68	16.71%	111	16.35%	0.024	Not sign	3.41	2.96
Behavioral	0	0.00%	0	0.00%	0.000	Not sign	0	0
Existential	6	1.47%	12	1.77%	0.134	Not sign	0.3	0.32
MATERIAL - TYPE	N=407		N=679					
Actor	60	14.74%	53	7.81%	13.133	+++	**3.01**	1.41
Other participants	50	12.29%	47	6.92%	8.998	+++	**2.51**	1.25
Process	70	17.20%	82	12.08%	5.547	+++	**3.51**	2.18
OTHER PARTICIP.	N=407		N=679					
Scope	39	9.58%	37	5.45%	6.679	+++	**1.95**	0.99
MENTAL - TYPE	N=407		N=679					
Mental cognition process	29	7.13%	91	13.40%	10.200	+++	1.45	**2.42**
MENTAL COGNITION PROCESS	N=407		N=679					
Cognition participant phenomenon	10	2.46%	35	5.01%	4.662	++	0.5	**0.93**
RELATION - TYPE	N=407		N=679					
Relational attributive	45	11.06%	167	24.59%	29.688	+++	2.26	**4.45**
RELATION. ATTRIBUT.	N=407		N=679					
Relational intensive process	33	8.11%	106	15.61%	12.835	+++	1.65	**2.82**
Relational possessive process	5	1.23%	43	6.33%	15.694	+++	0.25	**1.14**
RELATION. INTENSIVE	N=407		N=679					
Intensive participant carrier	10	2.46%	38	5.60%	5.937	+++	0.5	**1.01**
RELATION. POSESSIVE	N=407		N=679					
Possessive participant carrier	1	0.25%	12	1.77%	4.981	++	0.05	**0.32**
Possessive participant attribute	2	0.49%	15	2.21%	4.873	++	0.10	**0.40**
Attribute possessive process	2	0.49%	15	2.21%	4.873	++	0	**0.40**

+ Weak significance (90%) ++ Medium significance (95%) +++ High significance (100%)

Analysis of Putin's transitivity patterns in his speech reveals that he uses more Relational clauses than Biden (5.62 % for Putin *versus* 3.61 % for Biden) (χ^2 = 23.660, p<.00); that is, clauses that construe the experience of being and becoming (Halliday, 1994, p. 212), especially to describe the attributes of particular entities (4.45 % for the former *versus* 2.26 % for the latter) (χ^2 = 29.688, p<.00). The carrier (i.e., the entity that is characterized) rather than the attribute or the process in Relational attributive intensive clauses proves statistically significant for Putin (1.01 %) (χ^2 = 5.937, p<.00). Indeed, "the speech [is] carefully crafted to place the blame on Ukraine, the United States, and NATO, while framing Russia as desiring peace but now taking military action as a moral responsibility" (Atlantic Council, 2023, n.p.). When doing so, Putin uses Relational attributive intensive clauses, which have processes such as *is*, *were*, *seem*, *would have been* (see (6)):

(6) Even now, [with NATO's eastward expansion] the situation for Russia [*Relational attributive clause: Carrier*] has been becoming worse and more dangerous [by the year]. Moreover, these past days NATO leadership [*Relational attributive clause: Carrier*] has been blunt in its statements [that they need to accelerate] and step up efforts [to bring the alliance's infrastructure closer to Russia's borders] (Putin).

In (6), Putin stresses the fact that the aggression of the enemy (i.e., NATO) is imminent. He does so through Relational attributive clauses, which ascribe negative qualities to the current situation for Russia due to NATO's actions. Thus, he presents Russia as a victim, which casts a negative image upon *Them*. This serves him to act in a way that is contrary to his own nature.

The Russian politician also relies on Relational attributive possessive clauses, which describe a relationship of possession with processes, such as *have*, *provide*, or *face* (1.14 % for Putin *versus* 0.25 % for Biden, χ^2 = 15.694, p<.00). The carrier (0.32 %, χ^2 = 4.981, p<.05), attribute (0.40 %, χ^2 = 4.873, p<.05), and process (0.40 %, χ^2 = 4.873, p<.05) are statistically significant (see (7)):

(7) It is a fact [*Relational attributive intensive clause*] that over the past 30 years we have been patiently trying [to come to an equal and indivisible security in Europe] [*Mental cognitive clause*]. In response to our proposals, we [*Relational attributive possessive: Carrier*] have invariably faced [*Relational attributive possessive: Process*] either cynical deception and lies or attempts [at pressure and blackmail] [*Relational attributive possessive: Attribute*] (Putin).

In (7), by using Relational attributive possessive clauses, Putin portrays *Us* (i.e., the Russian government) in a positive light for making efforts towards peace, despite their perceived futility, while also condemning *Them* (i.e., NATO and Western democracies) for their malevolent actions. These jeopardize the international order.

The Russian President further prefers Mental cognitive processes (2.42 %) (χ^2 = 10.200, p<.00) to represent his and his government's inner thoughts and beliefs (i.e., the phenomenon (0.93 %) (χ^2 = 4.662, p<.05)). See (8), in which he expresses his main motivation for "liberating" some parts of eastern Ukraine: to defend the people in the

controlled parts of Crimea and Sevastopol from the Kyiv's government. This way, he shows altruism to be his driving motive (Thom, 2022, n.p.). At the same time, *Them* are associated with negative sentiments:

(8) They [*Mental cognitive: Senser*] did not leave [*Mental cognitive: Process*] us any other option [*Mental cognitive: Phenomenon*] [for defending Russia and our people], [other than the one we are forced] [to use today] (Putin).

However, there is no evidence suggesting that Ukraine attacked Russia and, thus, it needs to defend itself. Rather, it seems that "this is part of Putin's narrative accusing Ukraine of conducting military operations and even preparing for war against Russia" (Weber et al., 2022, n.p.). This suggests that Putin's speech is ideological in purpose. Putin also uses Mental cognitive processes to showcase "a characteristic of ideological dictatorships, the enormous lie" (2022, n.p.) (see (10)):

(10) We [*Mental cognitive: Senser*] do not intend [*Mental cognitive: Process*] [to impose anything by force] [*Mental cognitive: Phenomenon*]. [...] Freedom guides [*Mental cognitive: Process*] our policy [*Mental cognitive: Phenomenon*], ([which is) the freedom to choose independently our future and the future of our children]. We [*Mental cognitive: Senser*] believe [*Mental cognitive: Process*] [that all the peoples living in today's Ukraine, anyone who wants to do this, must be able to enjoy this right to make a free choice] [*Mental cognitive: Phenomenon*] (Putin).

In (10), through Mental cognitive clauses that have *Us* as senser and positive phenomena, the Russian president assures he and his government did not intend to occupy the Ukrainian territory by force. And yet, there is a full-scale war in which they annexed some Ukraine provinces, while Putin claimed he aimed at the "liberation of Donbas" (Kirby, 2022, n.p.). This again shows Putin's ideological purposes in the war against Ukraine.

5.2 Results from the analysis of lexical cohesion

To address our second research question, we present some repetitions of collocationally related lexical items in Biden's and Putin's speeches and examine how these repetitions create dominant metaphors that establish organizing themes.

5.2.1 Lexical cohesion in Biden's 2022 speech

Analysis of the lexical items that are collocationally related in Biden's speech reveals that the motifs of war, sanctions, community, and journey in Biden's portrayal of the events are strengthened by his lexical choices. These contribute to some dominant metaphors in the speech that construct and sustain ideologies conceptualizing Russia as a military assaulter of Ukraine and the US, its Allies, and partners as defenders of Ukrainian people (see Table 3 below for Biden's lexical choices building up metaphorical themes in the speech). Indeed, in his 2022 speech Biden constructs the POLITICS IS WAR metaphor through metaphorical lexical items such as "*violation*", "*assault*", and "*war*" and uses them in a context of moral argument (MORAL ARGUMENT IS WAR) through the words "*international*

law", "*the very principles*", "*without a cause*" (see (1) to (3) in Table 3). In such excerpts, Biden's lexical choices stress Russia's amoral position, since it poses a risk to the world's peace (also, in Obama's speeches concerning the Ukraine crisis and the annexation of Crimea, see Arcimavičienė, 2019). The War metaphor is intertwined with THE COUNTRY IS A VILLAIN and THE COUNTRY IS A HERO metaphors, in which Russia is described as a criminal and the US is ascribed the role of hero. Russia is an "*aggressor*", "inherently evil, perhaps even a monster" (Lakoff, 2013, p. 8), because it ordered "an *assault* on the very principles that uphold global peace". The US is a hero who "is left with no choice but to engage the villain in battle" (2013, p. 8). It provides "*relief*" to the victims and "*stands up*" for freedom. At the same time, the Democrat depicts Russia as a nation-child (THE COUNTRY IS A CHILD), "who need[s] to be taught how to develop properly and must be disciplined [...]" by the nation-adult (i.e., the US and the NATO countries) (THE COUNTRY IS AN ADULT) "when [it] fail[s] to follow instructions" (Lakoff, 2004, p. 119) (both metaphors are part of the STRICT FATHER metaphor (2004, p. 9)). The US and the NATO countries discipline the nation-child with sanctions, which are a form of punishment (SANCTIONS IS PUNISHMENT). The punishment inflicts metaphorical physical pain: it "*hurst*[*s*]" when the nation-adults "*strike a blow*" and "*hit*". However, it also inflicts economic distress, because it has a "long-term *impact* on Russia", "*degrade[s]* their aerospace industry" and "*limit[s]* their ability to do business". By constructing Russia's attack as a full-scale invasion of Ukraine and by taking up the position of moral integrity, Biden conceptualizes a reality of an unfair war, which calls for immediate action, this being stinging sanctions targeting Russia's financial, energy and transport sectors.

Biden's metaphorical portrayal of Russia is completed with the POLITICS IS COMMUNITY, NATION IS PERSON, and POLITICS IS A JOURNEY metaphors. He uses the POLITICS IS COMMUNITY metaphor, in which "nations are conceptualized as individual people living in a world community" (Lakoff, 1999, p. 11) and its related NATION IS PERSON metaphor. The POLITICS IS COMMUNITY metaphor implies the existence of friend, enemy, and rogue countries. Such metaphor "has the effect of isolating Russia from a unity with other nations" (e.g., "30 *Allied* nations and close *partners*"). It is therefore "part of a process of ideological polarization: family/friends/partners vs. strangers/opponents/enemies [in which] nations are divided into good and bad, right and wrong" (Arcimavičienė, 2019, p. 104) (see (10) above, in which Biden sets up a division between *Us* and *Them*, since the US and our Allies and partners stand as a unit before Russia). Also, one's own country is home and "regional military forces (e.g., NATO) are seen as forces that 'police' the neighborhood" (Lakoff, 1999, p. 11). Indeed, after Russia's invasion of Ukraine, some moral friendly *partners* of the world community - the US and the NATO countries - *allied* to introduce a wave of sanctions against Russia for not abiding by community norms (POLITICS IS COMMUNITY), with President Biden speaking on behalf of the moral countries before the amoral Them (i.e., Russia). In this way, Biden uses "a strategy of legitimization, where the US is viewed as a moral agent that knows right from wrong by representing universal moral values and thus can make judgements about others" (Arcimavičienė, 2019, p. 107).

Table 3. Metaphors in Biden's 2022 speech.

MORAL ARGUMENT IS WAR / MORALITY IS UP THE COUNTRY IS A VILLAIN / THE COUNTRY IS A HERO
Them
(1) We saw **a flagrant violation of international law.** (2) Putin has committed an **assault on the very principles** that uphold global peace. (3) It was about […] Putin's desire for empire by any means necessary – […] by **choosing a war without a cause**.
Us
(4) America **stands up** to bullies. We **stand up** for freedom. (5) We'll provide humanitarian **relief** to ease their suffering.
SANCTIONS IS PUNISHMENT
Us
(6) We've already seen the **impact** of our actions on Russia's currency, the Ruble, which early today **hit** its weakest level ever — ever in history. (7) It will **strike a blow** to their ability to continue to modernize their military. It'll **degrade** their aerospace industry […]. It will **hurt** their ability to build ships […]. (8) This is going to **impose severe costs** on the Russian economy.
POLITICS IS COMMUNITY / NATION IS A PERSON
Us
(9) Tomorrow, NATO will convene a summit — we'll be there — to bring together the leaders of 30 **Allied** nations and close **partners**. (10) He [Putin] rejected every good-faith effort the United States and our **Allies** and **partners** made to address our **mutual** security concerns.
POLITICS IS A JOURNEY
Us
(11) We're also **taking steps** to defend our NATO Allies, particularly in the east. (12) They [the Ukrainian people] will not tolerate anyone who tries to **take their country backwards**. (13) I'm also authorizing additional US forces and capabilities to **deploy** in Germany as part of NATO's response.

In Biden's speech, the POLITICS IS COMMUNITY metaphor is further interrelated with the POLITICS IS A JOURNEY metaphor as part of the journey taken to legitimize the US and NATO's intervention in Ukraine (see (13) above, in which Biden explains that NATO and the US forces were used as a response to Russia's invasion and, thus, the intervention in Ukraine is justified). Table 3 shows that lexical choices related to the journey motif appear in Biden's speech. He uses metaphors of walking (e.g., "*take steps*"), but also of general movement (e.g., "*give way*", "*unleash* its assault", "additional *moves*"). At the same time, Biden associates Putin with "*tak[ing] their* [the Ukrainians'] *country backwards*" and, thus, he sheds a negative light on Them. It seems, therefore, that the ideologically motivated

constructed metaphors in Biden's speech not only contribute to "creat[ing] a version of 'reality' that blames the activities of *them*, but also appeal to the readers' emotions, shaping their understanding and interpretation of the event" (Li, 2010, p. 3455, italics in original).

5.2.2 Lexical cohesion in Putin's 2022 speech

The previous Transitivity analysis of Putin's 2022 speech constructs the conflict between Russia and Ukraine as being caused by Ukraine, the United States and NATO, while Russia was obliged to act. The motifs of community, war, journey, and space are supported by Putin's lexical choices, which contribute to some metaphorical themes in the text (see Table 4 for some dominant metaphors). As in Biden's speech, the Russian politician's lexical choices conceptualize and sustain ideologies that attempt to justify the war as necessary. For that purpose, politicians "use the NATION AS PERSON metaphor plus two narratives that have the structure of classical fairy tales: The Self Defense Story and The Rescue Story" (Lakoff, 2004, p. 120). Putin uses the Self Defense Story, which is based on the populist strategy of (de)legitimation (Arcimavičienė, 2019, p. 111-112), to foreground his legitimacy and morality in the Ukrainian events. In order to illustrate this idea, the Russian politician employs the POLITICS IS COMMUNITY metaphor, depicting Russia and Ukraine as two interconnected nations (e.g., "the people of Crimea and Sevastopol made their choice in favour of being with *their historical homeland*, Russia", "*our historical land*"). Such close ties help Putin to legitimize waging a war, whose aim is to protect Ukrainians from the Kiev regime, the US, and the NATO countries (WAR IS A RESCUER). The POLITICS IS WAR metaphor complements the POLITICS IS COMMUNITY metaphor in Putin's legitimization strategy (e.g., They did not leave us any other option for *defending* Russia and *our people*) (also, in Putin's Crimea address in 2014, see Arcimavičienė, 2019 for further details). Indeed, the POLITICS IS COMMUNITY metaphor serves the function of "appeal[ing] to the emotions of the intended audience and its sentiments by highlighting a common ancestry", while the POLITICS IS WAR metaphor is used to "legitimi[ze] and construct a moral ground upon which to defend this long lasting bond" (2019, p. 111).

Closer examination reveals that the POLITICS IS WAR metaphor and its related THE COUNTRY IS A VICTIM, THE COUNTRY IS A HERO and THE COUNTRY IS A VILLAIN metaphors set a clear division between *Us* and *Them*. In such metaphors, Russia is portrayed as a victim and as a hero; the Western countries, as a villain; and Ukraine, as a puppet of the West. Indeed, after the dissolution of URSS the US and its Allies tried to "put the final *squeeze* on us, *finish us off*, and utterly *destroy* us" (WAR IS AGGRESSION). Also, they are the "very same '*empire of lies*'" (THE WESTERN BLOC ARE LIARS), have a "feeling of absolute *superiority*" (MORALITY IS UP) and "sought to *destroy* our traditional values and *force* on us their *false values* that would *erode* us, our people from within" (THE COUNTRY IS A VILLAIN). In addition, the policies followed by the US and NATO Allies are characterized as "modern *absolutism*", which reinforces the theme of aggressive villain countries. This contrasts with Putin's strict compliance with international law when he annexed Crimea and Sevastopol (PUTIN IS A LAWFUL ACTOR) and Russia's portrayal as a victim. Putin and his government further attempt to "demilitarize and *denazify*" Ukraine (WAR IS A RESCUER) and do away with

"today's *neo-Nazis*" (THE COUNTRY IS A VILLAIN). Also, they intend to "*stop that atrocity, that genocide* of the millions of people who live [in Donbas]" (THE COUNTRY IS A HERO / WAR IS A RESCUER). This implies providing military support to ethnic Russians in Ukraine,[4] which is justified under Article 51 of the UN Charter. This allows for self-defense in the face of an armed attack on a UN member state. Despite the claims that Putin's accusations are baseless (Fisher, 2022, n.p.) and, therefore, they are ideological in nature, they are one of the main justifications for Putin's military involvement in Ukraine. At the same time, "an act of political violence [is] projected as a heroic stance in the name of the oppressed" (Arcimavičienė, 2020, p. 100).

Table 4. Metaphors in Putin's 2022 speech.

POLITICS IS COMMUNITY / NATION IS A PERSON
Us
(1) [...] in territories adjacent to Russia, which I have to note is our historical land, a hostile "anti-Russia" is taking shape. (2) The people of Crimea and Sevastopol made their choice in favour of being with their historical homeland, Russia. (3) The combat operations conducted by the Western coalition [...]
WAR IS A RESCUER / WAR IS AGGRESSION **THE COUNTRY IS A HERO/ THE COUNTRY IS A VILLAIN**
Us
(4) We had to **stop that atrocity, that genocide** of the millions of people who live there. (5) The purpose of this operation is to protect people [...]. We will seek to demilitarize and **denazify** Ukraine [...].
Them
(6) [...] they immediately tried to put the final squeeze on us, finish us off, and utterly destroy us. (7) [...] they sought to **destroy** our traditional values and **force** on us their false values that would **erode** us, our people from within, the attitudes they have been aggressively **imposing** on their countries [...]
THE COUNTRY IS A VICTIM / ELECTIONS IS APPEARANCE
Them
(8) We can see that the forces that staged the coup in Ukraine in 2014 have **seized power**, are keeping it with the help of **ornamental election procedures** [...]
POLITICS IS A JOURNEY / MORALITY IS UP
Them
(9) [...] Where did this insolent manner of **talking down** from the **height** of their exceptionalism, infallibility and all-permissiveness come from? (10) [...] they need to **accelerate** and **step up** efforts to **bring** the alliance's infrastructure **closer** to Russia's borders. (11) **the first step** towards complete degradation and oblivion.

[4] The so-called 'kin-state rallying' refers to acting on behalf of compatriots (Goudimiak, 2016, p. 15).

Putin's lexical choices provide further justification for his war against Ukraine, since they picture the North Atlantic Alliance to have "*accelerate*[d] and *step*[*ped*] *up* efforts to *bring* the alliance's infrastructure *closer* to Russia's borders" (POLITICS IS A JOURNEY) (NATION IS PERSON). Similarly, through the use of other Journey metaphorical verbs and noun phrases (e.g., "*came in the way*", "*took a different turn*", "*pushed the country* towards a humanitarian catastrophe", "*exodus*") (POLITICS IS A JOURNEY), Putin refers to NATO's wrong political decision-making involving expansionism, whose final destination is to threaten Russia's interests, since "Ukraine serves as a buffer state of enormous strategic importance to Russia" (Mearsheimer, 2014, p. 82). At the same time, he taints the US's and its Allies' image as corrupt and aggressive. The spatial metaphorical verbs and noun phrases (e.g., "*talk down*", "*at the highest state level*", "*height*", "*superiority*") (MORALITY IS UP) serves Putin to demonize NATO for their false sense of democracy and their arrogance, although it is precisely "the unmasked superiority and greatness of the Russian people [...] the backbone to the Russian military incursion in Ukraine" (Goudimiak, 2016, p. 19). All in all, Putin creates a narrative in which Russia is a victim of NATO and its Allies, which he and his government need to fight against as an act of self-defense. At the same time, all metaphors are ideologically constructed to "directly express [a negative] moral evaluation of the out-group" (Arcimavičienė, 2020, p. 97), which justifies Putin's decisions.

6. Conclusion

The present study has examined President Biden's and President Putin's lexicogrammatical choices and lexical cohesion in their speeches on February 24th, 2022 to find out to what extent these serve to legitimize war. The results from the study of Transitivity show that the American and Russian politicians rely on different rates of Transitivity to construct their own version of reality that reflects their ideological stance. Biden uses higher rates of Material clauses than Putin to condemn Russia's full-scale invasion of Ukraine and to announce a round of sanctions, vowing to impose a severe cost on Russia. In contrast, Putin uses higher rates of Relational and Mental clauses. The Relational clauses cast a negative light on NATO for their perceived hostile eastward expansion, while presenting Russia as a victim. The Mental clauses, on the other hand, allow Putin to express his inner positive motivations. These contrasting patterns in Transitivity highlight the differing rhetorical strategies employed by Biden and Putin. Indeed, Biden's Material clauses help him to position Russia as the aggressor, whereas Putin's Relational and Mental constructions serve him to shape a narrative where Russia is justified in its actions and to portray itself as a victim. These linguistic choices contribute to the respective leaders' efforts to legitimize their stance on the war.

An analysis of the metaphorical lexical cohesion employed by President Biden and President Putin reveals that both leaders utilize similar metaphorical themes to shape their own narratives regarding the Russian invasion of Ukraine, but use them differently. Through a deliberate use of collocationally related lexis contributing to some dominant metaphors, both politicians construct their own version of the events in Ukraine. They do so by subtly influencing how the audience perceives events (i.e., war as a full-scale invasion

of Ukraine or as an act of self-defense) and individuals (i.e., Putin as an aggressor or as a victim) by framing them in a particular light. The aim is to legitimate a war of unforeseen consequences. Concurrently, the American and Russian Presidents appeal to the emotions of their respective audiences in an attempt to persuade them of the veracity of their assertions.

When both Transitivity and lexical cohesion are combined, semantic amplification is achieved. Indeed, the interplay works overtly through lexicogrammatical choices and implicitly by shaping the audience's emotional response through metaphors that recast military actions in terms of defense and justice. This way, their interaction leads the audience to interpret war as, not only morally justified, but also as necessary. It seems, therefore, that Transitivity and lexical cohesion are deeply interrelated in legitimacy narratives. They contribute to the construction of legitimacy by shaping how Putin's and Biden's warfare actions and decisions are perceived by the audience and, thus, influencing their acceptance as legitimate.

The present study presents some limitations. One such limitation is that the speech by President Putin that was analyzed was a translation into English, rather than the original Russian. This may have influenced the results concerning Transitivity and metaphors. Ideally, analyses could be conducted on the original text. Additionally, the Pragglejaz Group's MIP was utilized for identifying metaphors. Future research could benefit from analyzing political speeches using the MIPUV (Steen et al., 2010). The MIPUV refines and expands on the original MIP, which could provide a basis for comparing the results obtained. Additionally, MIPUV includes specific criteria for identifying implicit metaphors (2010, p. 122), which politicians may use, as they are subtle and, thus, not directly apparent upon first hearing or reading them. This suggests that MIPUV could a suitable tool for analyzing political discourse.

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Caracterización semántica y voces especializadas: la incidencia de la titulación en la disponibilidad gramatical de estudiantes universitarios

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Resumen: Los estudios en Disponibilidad Léxica (DL) se basan tradicionalmente en la evaluación de las respuestas de hablantes sin patologías declaradas ante estímulos en forma de campo semántico. La disponibilidad gramatical nace dentro del ámbito de la DL, pero se aleja de estos grupos nocionales típicos. En su lugar, utiliza etiquetas gramaticales para estimular la recuperación léxica. En este marco, se realizaron pruebas a estudiantes de la Universidad de Salamanca (España), con el fin de medir la disponibilidad de las dos grandes clases de palabras en español —verbos y sustantivos— entre hablantes adultos. Más allá de los objetivos del proyecto, este estudio analiza los resultados de las pruebas de estudiantes de Filología Hispánica y de Medicina para valorar la posible influencia de la titulación en la disponibilidad gramatical. Esta perspectiva mixta reveló diferencias entre ambos grupos, esencialmente respecto a la presencia de léxico especializado y vocablos exclusivos semánticamente marcados.

Palabras clave: *disponibilidad léxica, disponibilidad gramatical, sociolingüística, análisis contrastivo, léxico especializado.*

Semantic characterisation and specialised voices: the impact of degree on university students' grammatical availability

Abstract: Studies in lexical availability have traditionally been based on the evaluation of healthy speakers' responses to semantic stimuli. Building on this foundation, grammatical availability stimulates lexical retrieval through grammatical labels, therefore disengaging from the typical notional groups used within the field of lexical availability. Thus, we carried out production tests among healthy young adults to measure the availability of the two main word classes in Spanish: verbs and nouns. To do so, the labels 'Verbos' and 'Sustantivos' were offered as centers of interest. This study analyses the tests results of students of Spanish Philology and Medicine, which will also allow us to assess whether the variable 'University degree' exerts an influence on grammatical availability. The mixed perspective revealed differences between the two groups of informants, essentially with regards to specialised lexis and semantically marked exclusive vocabulary.

Keywords: *lexical availability, grammatical availability, sociolinguistics, contrastive analysis, specialised lexis.*

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1. Introducción

El vocabulario de una lengua reúne todas las representaciones que sustituyen la realidad de una comunidad y, consecuentemente, proporciona información sobre elementos concretos y abstractos de ese imaginario compartido, así como del mundo interior y experiencias de vida de sus usuarios. Este *vocabulario general* se compone de *léxico básico* y *léxico disponible*; mientras que el primero está compuesto por palabras atemáticas (René Michéa, 1950; 1953), útiles independientemente del tema tratado, el segundo incluye palabras temáticas, cuyo uso está asociado a un tema o a las exigencias de una situación comunicativa particular. Generalmente, las palabras atemáticas son las más usadas —a mayor uso, menor dependencia de variables externas (María Natalia Castillo Fadic, 2015)— y se recogen en los léxicos básicos. Las voces temáticas, en cambio, se vinculan con el vocabulario de interés y constituyen el grupo de las palabras disponibles. Aparecen, por tanto, en los léxicos disponibles.

La Disponibilidad Léxica (DL) se encarga del análisis del léxico disponible y los vocablos temáticos que lo componen. Tradicionalmente, define su objeto de estudio como un conjunto de vocablos almacenados en el lexicón mental de un hablante y susceptibles de ser utilizados cuando la situación comunicativa lo requiera (Humberto López Morales, 1999; María Victoria Galloso Camacho, 2003; María Begoña Gómez-Devís, 2003; José Antonio Bartol Hernández, 2006; entre otros). Para obtener datos, la DL lleva a cabo pruebas de producción asociativas con informantes nativos, generalmente de último año de bachillerato, el nivel anterior al ingreso en la universidad en el sistema educativo español, con edades comprendidas entre los 17 y 18 años. Estos informantes son considerados ideales para la disciplina, puesto que, aunque su idiolecto se aleja de la influencia del habla adolescente y su vocabulario se acerca más a la norma culta (López Morales, 1999), este aún no se ha *contaminado* con léxico técnico o especializado, propio de la experiencia adquirida en el mundo laboral o la educación superior (Julio Borrego Nieto y Carmen Fernández Juncal, 2003).

Al analizar el léxico disponible de una comunidad, una vez recabados los datos, los principales factores que tradicionalmente se tienen en cuenta son (1) la frecuencia de cada voz y (2) el orden de aparición. Mediante estos y otros índices, la DL brinda indicios sobre la estructuración y organización del lexicón mental y sobre las capacidades y mecanismos cognoscitivos de los que los individuos disponen al actualizar las unidades en torno a un campo temático (Galloso Camacho, 2003; Florentino Paredes García, 2006). Según Natividad Hernández Muñoz (2010), aunque esta actualización es individual y circunstancial, existen tendencias comunes entre los individuos de cada comunidad, lo que permite afirmar que la DL posee también una dimensión colectiva.

Por otra parte, los estudios tradicionales tienden a ser generales, de manera que los estímulos —o centros de interés— usados habitualmente pretenden abarcar los campos semánticos más importantes del universo léxico de los hablantes. De acuerdo con Hernández Muñoz y Borrego Nieto, los dieciséis centros de interés tradicionales se caracterizan porque:[1]

> pertenecen al entorno cercano del estudiante, están encabezados por un enunciado claro que se vincula directamente con el tipo de términos requeridos, no se producen confusiones en la interpretación y son concretos en cuanto a la referencia física de la mayoría de las palabras que los componen. (2004, p. 1520)

Dadas las características propias de estos centros semánticos (Hernández Muñoz, 2006; Carmela Tomé Cornejo, 2010), las palabras que aparecen predominantemente en los listados de disponibilidad son los sustantivos. Por ello, diferentes investigaciones se han propuesto registrar el léxico correspondiente a otras categorías gramaticales, como los verbos (Juan López Chávez, 1994; Eréndira Camarena Ortiz, 2010), adjetivos (López Chávez, 1994; María del Carmen Ayora Esteban, 2006; Camarena Ortiz, 2010; Paredes García, 2022; María Elena Gómez Sánchez et al., 2022) o nombres propios (Fernández Juncal y Hernández Muñoz, 2019; Fernández Juncal, 2020; 2021a y 2021b).

Es en esta línea en la que el proyecto DispoGram (PID2020-120436GB-I00) desarrolla sus investigaciones, que parten de los preceptos metodológicos de DL y adoptan una nueva perspectiva de investigación interdisciplinar, la *disponibilidad gramatical*. A diferencia de los estudios previos, esta tiene la finalidad no solo de obtener un mayor número de palabras de determinadas categorías sino también de analizar las implicaciones de responder a estímulos gramaticales en lugar de a un *input* nocional o semántico (Tomé Cornejo y Álvaro Recio, 2022). Para ello, el equipo de DispoGram (PID2020-120436GB-I00) selecciona como centros de interés las etiquetas gramaticales "Sustantivos"/"Nombres" y "Verbos". Tomé Cornejo y Recio (2022) justifican esta elección en su transparencia, su relevancia teórica y educativa y su productividad experimental. Además, afirman que:

> por una parte, se corresponden con contenidos presentes en el currículo oficial desde la enseñanza primaria hasta el bachillerato y articulan, en buena medida, la enseñanza de la morfología y, como núcleo de los sintagmas nominal y verbal, también de la sintaxis. Por otra parte, su naturaleza sintáctico-semántica les confiere un estatus prominente: son las dos grandes categorías nucleares de la gramática universal humana, están presentes en todas las lenguas del mundo (Robins, 1952), poseen un grado de iconicidad superior al resto de categorías (Hopper y Thompson, 1985) y son claramente susceptibles de caracterización nocional (Langacker, 1987). (2022, p. 302)

[1] Los centros de interés tradicionales son: "Partes del cuerpo", "La ropa", "Partes de la casa", "Los muebles de la casa", "Alimentos y bebidas", "Objetos colocados en la mesa para la comida", "La cocina y sus utensilios", "La escuela: muebles y materiales", "Iluminación, calefacción y medios de airear un recinto", "La ciudad", "El campo", "Medios de transporte", "Trabajos del campo y del jardín", "Los animales", "Juegos y distracciones" y "Profesiones y oficios".

Más allá de las características del centro de interés utilizado, existen factores que pueden influir en los resultados de estas pruebas asociativas. Concretamente, la naturaleza del *input* lingüístico recibido por el informante a lo largo de su vida, tanto por la vía académica como por las lecturas y discursos orales a los que está expuesto diariamente, puede ser decisiva en la recuperación léxica (Hernández Muñoz, 2015). En otras palabras, la experiencia produce reajustes cognitivos en cada una de las etapas de la vida que afectan directamente a las redes de conceptos y sus asociaciones. En este sentido, juega un papel importante la escolarización (López Morales, 1993; Alberto Carcedo González, 1998; Diego Marconi, 2000; Marilyn Nippold, 2007; Carolina Zambrano Matamala et al., 2019) y, especialmente, la educación superior, pues supone un cambio en la experiencia de enseñanza-aprendizaje en favor de la especificidad de los conocimientos y exige al individuo una actuación lingüística especializada según el área de conocimiento, como el uso de palabras o expresiones técnicas, estilos que les son propios, etc.

En esta línea, el uso de terminología se concibe a menudo como el principal rasgo lingüístico diferenciador de los lenguajes científicos y técnicos. Aunque el léxico de especialización no siempre es exclusivo de una disciplina, e incluso puede formar parte del vocabulario general, adquiere un significado preciso en contextos específicos (Yanira Navarro Marrero, 2010). Por ello, el léxico especializado exigido en la educación universitaria puede ser también considerado como un tipo de léxico disponible.

Teresa Cabré Monné (2004) sostiene que este léxico especializado no conlleva un conocimiento gramatical distinto al empleado en actos comunicativos cotidianos, sino que se restringe al uso de términos específicos propios del área de estudio o a términos pertenecientes al vocabulario general con un significado propio relacionado con la disciplina. A este respecto, Cabré Monné y Andreína Adelstein (2001, p. 389) afirman que el conocimiento lingüístico general y el especializado están integrados y que, además, "el conocimiento especializado se organiza simultáneamente al no especializado, en la mente humana, y que la adquisición del nuevo conocimiento especializado se realiza siempre sobre la base del conocimiento general o especializado ya adquirido anteriormente".

En cuanto a los informantes preuniversitarios, considerados hablantes ideales en los estudios de DL, Hernández Muñoz (2015) reflexiona también sobre la posible influencia de la especialización académica temprana entre Ciencias y Letras, con el fin de determinar si el grupo considerado como representante de "la norma comunitaria adulta" (López Morales, 1999, p. 28) posee o no una competencia léxica homogénea o si más bien esta está determinada por la especificidad de la formación recibida en secundaria y bachillerato. La autora encuentra que, según datos cuantitativos, el perfil académico no parece influir en el léxico disponible de los estudiantes de bachillerato. En consecuencia, sostiene que "el nivel de estudios asegura la igualdad en destrezas de lecto-escritura, al haber recibido el mismo tipo de enseñanza, así como la formación en las materias comunes como Lengua castellana y Filosofía" (Hernández Muñoz, 2015, p. 94). Sin embargo, también registra una relevante variación cualitativa entre los dos grupos

en el campo "Profesiones", ya que los alumnos de Letras ponen en marcha estrategias relacionadas con su mayor dominio del conocimiento metalingüístico que favorecen un incremento de su producción léxica.

Borrego Nieto y Fernández Juncal (2003) realizan su propio estudio con hablantes preuniversitarios y universitarios de cuarto año de Filología de la provincia de Salamanca. Si bien los autores observan variaciones entre ambos grupos en ciertas categorías semánticas, las divergencias parecen no ser relevantes cuantitativamente. Cualitativamente, sin embargo, los universitarios presentan una mayor madurez en el proceso de lexicalización, lo que corroboraría la idoneidad de los preuniversitarios como informantes en DL.

De los estudios previamente descritos —Hernández Muñoz (2015), Borrego Nieto y Fernández Juncal (2003)—, se puede extraer que los hablantes preuniversitarios constituyen una muestra de habla adulta léxicamente homogénea con independencia de la especialidad académica a la que pertenezcan. No obstante, cabría analizar si esta homogeneidad se mantiene en el nivel universitario entre informantes de diferentes titulaciones o si, por el contrario, se establecen diferencias en términos de productividad, abstracción o tecnificación en el léxico disponible producto de la formación universitaria.

A este respecto, Hernández Muñoz (2015) defiende que la incidencia de la titulación debe percibirse no únicamente desde un punto de vista centrado en la escolarización, sino como un producto complejo en el que las decisiones académicas confluyen en el individuo con otros factores sociales o personales. Por su parte, Gustavo González et al. (2008) y Pedro Allueva Torres et al. (2010) demuestran que la rama del conocimiento a la que pertenece una titulación universitaria incide desde el primer año de carrera en la construcción del conocimiento individual y los estilos de pensamiento de los estudiantes.

Aunque existen otros ejemplos de estudios de DL en el nivel universitario, estos se han dedicado al estudio del léxico especializado en una misma titulación, en detrimento del análisis de la posible influencia de la titulación en la producción de grupos distintos. Las investigaciones a este respecto que se han llevado a cabo hasta la fecha son numerosas y variadas: Gómez Sánchez y Luis Guerra Salas (2005), Karina Riffo et al. (2019) o Steffanie Kloss y Angie Quintanilla (2022) estudian el léxico disponible del periodismo y los medios de comunicación; Paula Urzúa et al. (2006), Pedro Salcedo Lagos y María Del Valle (2013), Gamal Cerda Etchepare et al. (2017, 2021), Aníbal Puente Ferreras et al. (2021) o Salcedo et al. (2022), el léxico de las matemáticas; Navarro Marrero (2010; 2011), el léxico de la fisioterapia; Tomé Cornejo (2016), Antonio Ávila Muñoz e Inmaculada Clotilde Santos Díaz (2019) o Salcedo et al. (2022), el léxico de la tecnología; Cristina Herranz-Llácer (2020), Guadalupe de la Maya Retamar y Magdalena López Pérez (2020); Santos Díaz y María Juárez Calvillo (2022) o Rocío Escudero Sánchez et al. (2022), el léxico de la educación; entre otros.

En consonancia con lo previamente expuesto, se marcan como objetivos principales de esta investigación la descripción de las diferencias semánticas fundamentales y de la producción terminológica en dos grupos de informantes con distintas áreas de especialización, así como la verificación de la titulación como una variable de influencia en la disponibilidad gramatical a través de estas mismas diferencias.

Así, se pretende llevar a cabo un cotejo cualitativo y cuantitativo de los grupos semánticos a los que pueden adscribirse las palabras recuperadas por los informantes de cada rama de estudios, al tiempo que se observan las características de la actualización de términos propios de su disciplina. Paralelamente, se busca profundizar en la posible repercusión de ciertas variables sociodemográficas, concretamente, la carrera en la que los informantes están matriculados, en tanto que la selección preferente de participantes en estadios educativos preuniversitarios ha provocado que este aspecto sea tradicionalmente omitido, a pesar de que existen estudios que ponen de manifiesto su alcance en este tipo de estudios.

2. Metodología

Con el fin de alcanzar los objetivos propuestos, se aplicaron pruebas de tipo asociativo presentando como estímulos, a modo de centros de interés, dos etiquetas metagramaticales: "Verbos" y "Nombres". En línea con los preceptos de la disponibilidad gramatical, los centros de interés que se establecen para esta disciplina no son temáticos, sino gramaticales o categoriales. Por lo que respecta a la muestra, estuvo compuesta por un total de 197 informantes, todos ellos sin patologías declaradas, nativos y estudiantes de la Universidad de Salamanca, institución pública de esta ciudad. Entre estos, 84 pertenecían al Grado de Medicina y 113 al de Filología Hispánica. La selección de estas dos titulaciones siguió dos criterios principales: la adhesión de ambas a las nociones tradicionales de Ciencias y Letras y la accesibilidad de los participantes. Por tanto, el muestreo incluye una asignación no aleatoria de los participantes a cada grupo de investigación. Los informantes de Medicina eran estudiantes de primer año, mayoritariamente mujeres (70,24 %), mientras que en Filología Hispánica se recogieron respuestas tanto de estudiantes de primero como de cuarto año (con un 85,07 % de presencia femenina).[2]

La encuesta se realizó por escrito, en papel y de forma presencial, en las aulas de cada facultad (Salamanca, España), con el fin de controlar todas las posibles incidencias. La selección de este soporte implicó la necesidad de una posterior transcripción, y motivó la eliminación de algunas respuestas ilegibles. En todo caso, estas fueron mínimas, y afectaron en exclusiva a palabras concretas, no a centros de interés completos. La prueba se llevó a cabo anónimamente, y constó de dos partes diferenciadas: un cuestionario

[2] Tras realizar un análisis estadístico comparativo, con un cotejo mediante proporciones y chi cuadrado, la presencia de alumnos de cursos superiores —cuya inclusión responde en exclusiva a las posibilidades de acceso a participantes— no demostró favorecer la aparición de tecnicismos, con un promedio por informante de 1 en cuarto y 1,06 en primero ($p > 0{,}001$). Tampoco resultaron significativas las diferencias relativas al sexo, salvo en los verbos especializados, lo cual podría estar relacionado con las características de la distribución de dicha categoría que se desarrollarán posteriormente (§4). En cualquier caso, no ha sido posible extraer conclusiones firmes respecto a la influencia de la variable "Sexo" debido al desequilibrio entre el número de informantes de ambos sexos.

sociológico y una prueba de producción. En el cuestionario demográfico se recabaron los datos relativos a la titulación, el curso, el sexo, la edad, la condición de nativos de la lengua y la localidad de procedencia. Puesto que se asume un equilibrio en cuanto al nivel sociocultural desde un punto de vista instruccional (todos ellos cursan estudios universitarios), no se recopiló este tipo de información. Por otra parte, dada la ausencia de representatividad en la muestra, no se consideraron ampliamente las variables edad, sexo y procedencia. Por lo que respecta a la prueba de producción, esta consistió en una hoja encabezada con la denominación de la categoría seguida de columnas numeradas donde los encuestados anotaban sus respuestas. Dispusieron para ello de cuatro minutos, el tiempo estandarizado para las pruebas de disponibilidad gramatical (Tomé y Recio, 2022). Durante este tiempo se emitían, en un intervalo de treinta segundos, señales auditivas para delimitar el desarrollo de la producción; no obstante, esta información no fue utilizada para esta investigación en concreto.

Posteriormente, tras la transcripción de las respuestas, se aplicó sobre ellas una estandarización o lematización según los criterios del Proyecto Panhispánico de Disponibilidad Léxica (PPHDL), para unificar variantes de una misma voz (moción de género y número, apócope, etc.). Sobre estas listas unificadas, se extrajeron mediante la herramienta LexPro (Universidad de Salamanca, Universidad Miguel Hernández) una serie de datos cuantitativos. Este programa, desarrollado desde el proyecto DispoGram (PID2020-120436GB-I00), permite recuperar los índices relevantes en estudios léxicos (diccionarios de disponibilidad completos, cohesión, promedios, etc.), al tiempo que facilita las labores contrastivas desde su automatización. Asimismo, proporciona en una misma herramienta tanto información de DL como de redes asociativas, y ofrece la posibilidad de creación de grafos.

A través de este programa, así, se obtuvieron los listados de disponibilidad y compatibilidad de las pruebas de producción de estos 197 informantes para los dos centros de interés gramaticales.

Tras ello, se analizó la distribución semántica de distintas agrupaciones de palabras con características cuantitativas y/o cualitativas particulares: (1) el total de las palabras actualizadas, (2) los veinte vocablos más disponibles, (3) los pertenecientes al primer cuartil y (4) los exclusivos.[3] En primer lugar, se llevó a cabo una clasificación semántica de las voces incluidas en los grupos (2), (3) y (4) y se obtuvieron datos porcentuales. La selección de las clases, extraída de Tomé Cornejo y Recio (2022), tiene como referencia los centros de interés del Proyecto Panhispánico de Disponibilidad Léxica (PPHDL) para los resultados nominales y el *Glosario de términos gramaticales* (RAE y ASALE, 2019) para los verbales. En segundo lugar, se crearon listados de términos potencialmente especializados entre la totalidad de las respuestas (1), entendidos estos como voces temáticas, técnicas o terminológicas. Estos listados fueron posteriormente cribados mediante una búsqueda en obras lexicográficas, y se consideraron voces especializadas, en exclusiva, aquellas con

[3] A lo largo del análisis se utilizan las denominaciones *vocablos* y *palabras* para hacer alusión, respectivamente, al número de voces diferentes (o *types*) y al número total de palabras registradas (o *tokens*).

presencia en alguna de estas obras.[4] La aparición de correlatos nominales para términos verbales no fue aceptada como marca de especialización. Por último, se cotejó la lista definitiva con el grupo de vocablos exclusivos, con el fin de analizar su generalidad.

Para valorar la significación de los resultados obtenidos, este análisis fue complementado con un estudio estadístico en SPSS (versión 28). En primer lugar, se determinaron las características de las variables estudiadas, en términos de normalidad y homocedasticidad, a través de las pruebas Kolmogorov-Smirnov y Levene, que mostraron la necesidad de aplicar pruebas no paramétricas. Concretamente, se utilizaron tres tests: ji cuadrado (χ^2), para los vocablos, y U de Mann-Whitney y Wilcoxon, para las palabras.[5] El umbral de significación estadística se estableció en valor *p* inferior a 0,05. Los cálculos efectuados permitieron extraer información respecto a las medianas y a la distribución de los datos en cada una de las categorías, lo que hizo posible detectar dónde se producen mayores concentraciones de palabras y cómo se organizan.

El análisis llevado a cabo parte de un modelo de efectos fijos, que permite determinar la influencia de distintas variables en la propia muestra (Jenifer Larson-Hall, 2010). Sin embargo, en lo que respecta al posible efecto de la titulación de los informantes en el desempeño de la prueba, los datos fueron analizados mediante un modelo mixto —de efectos fijos y aleatorios—, lo que posibilitó la extracción de resultados más robustos (Daniel Ezra Johnson, 2014), así como la extrapolación de las tendencias a poblaciones más allá de la muestra reunida. El modelo de análisis, por tanto, combina la estadística descriptiva (efectos fijos) con la inferencial (efectos aleatorios).

3. Resultados y análisis

3.1 Diferencias entre titulaciones en cuanto a la clasificación semántica de las voces recuperadas

3.1.1 Diferencias entre los veinte vocablos más disponibles

El conjunto de los veinte vocablos más disponibles reúne los sustantivos y verbos con un índice de disponibilidad mayor de 0,213 y 0,250, respectivamente, en el grupo de Filología Hispánica. La selección de esta primera veintena responde a una adhesión a las líneas teóricas tradicionales, pues con frecuencia se ha tomado este corte como referencia (López Chávez y Strassburguer Frías, 1991; López Morales, 1995) y la réplica de este método facilita posteriores estudios contrastivos, en tanto que es la tendencia generalizada en las

[4] En concreto, el marcado de especialización del *Diccionario de la lengua española* (RAE y ASALE) para ambos grupos, así como el apartado de términos lingüísticos del *Diccionario Panhispánico de Dudas* (RAE y ASALE, 2005), el *Glosario de términos gramaticales* (RAE y ASALE, 2019) y el *Diccionario Español de Términos Literarios Internacionales* (DELTI) para las palabras relacionadas con el ámbito de la Filología Hispánica y el *Diccionario de Términos Médicos* (DTM) (Real Academia Nacional de Medicina de España) para las vinculadas a la salud.

[5] Pese a la existencia de cierta polémica en el uso de ji cuadrado, en tanto que se asume que las palabras de un corpus carecen de independencia (Adam Kilgarriff, 2005), se ha seleccionado esta prueba por varios motivos. En primer lugar, se trata del estadístico usado predominantemente en los estudios de corte lingüístico, en ausencia de algún otro referente de mayor eficacia y ampliamente aceptado en el área. Además, si bien existen algunas alternativas (Yves Bestgen, 2017; entre otros), estas tampoco se encuentran exentas de inconvenientes. En segundo lugar, se considera que la complementación con otras pruebas y el cotejo de los resultados permite la detección y rechazo de los potenciales casos de falsa significación que pudiera motivar la utilización del ji cuadrado. No obstante, los resultados ofrecidos por esta prueba deben ser tenidos en consideración con cierta cautela.

investigaciones para el español. En cualquier caso, se especifica el índice de disponibilidad con el fin de proporcionar una mayor comparabilidad con estudios metodológicamente distintos.

Considerando la titulación, en Medicina los primeros veinte sustantivos y verbos superan el 0,208 y 0,232. Tanto la producción nominal como la verbal en ambas titulaciones es similar. En cuanto a los sustantivos, el 80,00 % son compartidos, un 20,00 % en idéntica posición. Semánticamente, se concentran en el grupo de nombres relativos a la escuela, lo cual resulta esperable dadas las características de las pruebas, desarrolladas en este ámbito. Las discrepancias más acusadas se observan en los siguientes dos grupos con mayor productividad —"La ropa" y "Partes del cuerpo"— sin que sea posible determinar sus causas. A pesar de que la mayor presencia de vocablos relativos al cuerpo en Hispánicas frente a Medicina resulta ajena a lo esperable (Figura 1), la prueba de ji cuadrado sugiere que la diferencia no es estadísticamente significativa, con un valor *p* cercano al 0,35.

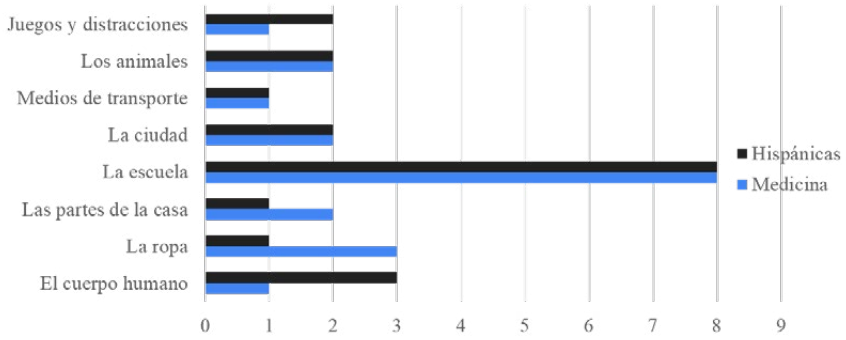


Figura 1. Clasificación semántica de los 20 sustantivos más disponibles.

En cuanto a los verbos, el 90,00 % es común a los dos grupos, con un 5,00 % en la misma posición. Semánticamente, se concentran en el grupo de actividades cotidianas, por tratarse de voces y realidades muy presentes y, en consecuencia, fácilmente recuperables. La principal diferencia entre ambos grupos es la actualización de términos existenciales entre los estudiantes de Filología, tal y como se observa en la Figura 2, una tendencia poco habitual en estas posiciones en disponibilidad gramatical (Tomé Cornejo y Recio, 2022) y ausente también entre los informantes de Medicina. No obstante, no parece ser significativa ($p \approx 0{,}15$).

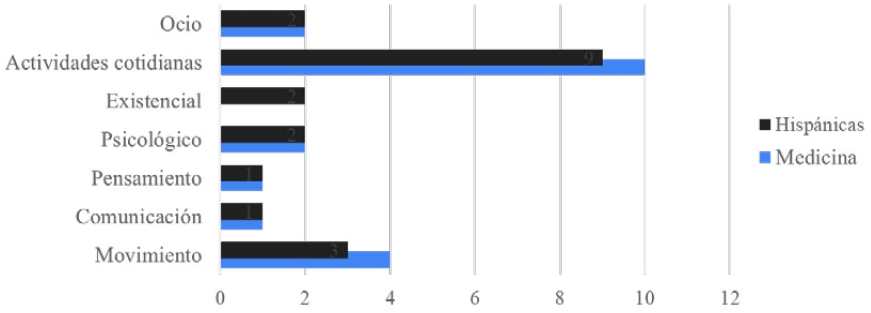


Figura 2. Clasificación semántica de los 20 verbos más disponibles.

En síntesis, no se aprecian disimilitudes notables relacionadas con la titulación entre los veinte primeros vocablos de los listados de disponibilidad, con independencia de la categoría. Debido a ello, se amplió la muestra a todas las voces del primer cuartil, y se tuvieron en consideración, asimismo, las voces exclusivas, en tanto que son las más características de cada grupo.

3.1.2 Diferencias semánticas en el primer cuartil

En esta franja, se clasificaron 464 sustantivos (ID > 0,013) y 335 verbos (ID > 0,015) para Filología Hispánica y 400 sustantivos (ID > 0,019) y 282 verbos (ID > 0,017) para Medicina. En primer lugar, como se aprecia en la Figura 3, los cinco grupos nocionales más frecuentes entre los nominales resultan mayoritariamente compartidos y no relacionados con la titulación (72,73 %). Las discrepancias entre los restantes, asimismo, tampoco parecen vincularse con esta variable. La única clase potencialmente ligada, "Partes del cuerpo", si bien está más presente en el grupo de Medicina, lo hace levemente y sin significación estadística, tanto en las palabras totales (p = 0,930) como en los vocablos (p ≈ 0,65).[6]

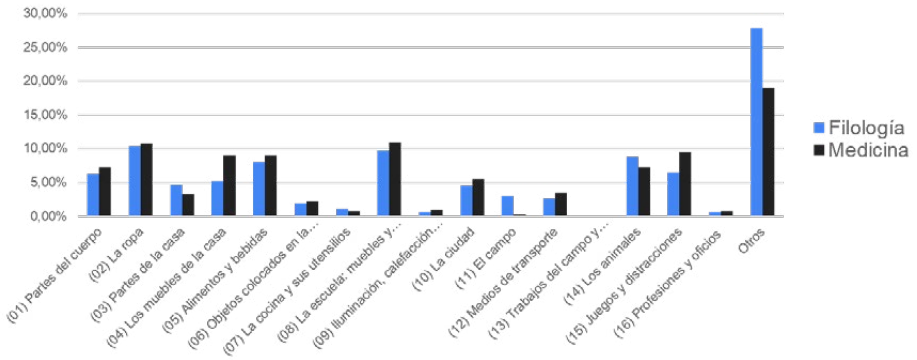


Figura 3. Distribución semántica de los sustantivos del primer cuartil.

La ausencia generalizada de relación con el tipo de estudios, no obstante, podría deberse al hecho de que ninguna de las categorías establecidas, a excepción de la previamente mencionada, forma parte del léxico de la disciplina. Por ello, se realizó una subdivisión semántica *a posteriori* dentro del grupo "Otros", en función de las diferentes nociones predominantes observadas en el análisis, con el fin de establecer nuevos grupos con una potencial influencia. Los resultados revelaron que, entre las palabras del primer cuartil, existe una presencia notablemente superior de los sustantivos de lengua y comunicación en el grupo de filólogos (3,45 %, frente al 1,00 % de Medicina). La prueba de ji cuadrado sugiere que esta diferencia es significativa tanto para los vocablos (p < 0,02) como para el total de usos, lo que se refleja también en el contraste de medianas y de distribución (p < 0,001). Los resultados de este último cálculo pueden observarse en la Figura 4:

[6] Si bien en principio "Profesiones y oficios" podría ser también susceptible de mostrar un vínculo con la titulación (Hernández Muñoz, 2015), este centro no se ha considerado especialmente relevante en el análisis dado el bajo número de términos que engloba.

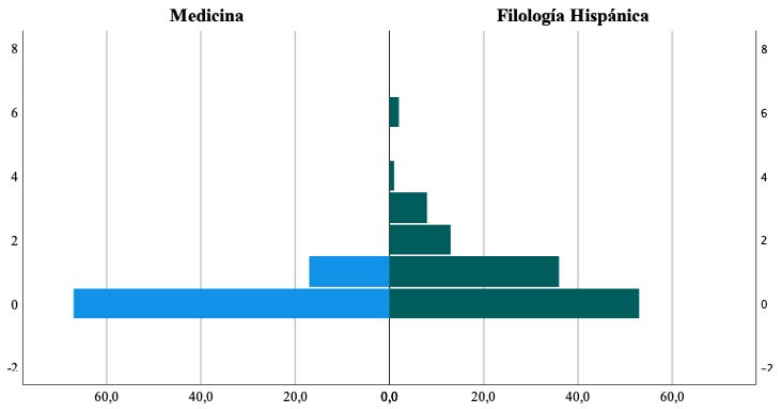


Figura 4. Diferencias en la distribución de palabras totales de "*Lengua*" en sustantivos del primer cuartil.

Respecto a los verbos, en segundo lugar, el porcentaje de semejanza entre los cinco grupos semánticos más frecuentes alcanza el 100 %. Ni entre estos ni entre las discrepancias de los restantes se observan diferencias relacionadas con la titulación (ver Figura 5).

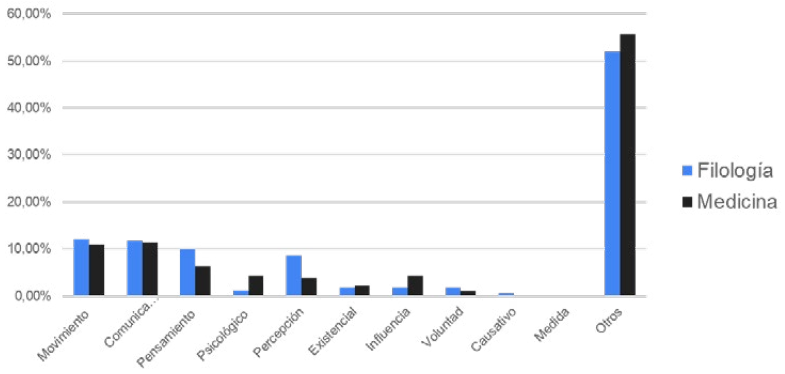


Figura 5. Distribución semántica de los verbos del primer cuartil.

En este caso, la desvinculación con la titulación no parece tener como causa la selección de los grupos semánticos, ya que, aparentemente, no existen subgrupos semánticos en "Otros" relacionados con ninguna de ellas. En cuanto al grupo de verbos de comunicación, que se preveía más productivo en la rama de humanidades, es únicamente más frecuente de forma leve y no significativa ($p \approx 0{,}5$ y $p = 0{,}754$ para vocablos y palabras, respectivamente). Asimismo, no se aprecian diferencias entre las titulaciones respecto a la distribución de las palabras totales ($p = 0{,}650$).

En síntesis, las palabras recogidas en los listados del primer cuartil son semánticamente muy similares en ambos grupos, incluso en aquellas clases que, *a priori*, podrían considerarse cercanas al área de especialización de los informantes. Únicamente existen diferencias significativas entre los sustantivos, con una mayor presencia de voces vinculadas a las nociones de lengua y de comunicación entre los estudiantes de Filología.

3.1.3 Diferencias semánticas entre las voces exclusivas

El conjunto de voces exclusivas está compuesto por 899 (51,49 %) sustantivos y 620 (44,57 %) verbos en Filología Hispánica y 755 (47,19 %) sustantivos y 355 (31,53 %) verbos en Medicina. Se observa, así, una mayor cantidad de vocablos exclusivos en las respuestas nominales y frecuencias más elevadas entre los estudiantes de la rama de humanidades, en especial para el centro de interés "Verbos", tanto en términos absolutos como relativos.

Respecto a la clasificación semántica, los grupos más frecuentes son predominantemente concordantes con los de los 20 primeros vocablos y el primer cuartil, para ambos centros y grupos. Del mismo modo, se reproducen ciertas discrepancias sin relación con la titulación, como se observa en las Figuras 6 y 7:

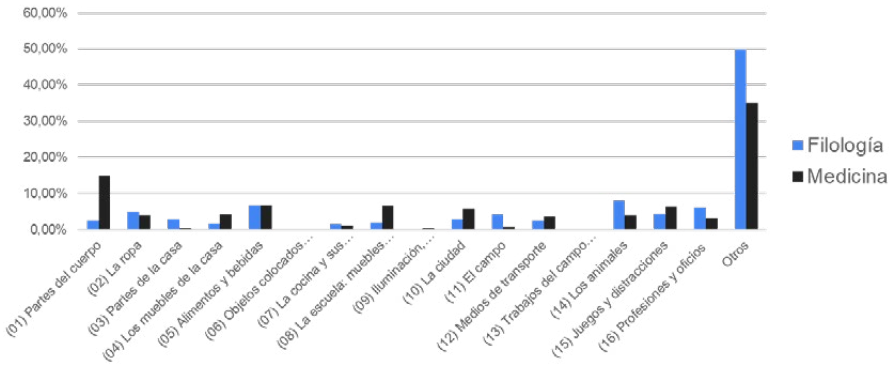


Figura 6. Distribución semántica de los sustantivos exclusivos.

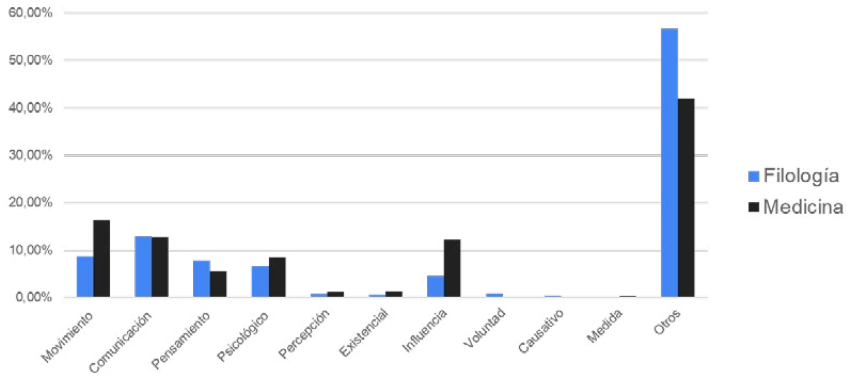


Figura 7. Distribución semántica de los verbos exclusivos.

Al tener en consideración los grupos semánticos tradicionales potencialmente relacionados y los subgrupos establecidos dentro de la categoría "Otros", las diferencias resultan más notables, si bien exclusivamente entre los sustantivos. En primer lugar, se manifiestan fuertes disimilitudes en los nombres relacionados con partes del cuerpo, con preeminencia en Medicina, que confirma la tendencia observada en el primer cuartil. Dentro de las nuevas subclases, en segundo lugar, existe una mayor presencia de sustantivos del ámbito médico

(enfermedades, remedios, etc.) entre los informantes de ciencias de la salud, mientras que los filólogos se muestran más productivos hacia los nombres de lengua, así como los relacionados con las artes. Aparecen sombreadas, en la Tabla 1, aquellas categorías con un valor *p* superior a 0,05 —es decir, carentes de significación— en relación con los vocablos.

Tabla 1. Porcentajes de sustantivos diferentes de subclases relacionadas con la titulación.

	Partes del cuerpo	Términos médicos	Lengua y comunicación	Artes
Filología	22 (2,45 %)	12 (1,33 %)	65 (7,23 %)	43 (4,78 %)
Medicina	112 (14,83 %)	16 (2,12 %)	3 (0,40 %)	20 (2,65 %)

En cuanto a los resultados de las palabras totales, las diferencias entre titulaciones resultan igualmente significativas. Por un lado, los datos de la mediana reflejan una mayor concentración de términos en Filología tanto en relación con la lengua ($p < 0,001$) como con las artes ($p = 0,022$), así como una mayor presencia de voces relacionadas con el cuerpo humano en Medicina ($p < 0,001$), no así de palabras del ámbito médico. Por otro lado, existen considerables diferencias en cuanto a la distribución de las palabras totales en ambos subgrupos ($p < 0,001$ y $p = 0,021$, respectivamente), con una menor dispersión de los datos en Medicina (Figura 8).

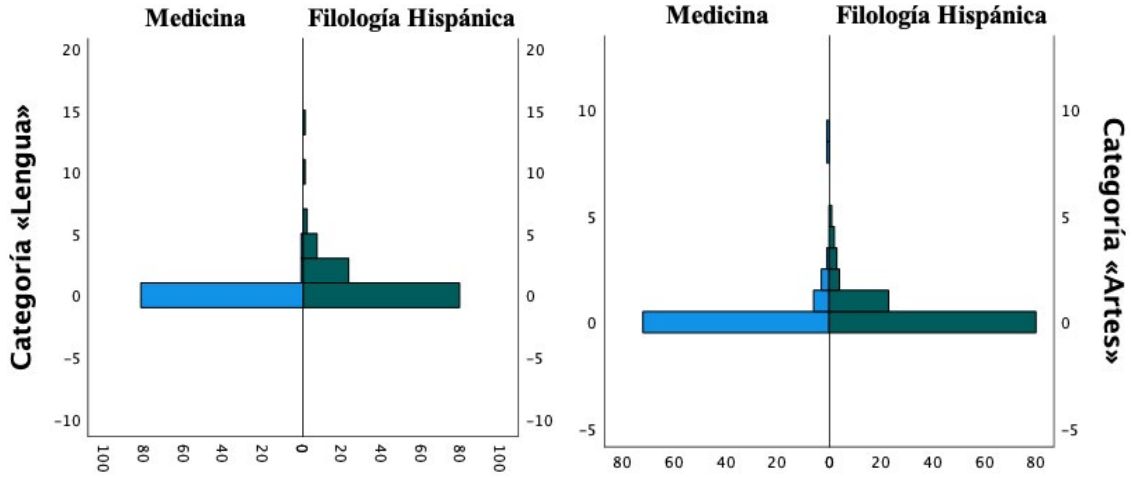


Figura 8. Diferencias en la distribución de las palabras totales de "*Lengua*" y "*Artes*" en los sustantivos exclusivos.

Por lo que respecta a los verbos, no existen grandes diferencias ligadas a la titulación. A pesar de que la presencia de verbos de comunicación diferentes es ligeramente más elevada en Filología (12,90 % frente a 12,68 %), no resulta significativa, aunque se acerca al umbral establecido ($p = 0,086$). Por el contrario, la dispersión de los términos es superior en Filología ($p = 0,017$), tal y como se aprecia en la Figura 9:

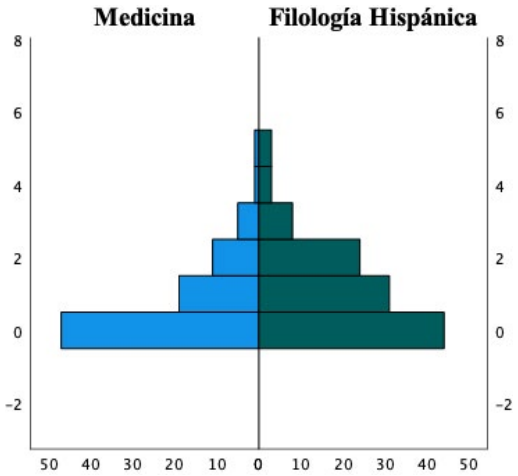


Figura 9. Diferencias de distribución de las palabras totales de "*Comunicación*" en los verbos exclusivos.

Si bien no es posible concluir que existan diferencias entre las titulaciones en relación con las palabras totales exclusivas de esta categoría respecto a la mediana, sí se aprecian variaciones significativas en la distribución. Ambos resultados —con independencia de su significación— están en consonancia con las tendencias previamente descritas.

3.2 Diferencias entre titulaciones en cuanto a la recuperación de voces especializadas

Puesto que las ciencias experimentales parecen poseer una mayor tendencia al uso de voces de especialización, se esperaba una presencia superior de este tipo de palabras entre los estudiantes de Medicina. Dicha expectativa resultó confirmada, tanto en el número de vocablos (Tabla 2) como en el total de palabras (Tabla 3).

Tabla 2. Número total y porcentual de vocablos especializados por grupo.

	Filología Hispánica	Medicina
Sustantivos	76 (4,09 %)	200 (12,50 %)
Verbos	18 (1,29 %)	64 (5,68 %)
Global	94 (2,89 %)	264 (9,68 %)

Tabla 3. Número total y porcentual de palabras totales especializadas por grupo.

	Filología Hispánica	Medicina
Sustantivos	127 (1,80 %)	658 (11,44 %)
Verbos	18 (0,29 %)	315 (6,71 %)
Global	145 (1,09 %)	973 (9,31 %)

Las diferencias en ambos centros de interés, así como globalmente, son significativas ($p > 0{,}001$) en todos los casos para los vocablos. En cuanto a las palabras, nuevamente la proliferación de voces especializadas en Medicina respecto a Filología es significativa ($p < 0{,}001$ y $p = 0{,}000$ en "Sustantivos" y "Verbos", respectivamente).

Asimismo, existen en ambas categorías diferencias notables en la distribución entre las titulaciones ($p = 0{,}000$), lo que se traduce en una mayor dispersión de los datos en Medicina (Figura 10). Por su parte, en Filología se aprecia una mayor concentración de palabras (un 88,89 % de los tecnicismos fueron producidos por un mismo informante).

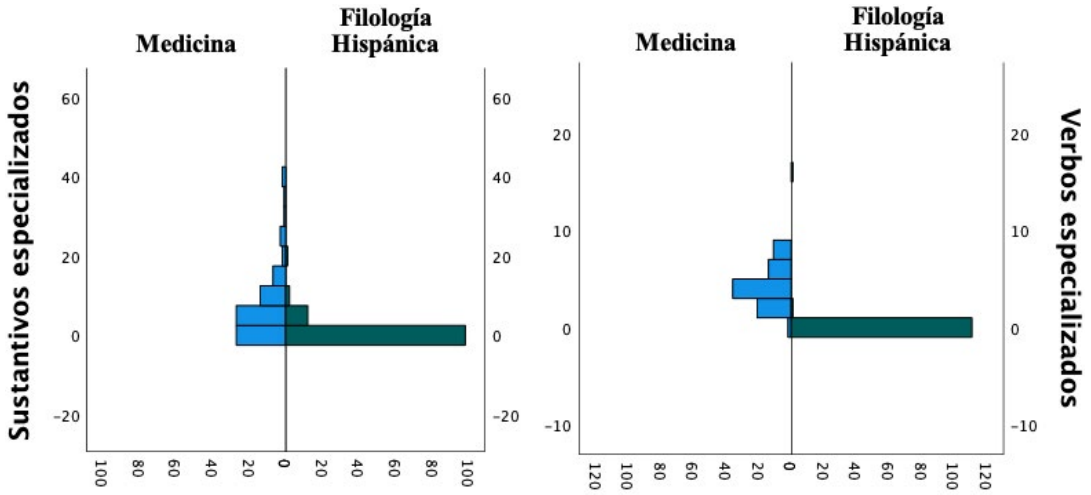


Figura 10. Diferencias de distribución de palabras especializadas.

Por otra parte, existe una marcada diferencia entre la producción nominal y la verbal: los vocablos de especialización bajo la etiqueta "Sustantivos" suponen un 77,09 %, y en el caso de las palabras un 68,79 %. Los cálculos estadísticos efectuados confirman la significación de esta diferencia, tanto con independencia del área de estudios ($p < 0{,}001$) como desglosada ($p < 0{,}001$ en ambas titulaciones).

Además de estas diferencias cuantitativas, se observaron disimilitudes tipológicas en el centro "Verbos": mientras que los términos especializados del grupo de Medicina son efectivamente verbos (*deglutir, seccionar, anastomosar,* etc.), casi el 90 % de los recogidos en Filología son sustantivos relacionados con esta categoría gramatical (*conjugación, vocal temática*, etc.). Estos datos podrían no ser representativos, ya que se trata de la producción de un único informante. No obstante, la presencia de un importante número de correlatos nominales (13) en las obras lexicográficas de referencia parece corroborar la idea de que los tecnicismos de esta disciplina pertenecen muy mayoritariamente a esta categoría, lo que podría indicar que Filología se percibe como un área de estudios más pasiva, centrada en la reflexión frente a la acción.

Por último, por lo que respecta a la relación entre la especialización y la exclusividad, es decir, a la generalidad de los términos marcados, los datos revelan que las voces médicas son de uso más común, especialmente en los verbos (Tabla 4). El tratamiento estadístico de los datos confirma la significación de estas diferencias únicamente para el grupo de verbos y el global ($p < 0{,}001$), no así entre los sustantivos ($p \approx 0{,}2$). En todo caso, es preciso tener en cuenta que los verbos especializados presentes en el grupo de Filología son resultado de la producción de un único informante, y esto repercute asimismo en el cálculo global. En consecuencia, a pesar de que la diferencia por titulación se muestra significativa tanto para verbos como para el conjunto de verbos y sustantivos, no puede considerarse que posea significación.

Tabla 4. Número total y porcentual de vocablos especializados exclusivos de su grupo.

	Filología Hispánica	Medicina
Sustantivos	56 (73,68 %)	131 (65,50 %)
Verbos	17 (94,44 %)	17 (26,56 %)
Global	73 (77,66 %)	148 (56,06 %)

Los cálculos relativos a la significación estadística ofrecidos en este análisis parten de una concepción de las variables como efectos fijos. No obstante, la variable "Titulación", factor central en el estudio, fue estudiada mediante un modelo mixto que también incluye efectos aleatorios. Ambos análisis arrojan resultados semejantes desde el punto de vista de la significación.

3.2.1 Análisis de las voces exclusivas y especializadas acotadas mediante umbral

Para el estudio de las voces exclusivas y especializadas se consideraron todos los vocablos, independientemente de si fueron producidos por un único informante, en tanto que (1) el 83,75% de los vocablos que se encuentran por debajo de este umbral de producción única son exclusivos, y el 67,06 % de los exclusivos está por debajo del umbral (2) las respuestas únicas suponen en torno al 70 % del total de voces exclusivas semánticamente marcadas en ambas titulaciones y (3) los vocablos especializados corresponden a un solo informante en alrededor del 50 % de las ocasiones, a excepción del caso particular de los verbos de Hispánicas tratado previamente. Aplicar esta restricción, en consecuencia, implicaría prescindir de una cantidad considerable de datos de interés.

No obstante, se desarrolló un análisis complementario aplicando un umbral estandarizado por porcentaje de aparición para comprobar si las tendencias se mantenían tras acotar la selección a las palabras producidas por dos o más informantes. Se consideraron los siguientes porcentajes de referencia: 0,009 % para Filología y 0,010 % para Medicina, cifras de aparición que se corresponden con las voces producidas por un solo participante según la información proporcionada por LexPro. Los resultados se recogen en la Tabla 5, en la que las celdas sombreadas representan la ausencia de significación en la comparación entre titulaciones:

Tabla 5. Vocablos especializados y exclusivos semánticamente marcados por encima del umbral.

	Medicina	Filología Hispánica
Sustantivos de lengua	0 / 334 (0 %)	15 / 238 (6,30 %)
Sustantivos de artes	5 / 334 (1,5 %)	11 / 238 (4,62 %)
Sustantivos del cuerpo	38 / 334 (11,38 %)	7 / 238 (2,94 %)
Sustantivos médicos	3 / 334 (0,9 %)	0 / 238 (0,00 %)
Verbos de comunicación	10 / 141 (7,09 %)	26 / 152 (17,10 %)
Sustantivos especializados	93 / 754 (12,33 %)	29 / 872 (3,33 %)
Verbos especializados	34 / 595 (5,71 %)	0 / 703 (0,00 %)

Como puede observarse, la práctica totalidad de los patrones relativos a las voces exclusivas semánticamente marcadas y especializadas se mantienen al aplicar el umbral, salvo los verbos de comunicación, que adquieren significación. Esta continuidad en las tendencias está apoyada por las cifras que representan el número de informantes de cada titulación que produce al menos una voz especializada o exclusiva semánticamente marcada, tanto teniendo en cuenta todas las respuestas como únicamente las producidas en más de una ocasión. Asimismo, la aplicación de cálculos estadísticos que relacionan los datos de cada clase con y sin aplicar el umbral corrobora esta propuesta, lo que supone un argumento adicional para la consideración de las palabras descentralizadas en ciertos tipos de estudios, ya que en ocasiones apenas implica cambios en la proporcionalidad, al tiempo que permite el acceso a una cantidad de datos notablemente superior. No obstante, dado el bajo número de ocurrencias en ciertas categorías, sería recomendable una ampliación de la muestra para obtener una mayor representatividad.

Respecto al número de informantes, todas las tendencias observadas a lo largo del análisis se reproducen, con la única excepción de que, al considerar solamente las respuestas de más de un hablante, la mayor presencia de términos médicos entre los estudiantes de ciencias de la salud adquiere significación. Los resultados pueden observarse en la Tabla 6, donde las celdas sombreadas implican nuevamente ausencia de significación.

En cuanto a la comparación de las cifras con y sin acotación, no existen entre estas opciones diferencias significativas, ni en la presencia de términos especializados ni en ninguna de las clases semánticas, a excepción de los verbos de Hispánicas, de acuerdo con lo previsto, en tanto que el 88,89 % pertenece a un mismo informante. Debido a esto, solo se consideraron los sustantivos en el análisis de la relación entre la especialización y la exclusividad. En esta categoría, los términos especializados continúan siendo más exclusivos en la rama humanística (41,94 % en Medicina frente al 58,62 % de Filología), nuevamente sin significación.

Por último, en lo concerniente a las palabras totales, se observan de nuevo cifras coherentes con la totalidad de los patrones descritos. Así, tras la aplicación de la prueba U de Mann Whitney, las diferencias entre ambos colectivos de estudiantes demostraron ser

Tabla 6. Número de informantes que produce al menos una palabra especializada o semánticamente marcada.

Nº de informantes que produce al menos un	Total de respuestas		Por encima del umbral	
	Medicina	Filología Hispánica	Medicina	Filología Hispánica
Sustantivo especializado	72 / 84 (85,71 %)	45 / 113 (39,82 %)	70 / 84 (83,33 %)	37 / 113 (32,74 %)
Verbo especializado	82 / 84 (97,62 %)	2 / 113 (1,77 %)	81 / 84 (96,43 %)	0 / 113 (0 %)
Sustantivo exclusivo de lengua	2 / 84 (2,38 %)	34 / 113 (30,09 %)	0 / 84 (0 %)	18 / 113 (15,93 %)
Sustantivo exclusivo de artes	12 / 84 (14,29 %)	33 / 113 (29,20 %)	8 / 84 (9,52 %)	24 / 113 (21,24 %)
Sustantivo exclusivo del cuerpo humano	34 / 84 (40,48 %)	13 / 113 (11,50 %)	31 / 84 (36,90 %)	10 / 113 (8,85 %)
Sustantivo exclusivo de medicina	9 / 84 (10,71 %)	10 / 113 (8,85 %)	5 / 84 (5,95 %)	0 / 113 (0 %)
Verbo de comunicación	37 / 84 (44,05 %)	69 / 113 (61,06 %)	23 / 84 (27,38 %)	53 / 113 (46,90 %)

significativas o muy significativas en todas las categorías (sustantivos exclusivos de lengua, de artes, del cuerpo humano y de medicina, verbos de comunicación y sustantivos y verbos especializados). Nuevamente, los sustantivos exclusivos semánticamente vinculados a la medicina constituyen el único caso de variación entre los resultados del análisis con y sin umbral, pues solo se aprecia significación tras acotar la muestra.

4. Discusión

En primer lugar, es preciso tener en cuenta que los trabajos previos que han centrado su análisis en el léxico especializado y su relación con la trayectoria académica de los informantes son escasos. Estos, además, parten de datos recopilados mediante los centros nocionales del PPHDL, mientras que en este estudio se han utilizado etiquetas metagramaticales. En consecuencia, los estudios comparativos que puedan realizarse son necesariamente parciales.

En cualquier caso, los resultados obtenidos a través del análisis pormenorizado de la distribución semántica permiten afirmar la influencia de la variable "Titulación" en la disponibilidad gramatical. No obstante, esta aparece restringida a los términos especializados y/o exclusivos. La ausencia de repercusión del área de estudios tanto entre los 20 vocablos más disponibles como entre los recogidos en el primer cuartil podría relacionarse con la elevada tendencia a la prototipicidad en las respuestas de disponibilidad gramatical, observada tanto en Tomé Cornejo y Recio (2022) como en Delgado-Olmos et al., (2024). La idea de un patrón de recuperación léxica vinculado con las características semánticas y morfosintácticas de los representantes canónicos del

centro de interés se ve reforzada, además, por la magnitud de las voces compartidas entre los primeros puestos de los listados de disponibilidad de los grupos contemplados en este estudio. En esta línea, tanto estos dos grupos como el conformado por los informantes del estudio de Tomé Cornejo y Recio (2022) presentan una distribución semántica similar en el subgrupo de voces más disponibles.

Paralelamente, se reproducen estas similitudes distributivas entre los informantes con independencia de su curso académico. Esto, sumado al hecho de que no se observan diferencias significativas en la producción especializada entre los alumnos de primero y cuarto de Filología Hispánica, sugiere que la etapa de mayor importancia en la adquisición del léxico específico podría ser el primer curso de Grado. Si bien la corroboración de la instrucción universitaria como un factor que propicia la aparición de estas palabras cuenta con amplio respaldo, en relación con la consideración de los estudiantes preuniversitarios como los participantes idóneos (López Morales, 1999 o Borrego Nieto y Fernández Juncal, 2003), los estudios en torno al desarrollo de este aspecto durante el avance de dicha instrucción son escasos.

A este respecto, la presente investigación va en consonancia con Allueva Torres et al. (2010), ya que, si bien encuentran ciertas disimilitudes entre estudiantes de primer año y egresados, estas no están presentes, en concreto, en los grupos de Filosofía y Letras y Salud-Deporte, que se corresponden con las áreas de conocimiento de Filología Hispánica y Medicina, respectivamente. Al mismo tiempo, esta posible relación establecida a través de la rama de estudios entre la actualización léxica mediante *input* gramatical y los estilos de pensamiento-aprendizaje apoya la percepción de Hernández Muñoz (2015) de la variable "Titulación" como un constructo multidimensional.

Esta autora enfatiza también la aparente homogeneidad en la producción entre los estudiantes de Ciencias y Letras, más allá del uso de tecnicismos. En esta investigación, esta idea se confirma, pues los resultados de ambas muestras en los veinte primeros vocablos más disponibles y el primer cuartil son muy similares. Al analizar el léxico especializado y exclusivo, sin embargo, los tecnicismos son más numerosos en Medicina. Estos datos son congruentes con Hernández Muñoz (2015), pues la autora registra que en la mayoría de sus centros nocionales la producción de léxico especializado es superior en el caso de los informantes que cursan el Bachillerato de Ciencias. No obstante, lo que en el estudio de Hernández Muñoz aparece como una tendencia mayoritaria, en esta investigación parece haberse consolidado en ambos centros de interés con resultados estadísticamente muy significativos.

Por último, el estudio arroja luz sobre ciertas cuestiones que podrían constituir futuras líneas de investigación. Entre estas, destacan las categorías utilizadas para la clasificación semántica de los vocablos y el potencial didáctico de los resultados. Respecto a la primera de ellas, las concentraciones de voces dentro de "Otros" sugieren que, quizá, la clasificación tradicional empleada no sea óptima en el ámbito de la disponibilidad gramatical o, al menos, en su aplicación a investigaciones con necesidades específicas. En cuanto a su aplicación en la enseñanza-aprendizaje, la comprensión de los procesos de

recuperación del vocabulario semánticamente marcado y especializado, su organización y sus relaciones con el léxico general constituyen una valiosa herramienta para la construcción de modelos y estrategias didácticos, tanto en la lengua materna como en español para extranjeros con fines específicos.

5. Conclusiones

El estudio presentado a lo largo de estas páginas pretende describir las principales diferencias semánticas entre las voces recuperadas por alumnos de Filología Hispánica y Medicina en tareas de disponibilidad gramatical. Partiendo de estos datos, se busca determinar si la variable "Titulación" constituye un factor significativo en la recuperación de palabras vinculadas a los centros de interés "Sustantivos" y "Verbos".

Respecto a la categorización semántica de las veinte voces más disponibles, no se aprecian divergencias notables entre los grupos de alumnos. Las categorías semánticas mayoritarias son "La escuela" y "Actividades cotidianas" en los centros "Sustantivos" y "Verbos", respectivamente.

Dentro del primer cuartil, se observa influencia de la titulación tan solo en ciertas categorías semánticas. Concretamente, el grupo de Medicina muestra una mayor concentración de términos relacionados con el cuerpo humano, aunque la diferencia es leve y no resulta significativa; en cambio, las categorías vinculadas a la lengua y la comunicación tienen una mayor presencia —estadísticamente significativa— en las respuestas de Filología Hispánica. A excepción de estos casos, se aprecia una relación marginal entre la titulación y los datos obtenidos, tanto entre los veinte vocablos más disponibles como en el primer cuartil.

En cuanto al léxico exclusivo, está conformado principalmente por vocablos del centro "Sustantivos", y es cuantitativamente superior en el grupo de Filología Hispánica. De nuevo, las categorías relacionadas con el cuerpo humano tienen un mayor peso en Medicina, mientras que Filología Hispánica mantiene un vínculo más estrecho con la lengua, la comunicación y las artes. Las divergencias en función de la titulación son más profundas en el léxico exclusivo en contraste con las voces del primer cuartil, lo que se traduce en resultados estadísticamente muy significativos.

Finalmente, el número de tecnicismos en Medicina es significativamente superior al de Filología Hispánica, tanto en las palabras como en los vocablos. Pese a ello, el análisis muestra que dichas voces, aun siendo especializadas, constituyen en gran medida un léxico de uso común o compartido, en especial en los verbos.

En suma, los resultados obtenidos confirman que en la disponibilidad gramatical la titulación a la que estén adscritos los informantes constituye una variable determinante. Esta afirmación, aunque se encuentra respaldada por un análisis cuantitativo y cualitativo, debe ser tenida en consideración con cierta prudencia, pues no se descarta la posibilidad de que otras variables de las que no se tiene información —esencialmente el nivel socioeconómico— puedan ejercer también influencia al confluir con la rama

del conocimiento. En todo caso, el presente estudio supone una línea de partida para la consideración de esta variable en posteriores investigaciones, con vistas a observar su alcance y el modo en el que interactúa con otras. Al mismo tiempo, resulta novedosa la observación de factores sociolingüísticos en esta disciplina emergente. La información extraída, circunscrita en este caso al ámbito de la disponibilidad gramatical, tiene no obstante potencial interdisciplinar. En este sentido, podría servir de base para trabajos de disponibilidad léxica, valorando una posible extrapolabilidad, o para estudios de sociología, esencialmente desde el punto de vista del mercado y el capital lingüístico (Pierre Bourdieu, 1977). Podrían desarrollarse, incluso, aplicaciones clínicas, siguiendo la estela de los avances de autores como Castillo Fadic y Pino Castillo (2020).

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Léxico disponible en *Educación* y *Nuevas Tecnologías: TIC* de futuros docentes de educación primaria. Incidencia de la formación inicial

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Resumen: Este trabajo estudia el léxico disponible de futuros docentes de educación primaria con el propósito de indagar la incidencia de su formación en los ámbitos de *Educación* y *Nuevas Tecnologías: TIC*. A partir de un corpus en el que han participado 305 estudiantes, y que reúne 8947 palabras y 1231 vocablos, se analizan los materiales léxicos según el curso de la titulación, primero y cuarto, para establecer el grado de convergencia entre las palabras más disponibles y se descubre, a través del programa DispoGrafo, qué unidades se manifiestan como prototípicas y qué tipos de relaciones –redes– son las de mayor fuerza. Como principal conclusión se constata que tanto los inventarios léxicos como la configuración de redes muestran importantes particularidades en función del centro de interés y nivel educativo seleccionados.

Palabras clave: *disponibilidad léxica, lexicón mental, DispoGrafo, formación de profesorado, nuevas tecnologías.*

Lexical availability in *Education and New Technologies: ICT* of future primary education teachers. The impact of initial training

Abstract: This article studies the lexical availability of future primary education teachers, with the aim of investigating the impact of their university education in the areas of *Education* and *New Technologies: ICT*. Based on a corpus in which 305 students have participated and which includes 8947 words and 1231 unique terms, the lexical materials are analysed according to the first and fourth year of their degree course. In order to establish the degree of convergence between the most available words and to discover, through the DispoGrafo programme, which units are shown to be prototypical and which types of relationships –networks– are the strongest. The main conclusion is that both the lexical inventories and the configuration of networks show important particularities depending on the selected centre of interest and educational level.

Keywords: *lexical availability, mental lexicon, Dispograph, teacher training, new technologies.*

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1. Introducción

Los procesos de formación docente persiguen la revisión de concepciones de aprendizaje y epistemologías personales del profesorado hacia orientaciones que generen una mejora sustancial de los propios aprendizajes y de las estrategias de enseñanza. Se espera, en general, un cambio desde aquellas tesis adquiridas de forma implícita en los procesos formativos previos hacia otras más sofisticadas, resultado del conocimiento teórico y disciplinar más actual.

Una de las opciones más adecuadas para investigar en el colectivo docente este cambio en la manera de entender y conceptualizar el ejercicio de la profesión es a través de metodologías que permitan analizar el lenguaje; en especial, en las palabras o unidades léxicas utilizadas y la relación que se presenta entre ellas. La disponibilidad léxica (DL) es una línea de investigación que permite conocer el léxico potencial –de un individuo, grupo o comunidad– ante un estímulo o contexto comunicativo determinado; en otras palabras, el vocabulario que sin ser "necesariamente frecuente, vive potencialmente en el hablante y se actualiza en cuanto se producen ciertas asociaciones" (Michéa, 1953, p. 340). Más tarde, López Morales (1999, p. 11) indicó que: "existe en el lexicón mental una serie de términos que no se actualizan a menos que sean necesarios para comunicar una información muy específica". Por lo tanto, se refiere a la cantidad y también a la calidad de las palabras que una persona conoce y utiliza en el momento en que tiene necesidad de ellas.

De esta forma, se trataría del léxico –disponible– cuyo análisis no puede afrontarse a partir de la frecuencia, sino que debe abarcar el léxico potencial ante un estímulo o contexto comunicativo determinado. Para conseguir este objetivo la encuesta de disponibilidad permite la evocación del vocabulario y organiza la recogida del corpus en centros de interés (CCII). El término centro de interés fue tomado de la pedagogía (Decroly, 2007) y hace referencia a aquellos temas que muestran una gran potencialidad para estimular el aprendizaje de los estudiantes. Posteriormente, la lexicografía toma el término y relaciona este concepto con las nomenclaturas (Quemada, 1967). Así, Sánchez-Saus Laserna (2017, 2019) detalla los orígenes de la DL y la de sus CCII. La proyección de este tipo de estudios se ha orientado, principalmente, hacia dieciséis CCII generados gracias al Proyecto Panhispánico de Disponibilidad Léxica (PPHDL): (1) *Partes del cuerpo*, (2) *La ropa*, (3) *Partes de la casa (sin los muebles)*, (4) *Los muebles de la casa*, (5) *Alimentos y las bebidas*, (6) *Objetos colocados en la mesa para la comida*, (7) *La cocina y sus utensilios*, (8) *La escuela: muebles y materiales,* (9) *Iluminación y calefacción*, (10) *La ciudad*, (11) *El campo,* (12) *Medios de transporte*, (13) *Trabajos del campo y del jardín*, (14) *Los animales*, (15) *Juegos y distracciones* y (16) *Profesiones y oficios*. Con ellos se consigue que los participantes confeccionen, a partir de la presentación de un estímulo, una serie de evocaciones que pueden deberse a relaciones semánticas (significado) o, por ejemplo, a relaciones entre los propios referentes. De hecho, el estudio del léxico disponible a partir de las pautas y criterios comunes que ha asumido la comunidad científica permiten establecer comparaciones entre los distintos estudios ya sea con los 16 CCII mencionados o con otros creados de forma específica para la comunidad de habla que se desea analizar.

La andadura de la investigación en DL se origina en Francia a mediados del siglo pasado con el propósito de mejorar la enseñanza de la lengua franca a los habitantes de las antiguas colonias (Gougenheim et al., 1956, 1964). Aquellas investigaciones iniciales ahora pueden dividirse en dos grandes categorías según el tipo de centros de interés que se trabajen. De un lado, los estudios de léxico general que consideran todos o algunos de los dieciséis CCII tradicionales del PPHDL– (e.g. González Martínez, 2002; Galloso Camacho, 2003; Trigo Ibáñez, 2011; Cruz Alonso, 2016). De otro, los de carácter específico referidos a algún léxico particular como, por ejemplo, la música (Juárez Calvillo y Trigo Ibáñez, 2022), las categorías gramaticales (Tomé Cornejo y Recio Diego, 2022), el cálculo, la geometría y las matemáticas (Cerda et al., 2017), los derechos humanos y la democracia (Montre-Águila y Araneda-Machmar, 2021) e incluso temáticas sanitarias como la COVID-19 (Ávila Muñoz et al., 2020).

En esta ocasión se han seleccionado dos centros de interés vinculados al contexto universitario y estrechamente relacionados con la formación inicial de maestros. En el ámbito de *Educación* ya se cuenta con publicaciones incardinadas en poblaciones de futuros docentes de infantil, primaria o secundaria (Herranz-Llácer, 2020; de la Maya Retamar y López Pérez, 2021; Martínez-Lara, 2021; Quintanilla Espinoza y Salcedo Lagos, 2019; Ramírez Pérez, 2019; Santos Díaz y Juárez Calvillo, 2022 o Valenzuela Castellanos et al., 2018, entre otros). Asimismo, en *Nuevas Tecnologías: TIC* también se comienza a contar con investigaciones que evalúan esta realidad en futuros docentes (de la Maya Retamar y López Pérez, 2020; Salcedo Lagos et al., 2022; Santos-Díaz et al., 2021).

Otro asunto palmario vinculado al estudio de los procesos psicológicos y cognitivos relacionados con el aprendizaje y el desarrollo del lenguaje es la consideración de este como una red dinámica de componentes interconectados, la cual ha estimulado la utilización de la teoría de grafos como instrumento de representación y medida. Una aproximación somera al grafo de lenguaje –red léxica– es la que entiende que puede construirse considerando a las palabras o a los participantes como unidad de análisis y permitiendo observar aspectos lingüísticos, como la estructura de un lenguaje en particular (Ferrer Cancho y Solé, 2001) o psicológicos y cognitivos, como los significados compartidos en una comunidad (Alexandridis y Yiheyis, 2012) o los procesos de recuperación de una palabra (Morais et al., 2013). Así, la incorporación de grafos a los métodos de la DL asegura la representación y análisis de los procesos de cambio y reestructuración del conocimiento en determinados conceptos, categorías o palabras. Esto permite entender cómo las personas almacenan y acceden al conocimiento léxico, siendo una herramienta de gran utilidad para distintas disciplinas como la lingüística cognitiva.

En este sentido, el alcance y la especificidad del presente estudio permite descubrir la incidencia de la formación inicial de maestros y maestras de educación primaria en el entramado léxico-semántico y cognitivo de los centros de interés observados. Algunas de las cuestiones que se plantean son ¿habrá diferencias entre los materiales de léxico

disponible de los estudiantes de primero y cuarto? En caso afirmativo, ¿cuál es la evolución o progresión de dichos repertorios? y ¿en qué medida se ven reflejados los contenidos adquiridos a lo largo de la carrera de magisterio?

En definitiva, el propósito de esta investigación es indagar no solo el léxico disponible de los futuros docentes en educación primaria, sino también el progreso en los repertorios de dos áreas esenciales del ejercicio profesional, la *Educación* y las *Nuevas Tecnologías: TIC*. Para ello se analizan distintos diccionarios (general y por curso académico) que contienen el repertorio de palabras que han obtenido mayor índice de disponibilidad léxica (IDL) junto al detalle de su organización mental a través de las redes asociativas (grafos), desarrollando así la perspectiva cognitiva. Esta cuestión primordial para la realidad y transformación actual de las aulas se despliega en un doble objetivo: el primero, descubrir en los inventarios de léxico disponible de los estudiantes de magisterio la incidencia de su educación universitaria y, el segundo, reunir materiales léxicos concretos y rigurosos con el objeto de optimizar el proceso de formación multidisciplinar del profesorado en las etapas iniciales.

2. Metodología

Se expone un análisis cualitativo con diseño no experimental. Como todo estudio de léxico disponible, este se desarrolla a través de una prueba asociativa que tiene como objetivo conseguir el léxico potencial de los informantes evaluados. La encuesta, creada *ad hoc,* se administró siguiendo los criterios del PPHDL (para mayor detalle sobre los criterios del PPHDL se recomienda la lectura de López González, 2014). Se implementaron, en primer lugar, los datos sociológicos (edad, sexo, nivel socioeconómico, etc.). En segundo lugar, se recogió la información léxica relacionada con cada centro de interés (de forma escrita, con listas abiertas y con dos minutos de tiempo por área asociativa). Así, cada participante confeccionó una lista de vocablos relacionados con el estímulo propuesto. Posteriormente, con las listas de palabras se calculó mediante la fórmula estadística de López Chávez y Strassburger Frías (2000) el índice de disponibilidad. Finalmente, es necesario explicar que los materiales léxicos se actualizan a partir de un proceso de activación generado por una red ilimitada de asociaciones. Por lo tanto, aunque las respuestas que aporten los participantes varíen, existe una tendencia a producir unas palabras asociadas a otras, lo que demuestra cierto patrón de ordenamiento léxico que puede seguir relaciones por significado, categorías, relaciones semánticas…

2.1 Participantes

Este estudio cuenta con 305 participantes (estudiantes del grado en educación primaria presencial). Si se consultan los datos existentes en el portal de transparencia de la Universidad Rey Juan Carlos (https://transparencia.urjc.es/) el tamaño de la muestra se considera representativo para la población que se está analizando (769) al contar con un nivel de confianza del 95 % y un margen de error de 0,05. En este sentido, del total de

participantes, 210 son alumnos de primer curso (68,9 %) y 95 de cuarto (31,2 %). Estas cifras son reflejo de la realidad de las aulas donde el número de estudiantes matriculados en primero es mucho mayor que los del último año.

2.2 Instumento

El cuestionario empleado fue creado *ad hoc* para los futuros docentes de educación primaria y estuvo compuesto por un total de diez páginas. En la primera página se encontraban las instrucciones detalladas del conjunto de la prueba. A continuación, las siguientes dos estuvieron destinadas a recoger la información sociodemográfica de los informantes que serían evaluados (edad, curso, conocimientos de idiomas...). Tras esta sección del cuestionario se incluía una página en la que solo se podía leer "Por favor, no pases de página", con el propósito de que la última sección (el resto de las páginas) se respondiera de forma simultánea por parte de todo el grupo. Así, en las seis páginas restantes había espacio en cada una de las páginas para responder a tres centros de interés de un total de dieciocho. Para esta investigación se ha tomado como referencia dos: *Nuevas Tecnologías: TIC* y *Educación*.

2.3 Procedimiento

Una vez recibida la autorización del Comité de ética de la Universidad Rey Juan Carlos, y el visto bueno de los docentes de las asignaturas, se acudió a todas las clases de primero y cuarto del grado en educación primaria presencial. Una vez en el aula, el cuestionario se aplicó de forma grupal. La participación de los estudiantes fue anónima y voluntaria, y no se gratificó la participación.

Al iniciar la recogida de los datos, se comenzó explicando verbalmente las instrucciones disponibles en la primera página del cuestionario y se fueron respondiendo, de forma conjunta, las preguntas de la primera parte de la encuesta (estas fueron las correspondientes a la sección sociodemográfica). En el momento de iniciar la prueba asociativa, se explicó que dispondrían de dos minutos de tiempo para escribir todas las palabras que relacionaran con el tema enunciado. Tras ese tiempo escucharían la palabra "siguiente". En ese instante pasarían a una nueva columna con otro centro de interés y sin posibilidad de volver a la anterior. Se especificó, asimismo, que no había palabras correctas o incorrectas, buenas o malas, y que no debían dejar de escribir ninguna por miedo a que esta pudiera ser inadecuada, malsonante o no estuvieran seguros de su ortografía. En conclusión, se indicó que todas las palabras eran correctas.

La edición de los materiales sigue las normas presentadas por Samper Padilla (1998) y las anotaciones específicas para estos centros de interés expuestos en Herranz-Llácer (2020). Además, se buscó, siguiendo lo indicado por Bartol Hernández (2002), tener una postura de mantenimiento de la información con el objetivo de que todas aquellas palabras que pudieran tener diversos significados quedaran representadas. Finalmente, se calculó el índice de disponibilidad léxica de López Chávez y Strassburger Frías (2000) que valora conjuntamente la facilidad de evocación de un vocablo, el orden de aparición y su

frecuencia. Este cálculo se desarrolló con el programa Microsoft Excel y el lenguaje de programación en Visual Basic (VBA). Asimismo, los gráficos disponibles en este artículo se realizaron con las herramientas Voyant Tools y DispoGrafo.

3. Resultados

Se presentan los diferentes resultados distribuidos en dos apartados: el primero dedicado al centro de interés *Educación* y, el segundo, a *Nuevas Tecnologías: TIC*. En ellos se aporta una breve descripción general del corpus que muestra el número total de palabras producidas por los estudiantes, el número total de vocablos (unidades diferentes) o el índice de cohesión.

Si bien es cierto que los resultados obtenidos en este último parámetro no son de gran envergadura, pues los distintos subgrupos que conforman la muestra no presentan el mismo número de informantes (305 muestra total, 210 estudiantes de primero y 95 del último curso), se aprecia en ambos centros de interés que los resultados obtenidos por el subgrupo de cuarto curso (menor número de estudiantes) siguen siendo superiores en total de palabras, total de vocablos y media por informante. También se muestra una nube de palabras de los términos más frecuentes elaborada con la herramienta Voyant Tools desarrollada por Sinclair y Rockell (https://voyant-tools.org/). Dicho programa permite crear nubes de un mínimo de 25 palabras y un máximo de 500.

En cuanto a los repertorios léxicos ordenados según el IDL, se ofrecen los inventarios, tanto para el corpus general como para los subgrupos estudiados (primero y cuarto), en formato de tabla con las 50 palabras más disponibles. Dichos listados se presentan en forma de porcentaje, pues resulta más sencillo interpretar el 43,45 % frente al IDL 0,43452 (Bartol Hernández, 2017). Por otro lado, la decisión de reunir en los listados solo 50 unidades obedece a conseguir una muestra fácil de manejar y que represente, aproximadamente, entre el 5 % y el 15 % del total de unidades inventariadas en cada subgrupo. En concreto, los datos de representación quedarían como siguen en la Tabla 1.

Tabla 1. Detalle de los vocablos disponibles y la proporción correspondiente de 50 vocablos.

	Total de vocablos		Vocablos de 1º		Vocablos de 4º	
Educación	871	5,7 %	762	6,6 %	788	6,3 %
Nuevas Tecnologías: TIC	406	12,3 %	329	15,2 %	229	21,8 %

La última sección del análisis, la más amplia, desarrolla la perspectiva cognitiva con el estudio de la configuración del lexicón junto a las redes que lo conforman. Se examinará el tipo de relaciones manejadas por los informantes mostrando la activación de vocablos y los mecanismos lingüístico-formales y semántico-cognitivos (Gómez-Devís y Herranz-Llácer, 2024; García Almendros y Gómez-Devís, 2025; Gómez-Devís et al., 2023; Moreno Mojica, 2016) que se manifiestan al comparar los resultados entre los subgrupos de primero y cuarto de educación primaria. Este análisis se realiza a través del programa DispoGrafo (Echeverría et al., 2008), diseñado para explorar la naturaleza de

las relaciones asociativas entre las palabras (nodos) y la fuerza de dicha relación a través del peso de las aristas (conectividad entre nodos). Así, los grafos muestran la distribución de categorías, núcleos semánticos o también la fuerza de la relación entre las unidades que conforman la figura.

3.1 Educación

Este centro de interés presenta un corpus de 5588 palabras y 871 vocablos. En términos de frecuencia, la representación de la nube de palabras con los 500 términos más frecuentes (Figura 1) permite apreciar rápidamente cuáles son las de alta y baja frecuencia (Battaner Moro et al., 2022).



Figura 1. Educación – nube de palabras.

A continuación, en la Tabla 2, se detallan algunos de los resultados. La primera columna reúne los materiales léxicos generales, mientras que la segunda y la tercera muestran los obtenidos según el curso. A primera vista se aprecia que la diferencia de participantes en los subgrupos –210 en primero frente a 95 en cuarto– no supone encontrar resultados más abultados; de hecho, y como cabía esperar, los alumnos del último curso superan a los recién llegados en todos los parámetros observados. Incluso evocan casi treinta vocablos más de media que sus compañeros.

Tabla 2. Resultados cuantitativos del centro de interés Educación.

	Corpus general (305 estudiantes)	Primer curso (210 estudiantes)	Cuarto curso (95 estudiantes)
Total de palabras	5588	4493	4773
Total de vocablos	871	762	788
Media por informante	18,32	21,39	50,24
Índice de cohesión	0,003	0,004	0,01

La Tabla 3 recoge las 50 unidades léxicas más disponibles. Al observar el inventario de primero y cuarto se expone un cambio que se ve reflejado en el 34 % de vocablos no compartidos (17 unidades). En el caso de primer curso estas palabras son: *educar*,

educador, *educación*, *organizar*, *pizarra*, *lectura*, *guardería*, *ayudar*, *alumno*, *estudiante*, *inglés*, *historia*, *apuntes*, *educación física*, *comportamiento*, *jede de estudios* y *confianza*. De ellas, 8 (16 %) se recogen en el reportorio general, pero en rangos distintos. A la inversa, para cuarto, las específicas fueron: *valor*, *respetar*, *universidad*, *calidad*, *recorte*, *cole(gio) concertado*, *secundaria*, *ley*, *vocación*, *FP*, *LOE*, *LOMCE*, *responsabilidad*, *contenido*, *tarea*, *carrera universitaria* y *modales*. También se muestran 7 elementos compartidos con el repertorio general (14 %).

Más allá de las cifras absolutas, los cambios en la conceptualización del área de *Educación* se manifiestan de la siguiente manera: los estudiantes de primero actualizan nombres de asignaturas (*educación física*, *historia*, *inglés*, etc.) o las figuras propias de los centros educativos (*educador*, *alumno*, *estudiante* o *jefe de estudios*); el grupo de cuarto, por su parte, se hace eco de otras realidades asociadas a la educación como las leyes educativas (*ley*, *LOE* y *LOMCE*) o de aspectos relacionados sobre cómo debe ser la educación (*valor*, *calidad*, *responsabilidad*, *contenido*…). No obstante, estas tendencias se podrán valorar con más detalle a partir del análisis de grafos.

Tabla 3. Centro de interés Educación – los 50 vocablos más disponibles.

	General		Primero		Cuarto	
	Palabra	**% Disp**	**Palabra**	**% Disp**	**Palabra**	**% Disp**
1	profesor	62,9 %	profesor	71,7 %	profesor	61,3 %
2	alumnado	39,3 %	alumnado	44,4 %	alumnado	36,8 %
3	enseñanza	30,5 %	enseñanza	37,9 %	valor	24,5 %
4	cole(gio)	25,1 %	cole(gio)	29,3 %	cole(gio)	20,8 %
5	infancia	19,9 %	infancia	21,0 %	enseñanza	20,1 %
6	universidad	17,9 %	libro	18,6 %	maestro	18,8 %
7	valor	17,0 %	conocimiento	16,9 %	infancia	17,9 %
8	libro	16,5 %	instituto	15,9 %	colegio público	15,5 %
9	respetar	15,3 %	director	15,8 %	respetar	15,4 %
10	conocimiento	15,3 %	maestro	14,3 %	universidad	15,1 %
11	maestro	15,2 %	aprendizaje	13,7 %	conocimiento	14,7 %
12	director	12,9 %	aprender	13,0 %	calidad	14,0 %
13	instituto	12,4 %	educar	12,5 %	colegio privado	13,4 %
14	aprendizaje	11,6 %	educador	12,0 %	libro	12,6 %
15	aprender	11,3 %	matemáticas	11,3 %	lengua	11,1 %
16	matemáticas	9,5 %	padre	11,1 %	director	10,9 %
17	lengua	9,5 %	estudiar	10,4 %	recorte	10,8 %
18	padre	9,3 %	lengua	10,2 %	bachillerato	10,2 %

Tabla 3, continúa en la página siguiente.

Tabla 3, continúa de la página anterior.

	General		Primero		Cuarto	
	Palabra	**% Disp**	**Palabra**	**% Disp**	**Palabra**	**% Disp**
19	educador	8,7 %	educación primaria	9,8 %	aprender	10,1 %
20	estudiar	8,4 %	clase	9,0 %	aprendizaje	9,2 %
21	educar	8,2 %	literatura castellana	8,5 %	cultura	9,2 %
22	educación primaria	8,0 %	familia	8,4 %	matemáticas	9,1 %
23	literatura castellana	7,7 %	escuela	8,2 %	futuro	8,3 %
24	clase	7,7 %	educación	8,1 %	escuela	8,2 %
25	colegio público	7,4 %	examen	7,7 %	literatura castellana	8,1 %
26	**trabajo**	7,3 %	compañero	7,6 %	asignatura	8,0 %
27	familia	7,3 %	asignatura	7,2 %	cole(gio) concertado	7,9 %
28	escuela	7,2 %	organizar	7,1 %	secundaria	7,7 %
29	asignatura	6,8 %	amistad	6,9 %	instituto	7,6 %
30	examen	6,7 %	aula	6,8 %	ley	7,4 %
31	cultura	6,6 %	bachillerato	6,5 %	educación primaria	7,4 %
32	bachillerato	6,6 %	pizarra	6,3 %	amistad	7,3 %
33	amistad	6,6 %	lectura	5,5 %	estudiar	7,1 %
34	colegio privado	6,4 %	cultura	5,5 %	vocación	7,0 %
35	compañero	6,2 %	guardería	5,4 %	formación	6,8 %
36	aula	6,2 %	colegio público	5,3 %	aula	6,7 %
37	educación	6,0 %	ayudar	5,2 %	compañero	6,2 %
38	futuro	6,0 %	alumno	5,0 %	examen	6,1 %
39	secundaria	5,7 %	estudiante	4,9 %	FP	6,0 %
40	organizar	5,3 %	inglés	4,8 %	LOE	5,8 %
41	docente	5,1 %	historia	4,7 %	LOMCE	5,8 %
42	ley	5,1 %	formación	4,7 %	padre	5,7 %
43	pizarra	5,1 %	apuntes	4,7 %	responsabilidad	5,5 %
44	formación	4,7 %	colegio privado	4,7 %	familia	5,5 %
45	responsabilidad	4,5 %	educación física	4,6 %	contenido	5,5 %
46	ayudar	4,4 %	futuro	4,5 %	clase	5,3 %
47	lectura	4,3 %	comportamiento	4,3 %	docente	5,1 %
48	alumno	4,3 %	docente	4,3 %	tarea	5,0 %
49	cole(gio) concertado	4,0 %	jefe de estudios	4,0 %	carrera universitaria	4,9 %
50	tarea	3,9 %	confianza	3,9 %	modales	4,8 %

En sombreado se encuentran los términos específicos según el nivel educativo

Con los datos de la tabla anterior es el momento de avanzar sobre la configuración del lexicón a partir del análisis de grafos (Figuras 2 y 3). El mecanismo de grafos aplicado para esta investigación considera las cuestiones siguientes: en primer lugar, la Figura 2 representa las palabras que han logrado asociarse a otras como mínimo en dos ocasiones creando una figura con 123 nodos y 146 aristas. En el caso de la Figura 3, solo se muestran los términos que han logrado tres o más conexiones (la figura se reduce a 80 nodos y 86 aristas). Por último, cabe señalar que los grafos pueden presentar un *cluster* conformado por aquellas palabras que manifiestan una conexión fuerte –esto significa que comparten más rasgos entre sí– y que no necesariamente se vinculan a la zona central del grafo, lugar en el que aparecen las palabras con mayor accesibilidad y capacidad conectiva.

Con carácter general, las figuras 2 y 3 muestran en su zona central las palabras con mayor capacidad asociativa con otros términos. Se destaca *alumno* [20 aristas], *profesor* [18], *enseñanza* [15], *cole(gio)* [11], *universidad* [11], *valor* [11], *respetar* [8], *infancia* [7] y *libro* [7].

Otra cuestión destacable es la relacionada con la fuerza asociativa entre dos términos, es decir, qué tipo de relaciones han logrado un mayor número de ocurrencias (peso en sus aristas) lo que presupone una mayor proximidad en la memoria o pensamiento de los informantes. Las más importantes fueron: *profesor* → *alumno* [143], *lengua* → *literatura castellana* [68], *cole(gio)* → *instituto* [63], *instituto* → *universidad* [57], *lengua* → *matemáticas* [39], *cole(gio) público* → *cole(gio) privado* [36], *enseñanza* → *aprender* [34], etc.

También en ambos grafos se manifiesta una distribución de los materiales léxicos en seis agrupaciones:

a. Disciplinas curriculares: a partir del término *conocimiento* surgen tres nodos, *inglés* [4], *literatura castellana* [4] y *matemáticas* [4] y estos, a su vez, dan paso a todo tipo de asignaturas (*historia*, *filosofía*, *geografía*, *educación física*, *música*, *lengua*, *literatura* o *literatura extranjera*). A todas estas, hay que sumar el *cluster física* → *química* → *biología* dejando buena parte de las asignaturas técnicas separadas del resto de materias. Este hecho pone de relieve la aparente necesidad de los estudiantes en hacer tangible el concepto abstracto de *Educación* y para ello, lo hacen a partir de las asignaturas que los informantes han cursado hasta su entrada en la universidad y que son conocidas para todos ellos.

b. Etapas educativas: en la parte inferior del grafo, se encuentran los nodos *escuela* → *cole(gio)*; *cole(gio)* → *instituto*; *cole(gio)* → *universidad*; *instituto* → *universidad*; *universidad* → *FP* y *ESO* → *bachillerato* → *universidad*. Además, a partir de *universidad* se manifiestan los títulos según el nivel educativo (*FP medio*, *FP superior*, *grado*, *licenciatura*, *máster*). Esto pone de manifiesto todas las posibilidades formativas existentes en los distintos niveles educativos.

c. Acciones habituales del proceso de enseñanza-aprendizaje que se manifiestan a través de ocho verbos que ejercen una capacidad conectiva destacable. Así,

   - *aprender* se vincula con *enseñanza* [34], *educar* [4] y con una arista de peso 3 *asignatura*, *respetar, motivar*, *organizar* y *escuchar*.
   - *respetar* conecta con *valor* e *igualdad* [8], *enseñanza* [7], *profesor* y *tolerancia* [5], *compañero* [4] y *alumno* e *infancia* [3].
   - *estudiar* se relaciona con *examen* [6], *enseñanza* [4], *conocimiento* [4], *libro* [4] y con *trabajo* [3].
   - *motivar* se une a *aprendizaje* [5], *interés* y *alumno* [ambos con un peso de 4] y *valor* [3].
   - *ayudar*, por su parte, lleva a *comprender* [5] y *enseñanza* [3].
   - *educar* se relaciona con *enseñanza* [15] y con *educación* [7].
   - *procesar* conecta con *aprendizaje* [4].
   - por último, destaca el *cluster aprobar → suspenso* [15] que queda fuera del grafo central.

   De acuerdo con estos datos puede entenderse que la educación no se percibe como algo estanco y pasivo, sino como una realidad activa en la que el sujeto forma parte de ella y puede interactuar con ella.

d. El proceso de evaluación se percibe como otra sección fundamental para la educación. A partir de *estudiar* se genera *examen* [6], *trabajo* [8], *prueba* [7], *tarea* [6], *asignatura* [5] y esta última, a su vez, nos lleva a *evaluación* [4]. De esta forma, se percibe la evaluación como otra sección fundamental para la educación.

e. Profesiones vinculadas al ámbito escolar: en primer lugar, se encuentra la relación *maestro → profesor* [28], seguida de *profesor → director* [23] y, por último las figuras que surgen a partir de *director* como *jefe de estudios* [21], *secretaria* [6] y *conserje* [4]. Como futuros maestros es lógico encontrar no solo las palabras relacionadas con la profesión docente, sino también con el resto de agentes vinculados con ella.

f. Material escolar entre el que destaca el usado directamente por el estudiante (*libro* con *cuaderno* [11], *material escolar* [4], *apuntes* [9], *pizarra* [8]), el empleado por el docente (*pizarra → tiza* [9]). Por último, observamos el *cluster bolígrafo → lapicero* [5] junto a *mesa → silla* [4]. Este último bloque de materiales expone aquellos objetos que docentes y estudiantes necesitan para desarrollar su actividad diaria.

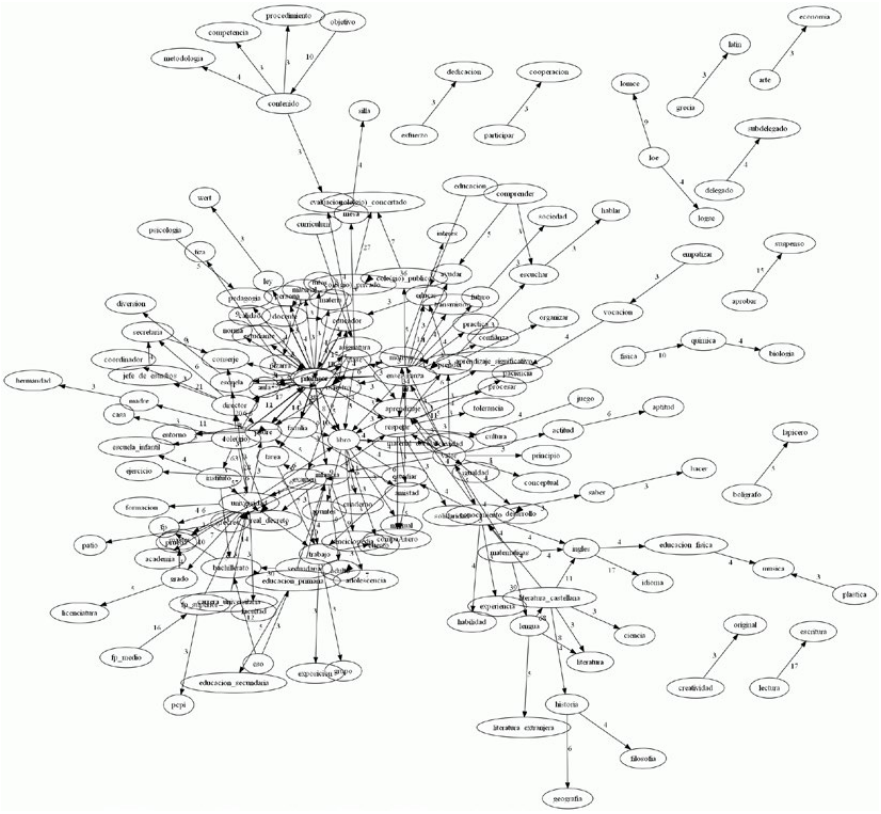


Figura 2. Grafo general *Educación*. Poda 2. Nodos: 123; Aristas: 146.

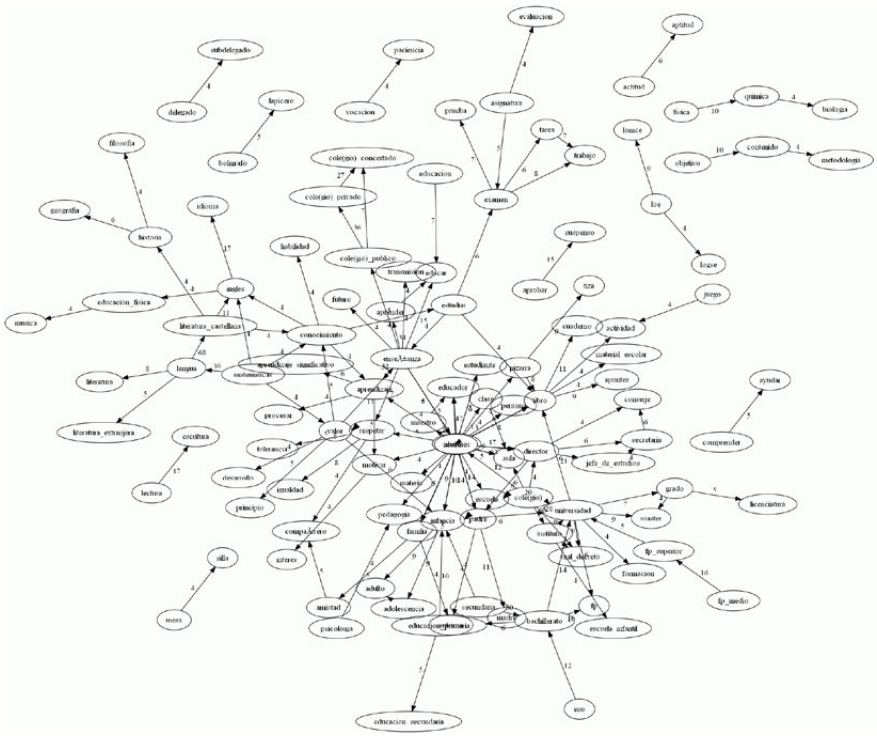


Figura 3. Grafo general Educación. Poda 3. Nodos: 80 y Aristas: 86.

Tras el análisis general de toda la muestra, se aborda el contraste a partir de los repertorios según el curso de la titulación a los cuales se ha aplicado una poda 4 (selección de palabras que han logrado como mínimo cuatro conexiones). La Figura 4 representa los resultados de los estudiantes de primero con 38 nodos y 33 aristas y la Figura 5 a los de cuarto con 18 nodos y 13 aristas. Aunque a primera vista los grafos puedan parecer muy diferentes presentan varias similitudes. Por ejemplo, se encuentran, de nuevo, asignaturas (*lengua → literatura castellana → matemáticas*) o tipos de centros educativos (*cole(gio) público → cole(gio) concertado → cole(gio) privado*) e incluso la relación entre *lectura → escritura*. Si nos detenemos en las diferencias, la primera de ellas se manifiesta en las distintas etapas educativas: mientras que en primero aparece *educación primaria → secundaria → bachillerato* (y sin unir a las anteriores, *cole(gio) → instituto → universidad*), en cuarto, por su parte, evocan esta última relación, pero activando el *cluster educación primaria → secundaria*. Otra cuestión es la distinta presentación de *profesor → alumno → maestro*, ya que se encuentra en la sección central del grafo en el inventario de primer curso y como *cluster* en cuarto.

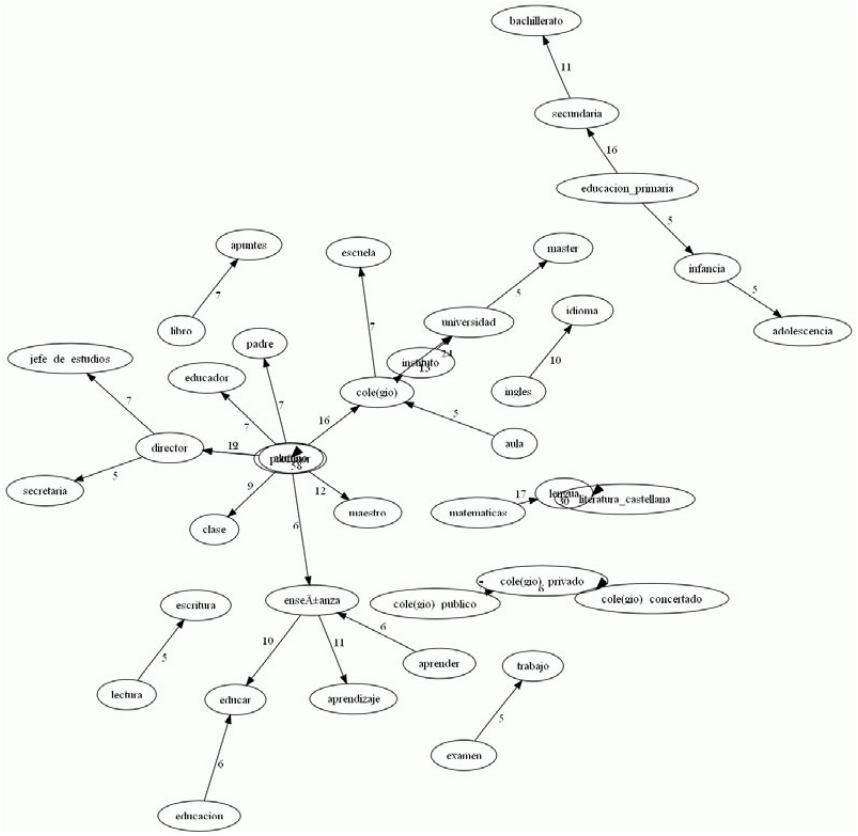


Figura 4. Grafo Educación Curso 1º. Poda 4. Nodos: 39 y Aristas: 33.

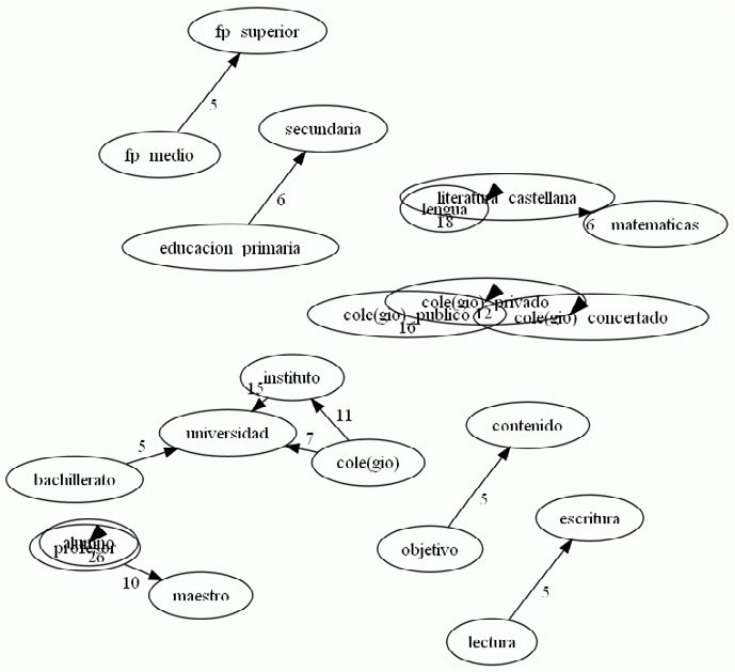


Figura 5. Grafo Educación. Curso 4º. Poda 4 Nodos: 18 y Aristas: 13.

3.2 Nuevas Tecnologías: TIC

Esta área nocional ha sido menos productiva que la anterior. Así, frente al corpus de 5588 obtenido en *Educación,* en esta ocasión se han registrado 3396 palabras, 2192 menos, la media ha sido de 11,13. En la Figura 6 se muestran los vocablos de esta área asociativa entre los que destacan *(ordenador) portátil, (teléfono) móvil* y *tablet*.

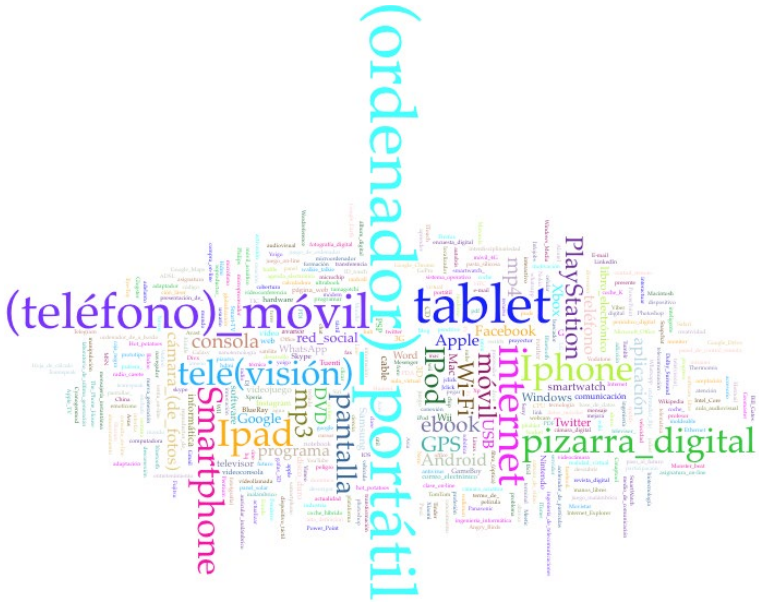


Figura 6. *Nuevas Tecnologías:TIC* – nube de palabras con los 406 vocablos.

A continuación, la Tabla 4 ofrece, de manera detallada los resultados. Específicamente, los estudiantes de primer curso han evocado 2294 palabras (media = 10,92) y 329 vocablos. Por su parte, los estudiantes de cuarto han producido un corpus total de 1082 (media = 11,39) y 229 vocablos. Estos resultados permiten, a simple vista, observar una rebaja léxica al compararlo con el centro de interés anterior. Asimismo, el promedio por informante no muestra diferencias llamativas entre primero y cuarto, cosa que sí ocurre en *Educación* (datos disponibles en la Tabla 2). Por consiguiente, no solo resulta evidente en los casos de total de palabras y vocablos, pues ocurre lo mismo con los resultados de la media por informante y el escaso margen de superioridad que muestran los del último año de la carrera. Sin embargo, el aspecto de la cohesión léxica no sigue el patrón y mantiene su tendencia a obtener un índice más elevado en dicho subgrupo (cuarto). Dicho esto, hay que recordar que los resultados del índice de cohesión dependen del tamaño de la muestra, dado que se calcula dividiendo el número medio de palabras por informante es esperable que el grupo más pequeño obtenga un valor mayor y, por tanto, los resultados deben ser tomados con cautela.

Tabla 4. Resultados cuantitativos del centro de interés *Nuevas Tecnologías: TIC.*

	Corpus general (305 estudiantes)	**Primer curso (210 estudiantes)**	**Cuarto curso (95 estudiantes)**
Total de palabras	3396	2294	1082
Total de vocablos	406	329	229
Media por informante	11,13	10,92	11,39
Índice de cohesión	0,003	0,004	0,01

En la Tabla 5 se recogen, siguiendo el modelo anterior, las 50 palabras más disponibles. En esta ocasión, tan solo se localizan 13 vocablos (26 %) que no son compartidos entre los informantes de primer y cuarto curso. En el caso de los estudiantes de primero han sido: *DVD*, *Xbox*, *libro electrónico*, *televisor*, *Windows*, *Nintendo*, *router*, *Samsung*, *3G*, *videojuego*, *3D*, *PSP* y *gafas 3D*. Tal y como se puede apreciar cinco son marcas comerciales, dos no tienen una relación directa con lo que hoy se entiende por *Nuevas Tecnologías: TIC* (*DVD* y *televisor*), otras dos hacen referencia a la conectividad de internet (*3G* y *router*). El resto o bien son dispositivos como *libro electrónico* o *gafas 3D* o se asocian a otras realidades de este concepto (*videojuego* y *3D*). Por último, destaca el último curso con los términos *Hot Potatoes* y *Jclick,* dos programas educativos, y *Word* y *nube* que, sin ser específicos de la educación, son utilizados constantemente por los estudiantes. Todo esto se podrá apreciar mejor a través de las Figuras 7, 8, 9 y 10.

Tabla 5. Centro de interés *Nuevas Tecnologías: TIC* – los 50 vocablos más disponibles.

	General		Primero		Cuarto	
	Palabra	**% Disp**	**Palabra**	**% Disp**	**Palabra**	**% Disp**
1	(ordenador) portátil	86,1 %	(ordenador) portátil	84,1 %	(ordenador) portátil	90,9 %
2	tablet	60,3 %	tablet	58,9 %	tablet	63,4 %
3	(teléfono) móvil	44,2 %	(teléfono) móvil	43,3 %	(teléfono) móvil	46,2 %
4	internet	31,3 %	internet	31,2 %	pizarra digital	42,0 %
5	pizarra digital	25,3 %	Iphone	28,3 %	internet	31,5 %
6	Ipad	24,6 %	tele(visión)	25,8 %	Ipad	29,3 %
7	Iphone	23,9 %	Smartphone	22,7 %	Smartphone	22,0 %
8	tele(visión)	22,9 %	Ipad	22,6 %	pantalla	18,7 %
9	Smartphone	22,5 %	móvil	20,6 %	Ipod	16,7 %
10	móvil	18,4 %	pizarra digital	18,0 %	tele(visión)	16,5 %
11	pantalla	15,3 %	PlayStation	15,1 %	Iphone	14,0 %
12	Ipod	14,8 %	Wi-Fi	13,9 %	móvil	13,5 %
13	PlayStation	12,6 %	Ipod	13,9 %	aplicación	13,2 %
14	Wi-Fi	11,5 %	pantalla	13,8 %	Apple	11,5 %
15	mp3	9,8 %	mp3	11,5 %	consola	10,0 %
16	ebook	9,4 %	Ebook	9,6 %	programa	9,1 %
17	consola	9,0 %	GPS	9,3 %	ebook	9,0 %
18	GPS	8,3 %	teléfono	9,0 %	informática	8,7 %
19	Android	7,6 %	Android	8,6 %	hot potatoes	8,6 %
20	aplicación	7,5 %	consola	8,5 %	Mac	8,2 %
21	teléfono	7,5 %	mp4	7,5 %	cámara (de fotos)	7,9 %
22	Apple	7,2 %	DVD	6,9 %	software	7,6 %
23	mp4	7,0 %	Xbox	6,2 %	PlayStation	7,1 %
24	programa	6,4 %	red social	6,0 %	Google	6,7 %
25	cámara (de fotos)	6,2 %	libro electrónico	5,7 %	Word	6,7 %
26	DVD	5,6 %	cámara (de fotos)	5,4 %	Wi-Fi	6,1 %
27	Google	5,6 %	Twitter	5,4 %	GPS	6,0 %
28	red social	5,2 %	Apple	5,3 %	mp3	5,9 %
29	WhatsApp	5,1 %	programa	5,2 %	WhatsApp	5,8 %
30	USB	5,0 %	Google	5,1 %	mp4	5,7 %
31	Twitter	5,0 %	Wii	5,0 %	avance	5,5 %
32	Facebook	4,9 %	Facebook	5,0 %	Android	5,5 %
33	Mac	4,9 %	aplicación	4,9 %	PDA	5,4 %
34	Xbox	4,8 %	USB	4,8 %	USB	5,3 %
35	libro electrónico	4,6 %	WhatsApp	4,7 %	cable	5,2 %

Tabla 5, continúa en la página siguiente.

Tabla 5, continúa de la página anterior.

	General		Primero		Cuarto	
	Palabra	**% Disp**	**Palabra**	**% Disp**	**Palabra**	**% Disp**
36	informática	4,6 %	Smartwatch	4,1 %	Jclick	5,1 %
37	Wii	4,5 %	televisor	3,9 %	Facebook	4,9 %
38	smartwatch	4,3 %	Windows	3,8 %	Smartwatch	4,7 %
39	Word	3,8 %	**Nintendo**	3,7 %	hardware	4,5 %
40	televisor	3,6 %	router	3,6 %	videoconsola	4,5 %
41	Windows	3,6 %	Samsung	3,6 %	juego	4,1 %
42	software	3,5 %	**3G**	3,6 %	Twitter	4,0 %
43	Samsung	3,4 %	Mac	3,4 %	teléfono	4,0 %
44	cable	3,4 %	Videojuego	3,4 %	notebook	3,9 %
45	videojuego	3,1 %	3D	3,3 %	digital	3,8 %
46	disco duro	2,8 %	PSP	2,9 %	web	3,6 %
47	videoconsola	2,8 %	informática	2,7 %	nube	3,5 %
48	PSP	2,7 %	disco duro	2,6 %	disco duro	3,4 %
49	**comunicación**	2,7 %	cable	2,6 %	Wii	3,4 %
50	router	2,7 %	gafas 3D	2,6 %	red social	3,3 %

En sombreado se encuentran los términos específicos según el nivel educativo.

De acuerdo con los comentarios arriba indicados, se continúa desarrollando el estudio de carácter general a partir de los grafos. Las Figuras 7 y 8 representan en la zona central las unidades léxicas que mayor capacidad conectiva han manifestado (número de relaciones, aristas) independientemente del número de ocasiones (peso de las aristas). Estas palabras podrían definirse como aquellas que más rasgos han activado durante el proceso de evocación del léxico disponible, puesto que han establecido mayor número de relaciones y mayor conectividad. Son las siguientes: *(ordenador) portátil* [20], *tablet* [17], *(teléfono) móvil* [16] y *Iphone* [7]. En cuanto a las aristas que muestran mayor peso en los inventarios, es decir, relaciones más fuertes, destacan *(ordenador) portátil* con *tablet* [74], con (teléfono) móvil [48] y con iPod [18]. También (teléfono) móvil con tablet [27] o *tablet* con *smartphone* [16] y las parejas *mp3* con *mp4* [26] y *iPad* con *iPod* [18].

Otra cuestión interesante es cómo la población ha configurado los materiales léxicos en torno a tres secciones. La primera, aunque breve, es relevante por la población que se está evaluando ya que tiene vinculación con los programas educativos (*Jclick* → *Hot Potatoes* [8]). La segunda, está relacionada con la temática de las redes sociales y medios de comunicación entre los que destacan tres unidades léxicas: (1) *WhatsApp* que conecta con *tablet* [3], con *Line* [3] y con *Facebook* [3]. (2) *Twitter* que se vincula a *Tuenti* [3] y (3) *Facebook* que se asocia con *Instagram* [6], con *Twitter* [5], con *Tuenti* [4] y con *red social* [3]. Por último, se señala el escenario de las videoconsolas y videojuegos destacando *Xbox*, *PlayStation*, *Wii*, *Nintendo*, etc.

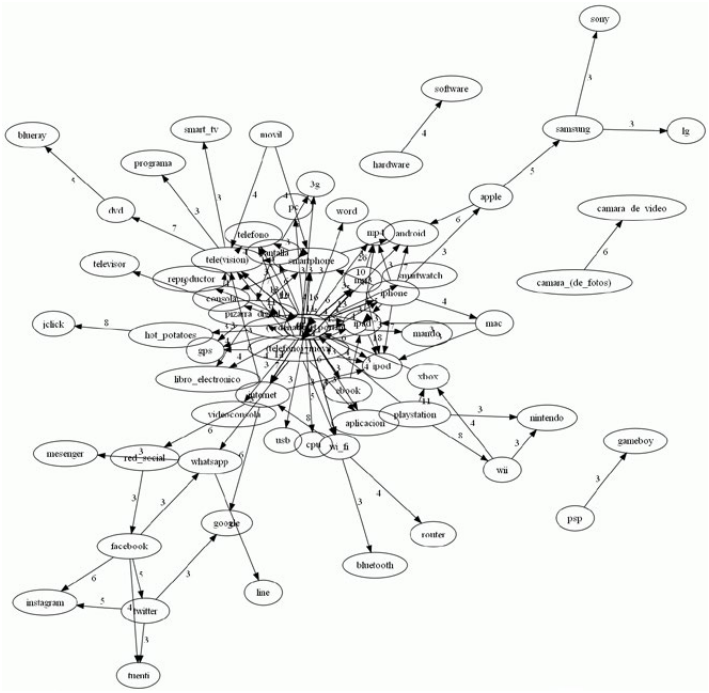


Figura 7. Grafo general *Nuevas Tecnologías*: TIC. Poda 2. Nodos: 69 y Aristas 119.

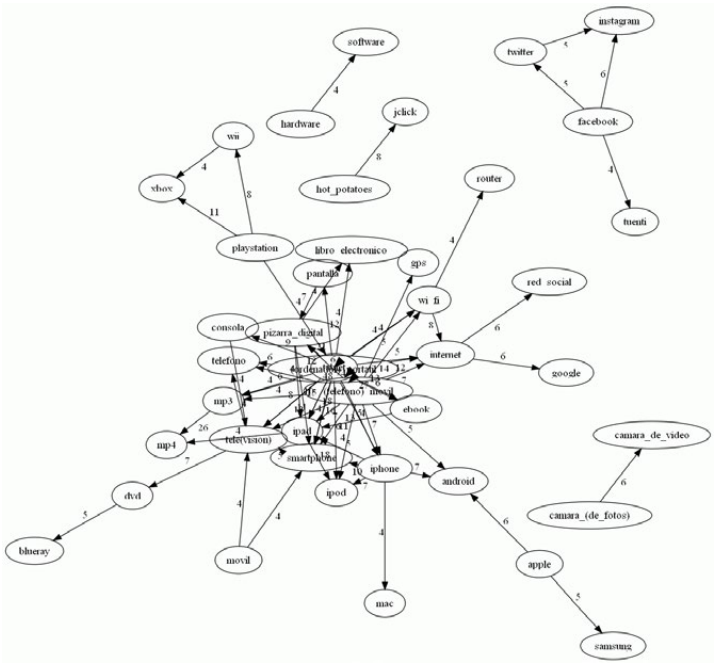


Figura 8. Grafo general *Nuevas Tecnologías: TIC.* Poda 3. Nodos: 42; Aristas: 75.

En este punto se da paso al estudio detallado entre el subgrupo de primero (Figura 9 con 22 nodos y 31 aristas) cuarto (Figura 10 con 16 nodos y 17 aristas). Al observar las similitudes entre ellos lo primero que destaca es la configuración de la zona central de ambos grafos conformado por *(ordenador) portátil → tablet → (teléfono) móvil.* Además, con *mp3 → mp4*

se evidencia la importancia de la música para esta población, por no mencionar que *iPod* es otro dispositivo específico para música, aunque puede escucharse a través de los teléfonos móviles, ordenadores, etc. Igualmente destaca el peso en el mundo tecnológico de la marca Macintosh a través de la red *iPad → iPod*. Finalmente, se hablará del *cluster Hot potatoes → Jclick* [8] solo presente en la muestra de cuarto curso (Figura 10) y que expresa el conocimiento de algunos programas educativos. No obstante, no deja de ser sorprendente que no aparezcan más aplicaciones, programas o herramientas relacionadas con esta realidad en ambos repertorios. Finalmente, también se debe señalar que decae la fuerza de las relaciones entre algunos términos de la muestra de primero como, por ejemplo, *consola, Xbox, PlayStation, tele(visión), DVD* desapareciendo en cuarto.

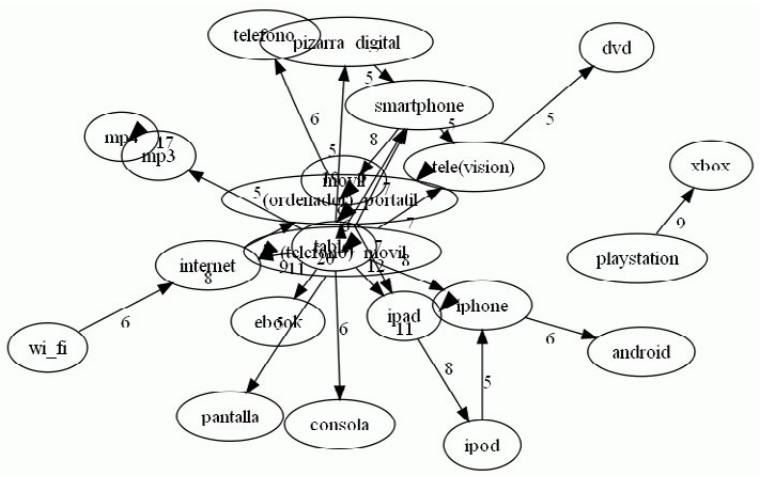


Figura 9. Grafo Nuevas Tecnologías: TIC. Curso 1º. Poda 4. Nodos: 22 Aristas: 31.

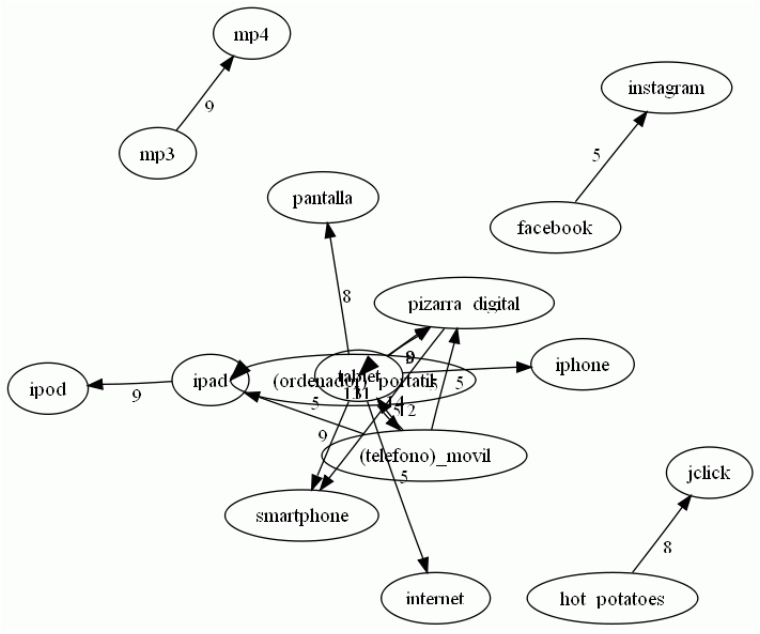


Figura 10. Grafo Nuevas Tecnologías: TIC. Curso 4º. Poda 4. Nodos:16 y Aristas: 17.

4. Discusión y conclusiones

La investigación en DL exhibe diversas aplicaciones para diferentes disciplinas, principalmente para la lingüística cognitiva, la didáctica de la lengua y la sociolingüística. A lo largo de esta investigación se ha buscado desarrollarlas en su justa medida, lo que la dota de un carácter especialmente innovador. Específicamente, se reúnen análisis que abordan los índices de disponibilidad léxica junto a la representación, a través de grafos, de las redes asociativas que despliegan la especificidad de la formación inicial de los maestros y maestras en educación primaria.

Uno de los logros de este trabajo se manifiesta con el detalle de la configuración interna de los centros de interés analizados y la confirmación de cierto patrón de ordenamiento léxico entre los distintos subgrupos tras aplicar la teoría de grafos y la herramienta DispoGrafo. Así, el estudio de las palabras que conforman las unidades básicas del léxico puede abordarse desde una perspectiva de activación conforme a su disponibilidad o accesibilidad al contexto. Igualmente, la accesibilidad de dichas palabras será mayor en la medida que sus relaciones de conectividad sean también mayores. Por tanto, a partir de la premisa de que existe una estructura subyacente en el léxico que permite conocer el significado de una palabra según aquellas con las cuales se relaciona, se han presentado dos tipos de análisis complementarios. El primero, el listado de disponibilidad léxica que incluía las 50 palabras con mayor índice de disponibilidad. El segundo, los grafos léxicos (con diferentes podas) que han ido mostrando la configuración del lexicon.

Con respecto al área nocional de *Educación* se ha mostrado el repertorio de los 50 términos con mayor IDL tanto de la muestra general de estudiantes de magisterio de educación primaria como en función del curso en el que se encuentran (primero o cuarto). Dichos listados ofrecen no sólo el léxico disponible compartido, sino también el específico: en el caso del último año de la titulación se aprecia mayor conocimiento de la realidad legislativa y así producen palabras como *LOE* o *LOMCE*. Del mismo modo, han aparecido conceptos más complejos que se han visto reforzados a lo largo de su formación universitaria inicial (*valor, calidad, vocación, responsabilidad,* etc.).

El caso de *Nuevas Tecnologías: TIC* ha mostrado unos resultados de menor calado en comparación con el anterior. No solo manifiesta menores cifras en todos los parámetros evaluados, sino que el léxico de los distintos inventarios no contiene un alto número de referencias específicas a las herramientas o tecnologías educativas; tan solo los listados de cuarto curso recogen *Jclick* y *Hot Potatoes.* Esto nos genera cierta inquietud: los informantes analizados, aunque son nativos digitales, desconocen esta realidad aplicada a la educación y esto nos lleva a que nos planteemos algunas cuestiones vinculadas con la enunciación del área asociativa y la población analizada. Concretamente, ¿no se encuentran más palabras asociadas a herramientas digitales educativas por desconocimiento de los informantes? ¿El problema podría radicar en un enunciado poco claro para el estudiantado? o ¿la competencia léxica de los futuros docentes es suficiente para el ejercicio de la profesión? Estas preguntas quedan planteadas para buscar respuesta en futuros trabajos.

Ahora bien, ciñéndonos al alcance de los resultados concretos de cada centro de interés según el nivel de instrucción la Tabla 6 muestra el comportamiento, tan distinto, de las áreas asociativas analizadas: se confirma que *Educación*, prácticamente, dobla a *Nuevas Tecnologías: TIC* en número de palabras (nodos).

Tabla 6. Detalle de la configuración de grafos en los centros de interés según las podas y el nivel educativo.

	1º curso		4º curso	
	Nodos	**Aristas**	**Nodos**	**Aristas**
***Educación* – poda 2**	144	183	106	106
***Educación* – poda 3**	76	82	56	45
***Nuevas Tecnologías: TIC* – poda 2**	73	157	53	87
***Nuevas Tecnologías: TIC* – poda 3**	48	81	28	36

Asimismo, también ha sido posible observar la progresión cuantitativa y de complejidad conceptual en función de los distintos niveles educativos (recuérdense los resultados de las Tablas 1, 2 o esto nos permite confirmar el cumplimiento de los objetivos planteados al inicio de la investigación descubriendo diferencias notables entre los repertorios de léxico disponible de primer y cuarto curso, y confirmando que el léxico evocado por los estudiantes de cuarto se ha visto influenciado por su trayectoria académica.

Finalmente, si bien estos datos, junto a los expuestos anteriormente, dejan claro que ambos centros de interés no se comportan del mismo modo, aunque ello no es un demérito de uno hacia el otro, nos permiten ahondar en las desigualdades o carencias manifestadas en la competencia léxica de los futuros docentes en distintos ámbitos. No hay que olvidar que los estímulos nocionales analizados son de primer nivel en el proceso de formación inicial y durante el ejercicio de la profesión, y que solo este tipo de investigaciones permite descubrir el léxico potencial proporcionando una revisión ajustada y actualizada con el objetivo de optimizar los procesos de formación de futuros maestros.

Considerado todo lo anterior, y a modo de cierre, se puede afirmar que el uso de la metodología de grafos unida a la investigación en disponibilidad léxica permite observar no solo la accesibilidad en la memoria de unidades léxicas, sino también la manera en que estas se estructuran y varían en el tiempo como producto de las situaciones de aprendizaje inicial.

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A study of social categorisations shared by Spanish students based on analysis of lexical associations: Migratory movements, animal rights movements, and gender-based violence

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Abstract: Identifying the perceptions and opinions held by a population in connection with a social movement can help to understand how well the movement's intended messages are spreading. A focus on the student population is essential for this understanding, as these individuals represent the future. In this work, we therefore analyse the prototypical conceptualisations regarding the movements of migration, animal rights, and gender-based violence shared by a sample of 600 Spanish students enrolled in compulsory secondary, pre-university, and university education. We use word association tests to extract lexical networks and then design the underlying metastructure to access the cognitive perception shared by the sample. Overall, we observe that the intended messages of equality and respect are catching on, although we do identify certain distorted perceptions, pertaining to some of the independent variables employed. Based on our results, we recommend that education centres must become transmitters of objective information on these movements, so that students catch on to a respectful awareness distant from extreme ideologies.

Keywords: *community prototypes, migratory movements, animal rights movements, gender-based violence, lexical compatibility.*

Estudio de las categorizaciones sociales compartidas por estudiantes españoles a partir del análisis de sus asociaciones léxicas: movimientos migratorios, derechos de los animales y violencia de género

Resumen: La identificación de las percepciones y opiniones de una población sobre un movimiento social determinado puede ayudar a comprender el grado de calado de los mensajes que promueve dicho movimiento. El enfoque en la población estudiantil es esencial para esta comprensión, ya que estos individuos representan el futuro de la sociedad. En este trabajo analizamos las conceptualizaciones prototípicas sobre los movimientos migratorios, los derechos de los animales y la violencia de género compartidas por una muestra de 600 estudiantes españoles que cursan Educación Secundaria Obligatoria (ESO), Bachillerato y estudios universitarios. Utilizamos pruebas de asociación de palabras para obtener redes léxicas y luego diseñamos la metaestructura subyacente para acceder a la percepción cognitiva compartida por la muestra. En general, observamos que los mensajes de igualdad y respeto están calando suficientemente, aunque identificamos ciertas percepciones distorsionadas relacionadas con algunas de las variables sociales empleadas. En función de nuestros resultados, recomendamos que los centros educativos se conviertan en transmisores de información objetiva sobre estos movimientos, para que el estudiantado adopte una conciencia respetuosa alejada de las ideologías extremas.

Palabras clave: *prototipos comunitarios, movimientos migratorios, derechos de los animales, violencia de género, compatibilidad léxica.*

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1. Introduction

The sociocultural characteristics of speakers largely determine their lexical choices (Boberg, 2005; Chan, 2017; Geeraerts et al., 1994; Grondelaers et al., 2010; Johnson, 1993; Kiesinger, 2015; Shi & Lei, 2021), and by identifying, analysing, and interpreting these characteristics, research can reveal interesting information concerning cognitive aspects of individuals. Proven sociolinguistic methodologies can be used to study many cognitive aspects in detail and to subsequently identify socio-community patterns. Such patterns can provide an understanding of the approaches, attitudes, and behaviours of a population towards current issues of particular social interest (Godenzzi, 2009). Researchers can then use the identified patterns of social perception to confirm or refute the presence of stereotypes regarding vulnerable social groups, which allows them to propose areas for improvement or reinforcement to education and administration. With such knowledge, researchers can also evaluate the degree to which populations are (dis)informed, a factor that may affect the collective attitude towards social developments.

However, going beyond the study of the individual to the analysis of community perceptions is by no means a simple task, as this step poses problems for both theory and methodology. Fortunately, the field that combines cognitive linguistics, psycholinguistics, and sociolinguistics does offer an approach for accessing shared information, reflected in the methodology used to extract lexical and semantic networks from the individual (Angulo-Chavira and Arias-Trejo, 2021; Collins & Loftus, 1975; Collins & Quillian, 1969; Ferreira & Echeverría, 2010; Gilquin, 2008; Hansen et al., 2020; Mani & Borovsky, 2018; Peters & Borovsky, 2019; Villar Díaz, 2018). This approach builds on a detailed understanding of cognitive processes and produces collective prototypes for societies (Apostel et al., 2023; Blank, 2001; Geeraerts, 1989; Lakoff, 1987b; Kleiber, 1995; Paul et al., 2015; Rosch, 1973, 1975, 1977, 1978; Smith, 2014), meaning it allows researchers to construct collective models of perception based on individuals. Researchers can then use these models as scales on which to measure a population's tolerance, inclusivity, and acceptance of social developments.

Against this background, we intend to access and analyse the perceptions shared by a group of 600 Spanish students enrolled in compulsory secondary, pre-university, and university education regarding three current, sensitive topics: migratory movements, animal rights movements, and gender-based violence. For this purpose, we will study the lexical networks at the disposal of the sample groups from the two speech communities considered (Malaga and Cadiz, Spain), analyse their thematic vocabulary, and identify their perceptions and underlying beliefs.

Our general aim builds on the following premises:

(1) A community's perception of a contentious social reality becomes apparent in lexical-semantic differences. The various socioeconomic conditions of urban centres (economy, population movement, urban planning, immigration, etc.) can

condition inhabitants' ideology and perception, and this becomes apparent in the lexical structure of semantic content (Grieve et al., 2019; Hilte et al., 2020; Riemer, 2010; Ruette et al., 2014).

(2) Lexical prototypes provide access to cognitive prototypes. The individuals' thematic vocabulary is structured around prototypical nuclei that specify the most frequently used and most frequently shared lexical units. The compatibility of the vocabulary with the lexical prototype is described by applying fuzzy set theory (Ávila-Muñoz & Sánchez-Sáez, 2010, 2011; Villena Ponsoda et al., 2012), and the resulting fuzzy set represents the cognitive prototypes that underpin a society's opinions. The frequently shared lexical units can be quantified and interpreted, a process that reveals frequently shared concepts.

(3) As a result, we can identify stereotyped and discriminatory cognitive prototypes as well as lexical and cognitive gaps within fields of experience relevant to contemporary social life. Based on this information, we can then offer recommendations for the improvement of educational curricula (regarding inclusion, tolerance, diversity, equality, transversality, etc.).

This framework results in several objectives for the present work:

(1) To investigate the perceptions of reality held by the sample of students enrolled in programmes reaching from compulsory secondary education to higher education.

(2) To observe how sociocultural factors affect these perceptions.

(3) To study the vocabulary associated with the chosen topics by employing methods of sociolinguistic analysis such as tests of lexical availability.

(4) To study the cognitive prototypes identified in the collective mental representations produced by the study sample for the chosen stimuli.

(5) To reflect on the perceptions held by the different groups considered regarding the chosen topics.

(6) To identify areas of perception that have been recently acquired or may even be discriminatory towards certain vulnerable groups.

(7) To suggest areas for improvement to education and administration with the aim of fostering tolerant and inclusive societies.

We believe that this work may be of particular interest to communities of practice (Li et al., 2009; Wenger, 1996; Wenger et al., 2002) consisting of researchers, educators, and students seeking to understand the perceptions and attitudes of young students regarding issues faced by vulnerable groups – an area where education plays a significant role. Our approach provides a method for identifying patterns and tendencies based on the lexical associations employed by students in connection with such issues, the aim being to understand how these perceptions may affect the attitudes and behaviours of society. In

addition, we believe that our results may also benefit groups and associations involved in activism, because these could use our results in the development of future strategies for action.

The research questions for this study stem from the above foundations and are itemised as follows:

(1) What are the perceptions held by the students under study regarding the chosen topics?

(2) Does the type of education centre (public or private) determine the shared perceptions regarding immigration, animal rights, and gender-based violence?

(3) Does gender identity determine the shared perceptions of such social issues?

(4) Does age affect the shared perceptions?

(5) Does an increase in formal education affect the shared perceptions?

We hypothesise that especially the type of education centre will determine the students' responses and, hence, their shared perceptions, the reason being the different social characteristics of the environments in which the education centres are located. The private centres are located in residential areas where the economic status and educational level of inhabitants are significantly higher than in the areas where the public centres are located. We could even go as far as to describe the areas as two different social environments. If we consider that social class and family background play an important role in child education (Biblarz & Raftery, 1999; Pérez Sánchez et al., 2013), it seems likely that these factors will be reflected in the type of centre at which inhabitants are being educated.

In short, if we identify stereotyped, discriminatory prototypes, and lexical and cognitive gaps within the fields of experience under study, we will be in a position to provide suggestions for the improvement of educational curricula.

2. Theoretical framework

2.1 Studies of lexical availability

The available lexicon acquires meaning in the principle that certain words used frequently in a language are closely linked to the appearance of specific topics. By way of example, unless a military subject arises during conversation, it is unlikely that words such as "soldier", "barracks", or "artillery" will be mentioned in everyday communicative situations. The issue is not that these words are unknown to the general population, but that an individual is going to have difficulties using them unless a suitable topic arises.

In order to gather available (though not necessarily frequent) vocabulary, participants are presented with a number of stimuli – or thematic centres of interest – that initiate a process of lexical association (Aitchison, 1994; Nelson et al., 1997; Nelson et al., 2000). The centres of interest can include topics as diverse as "the human body", "the pandemic",

"colours", "the sea", "the city", "the environment", etc. Around these thematic nuclei, specific, related vocabulary emerges that is presumed to be the inventory used by the individual if a conversation takes the required course. In the methodology used to obtain lists of available vocabulary, the total number of words provided on each list is limited usually either by the individual's reaction time or by researchers setting a predefined limit. Words that come to mind first are assumed to be the most available, meaning it is the most available words that appear most often in the first positions on the lists. The lexical availability of a word is indicated using the lexical availability index (between 0 and 1), which is based on the number of times the word appears in the various positions on the lists analysed.

In short, this available vocabulary forms part of the mental lexicon of speakers, but it tends not to be used in linguistic exchanges unless a specific topic arises. Lists of available vocabulary have been used time and again in various fields, though the field in which they play the biggest role and have had the greatest impact is that of second language teaching (Gallardo, 2019; Paredes García, 2015; Rubio Lastra, 2020; Santos Díaz, 2017; Santos Díaz et al., 2020).

2.2 Fuzzy sets and the Index of Lexical Compatibility

A fuzzy set is defined by each element's degree of belonging to – or compatibility with – its set (Rosch et al., 1976). When used in models of representation, the elements – or words – in a set – or group –, show a gradual progression of compatibility with the concept represented by the set (Ávila-Muñoz & Sánchez-Sáez, 2014, pp. 133–159). As a result, different levels of compatibility can be established between the elements of a set and the set as a whole, instead of employing the belonging–not belonging dichotomy of classical set theory (Ávila-Muñoz & Sánchez-Sáez, 2010, pp. 37–81). This representation of reality can be applied to the field of lexical availability, allowing researchers to understand the categorical relations produced by a cognitive stimulus – or for a centre of interest – as well as the associations that result in the words on the lists.

In order to interpret all the lists provided as a metastructure for a specific shared category, we use fuzzy set theory due to its capacity to suitably represent this structure. Fuzzy set theory provides a reliable mathematical tool that allows us to determine the characteristic degree of compatibility of the fuzzy set: the FEV (Fuzzy Expected Value). By applying the FEV, we can establish objective limits for superior and inferior levels of compatibility (zones) within the fuzzy set created that do not depend on subjective perception. These limits directly relate the degree of compatibility of each element within a zone with an assessment of the size of the set of elements that exceed the zone in each case. Thus, we parameterise the process, allowing for an assessment of the size of each zone (Ávila-Muñoz & Sánchez-Sáez, 2010, pp. 61). This means we can organise the lexical elements into different zones according to their greater or lesser degree of compatibility with the community category obtained.

In short, when we combine the lexical networks of all the lists of available vocabulary analysed, this produces a metastructure and a fuzzy set. Each element (word) in the structure is assigned an Index of Lexical Compatibility (ILC, see Section 5.1), describing its compatibility with the fuzzy set. Hence, every word will be either more or less compatible with the metastructure of the fuzzy set, a fact that equates to each word's compatibility with the prototype proposed as the centre of interest. The resulting gradation of compatibility means we can use the FEV to classify the vocabulary into levels of compatibility.

Consequently, by applying fuzzy set theory to the field of lexical availability, we are in a position to obtain the following:

(1) The compatibility of each word with the shared metastructure. As described above, in a fuzzy category, we can determine the compatibility of each element with the fuzzy set produced by the community. In this approach, each word is related to the shared collective prototype (interpreted as a fuzzy set) through its compatibility with the prototype (Ávila-Muñoz & Sánchez-Sáez, 2014; de Vega, 1984; Lakoff, 1987a; Leiber, 1995; Wittgenstein, 1953).

(2) The shared social categorisation underlying the metastructure of the centre of interest, or in other words, the categorisation shared by the community regarding the proposed stimulus. We must not forget that the fuzzy set is a purely mathematical concept, while a categorisation is the cognitive process resulting from the application of the fuzzy set to lexical availability. Through the mathematical concept of "compatibility", we are linking the structure of the category interpreted as a fuzzy set with the cognitive process capable of producing a community category. Since we establish the levels of compatibility by applying the FEV, the approach offers the desired level of objectivity for the development of this work.

3. Materials and methods

As described above and in Section 5.1., the traditional methodology of lexical availability is based on a reliable mathematical model, and despite the simplicity with which this methodology extracts linguistic information, it has proved effective and incredibly useful in previous psycholinguistic and cognitive linguistic studies. Thus, associative tests triggered by a cognitive stimulus (word association tests) were used for the present work to obtain the lexical material required to construct the shared community prototypes. In such tests, participants spend two minutes writing down those words that they consider to be related to the stimulus.

Although the following sections present only the results obtained for the three stimuli *movimientos migratorios* 'migratory movements', *movimientos animalistas* 'animal rights movements', and *violencia de género* 'gender-based violence', the larger investigation that includes the present work examines the following categories:

(1) *Movimientos migratorios* 'migratory movements';

(2) *Movimientos feministas* 'feminist movements';

(3) *Cambio climático* 'climate change';

(4) *Movimientos animalistas* 'animal rights movements';

(5) *La violencia de género* 'gender-based violence';

(6) *Educación sexual* 'sex education';

(7) *La Constitución* 'the Spanish Constitution';

(8) *Movimientos políticos populistas* 'populist political movements';

(9) *Memoria histórica* 'historical memory';

(10) *Independentismo* 'separatism'.

To obtain the vocabulary that is prototypical of the stimuli considered in this work for the sample under study, we employed methods for analysis commonly used in research on lexical variation (Ávila-Muñoz et al., 2021). For this purpose, we used a previously developed piece of software called DispoCen, which consists of a library of tools using functional programming and implemented in R. DispoCen allows for the use of numerous models and applications and can instantly calculate the indices of lexical availability and lexical centrality. However, it can also take the analysis a step further and organise the words provided for a category into a shared structure consisting of different levels of centrality, with these levels being determined by the degree of compatibility of each word with the rest of the words provided. In this structure, level 0 corresponds to those words that do not belong to the nucleus of the centre of interest, in other words, to those words that are not generally compatible with the analysed set. Levels 1, 2, and 3 as well as subsequent levels represent an increasing degree of centrality and proximity to the prototypical nucleus of the centre of interest.

Once the words provided had been organised into levels of compatibility using DispoCen and the community prototype had been established, additional information collected via questionnaires allowed us to determine whether individual characteristics and family environment could be regarded as social determinants. The questionnaires were used to collect data relating to the social biography of participants' immediate family, participants' leisure and cultural habits, their contact with the media and social media, their attitudes towards certain social and linguistic phenomena, their contact with technology, etc. The information shared in these questionnaires by the research participants provided social values that we could transfer to the community: how they relate to the natural environment, animals, people different to themselves, etc.

Lastly, focus groups were organised to check the reliability of the results obtained after having processed and analysed the word lists provided by the students during the word association tests. Focus groups have traditionally been considered a flexible qualitative research technique that provides an approximation of reality, allowing researchers to study reality from within while in direct contact with the social phenomena

under study (Denzin & Lincoln, 2005). In the present work, however, this approach proved highly effective as a control mechanism for verifying the quantitative results, ensuring the reliability of the results obtained.

3.1 Sample

Given that one objective of this work is to identify areas of perception that have been recently acquired so as to suggest improvements to education, we worked with data from a sample of students enrolled in programmes reaching from the final years of secondary education to the final years of higher education in two cities in Andalusia, Spain (Malaga and Cadiz). We defined three observation groups: final year of compulsory secondary education (*Educación Secundaria Obligatoria)*, final year of high school (*Bachillerato*), and final year of a bachelor's degree (*Grado Universitario*). In the case of compulsory secondary education and high school, both public and private centres were considered. Table 1 presents the distribution of the sample.

Table 1. Distribution of the sample.

Educational level	Type of centre	Field of study	Malaga	Cadiz	TOTAL
Compulsory secondary education, final year	Public centre		n = 50	n = 50	N = 100
	Private centre		n = 50	n = 50	N = 100
High school, final year	Public centre	Sciences	n = 25	n = 25	N = 50
		Humanities and social sciences	n = 25	n = 25	N = 50
	Private centre	Sciences	n = 25	n = 25	N = 50
		Humanities and social sciences	n = 25	n = 25	N = 50
Bachelor's degree, final year	Public centre	Social sciences	n = 20	n = 20	N = 40
		Humanities	n = 20	n = 20	N = 40
		Health sciences	n = 20	n = 20	N = 40
		Sciences	n = 20	n = 20	N = 40
		Engineering	n = 20	n = 20	N = 40
TOTAL			N = 300	N = 300	N = 600

The data were collected during scheduled in-person visits to the various education centres during the academic year 2021/2022 (September 2021 to June 2022). Since many research participants were minors, we required the express consent of parents or legal guardians was required to obtain and analyse the data. The access to participants was ensured through signed collaboration agreements. These agreements also allowed us to formally communicate our results to the education centres, so as to keep them informed of progress regarding the research involving their students.

According to data from the National Statistics Institute (Instituto Nacional de Estadística, https://www.ine.es/ss/Satellite?c=Page&p=1254735905566&pagename=INE%2FINELayout&cid=1254735905566&L=1), inhabitants of the areas where the private centres under study are located present higher levels of formal education, higher household incomes, and more highly specialised professions than inhabitants of the areas where the public centres are located. These three variables have frequently been used as indicators of family social class since 1966, when Labov presented his paradigmatic study in New York (Labov, 1966). In later stages of the larger investigation that includes the present work, we plan to analyse the relevance of each of these predictors individually in our results. However, in this initial analysis, we simply used the type of education centre to represent all three factors.

4. Results

4.1 General statistics

Figure 1 shows the length of the lists obtained from all the individuals under study (N = 600) in connection with the three stimuli analysed ("migratory movements", "animal rights movements", and "gender-based violence"). The x-axis describes the length of the lists provided, and each point represents a certain number of words on a list. Thus, a point at for gender-based violence, for example, would mean that a participant produced a list consisting of 30 words for this stimulus. In addition, since several participants may have provided the same number of words, the size of the point indicates how many participants provided that same number. For details regarding the size of points and the numbers they represent, see the legend in Figure 1 under the heading "Accumulation of cases".

In order to present these general statistics in a more visual manner, Figure 1 uses boxplots. A boxplot is based on three measurements (Q1, median, Q3) and an estimation of the outliers in the distribution (indicated by the "whiskers"). The vertical line inside the box is the median, meaning half of the population is below and half is above this value. The two spaces between the median and the box limits represent 25% of the population both above and below the median. Thus, the distribution of the population is expressed as follows:

$$\underset{}{25\%} \;|\; \underset{Q1}{25\%} \;|\; \underset{Med}{25\%} \;|\; \underset{Q3}{25\%}$$

The "whiskers", or two horizontal lines that extend from the box, provide an estimation of the furthest "normal" values that would apply if the distribution was approximately "normal". Any points outside of these lines are independent and can be considered "outliers". In Figure 1, we can observe that for the three stimuli analysed, although there are outliers consisting of high numbers, most of the population under study is grouped within the expected "normal", meaning the results described in the following sections are representative of the sample under study.

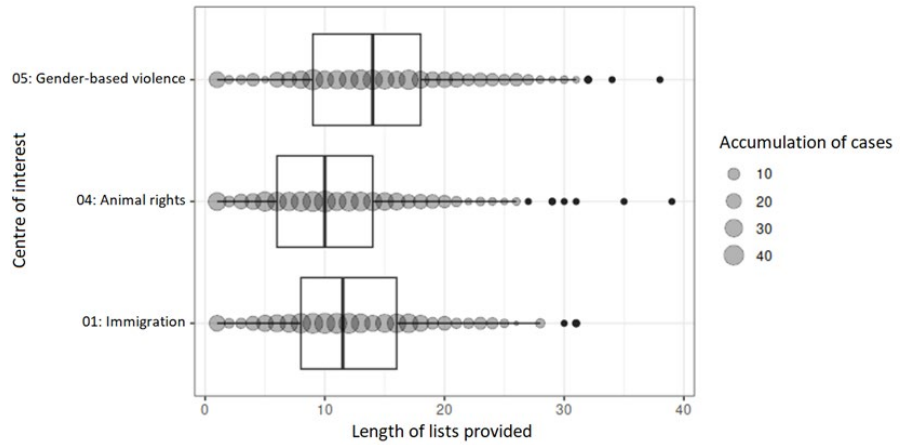


Figure 1. General statistics. Accumulation of cases.

4.2.Results by centre of interest

The general results obtained for each category are presented in the form of figures produced by the open-source software *WordClouds* (https://classic.wordclouds.com/). To facilitate interpretation, these figures show only the results for the level of maximum prototypicality in each case. This is the level comprising the words that are most compatible with their category, meaning they constitute the nucleus of the shared categorisation and depict the community's perception of the issue under study. In addition, for better visual portrayal in these figures, we have given greater weight to the words presenting a higher absolute frequency.

4.2.1 Migratory movements. General results

In 2014, Fine-Davis and Faas (2014) advised that teachers required tools to support their skills and competencies and to facilitate more inclusive and tolerant classrooms, with the purpose of addressing the religious, racial, and cultural diversity entailed by migratory movements. The authors focussed on a sample of 320 students and 208 teachers from Ireland, the UK, France, Latvia, Italy, and Spain, analysing their attitudes towards the phenomenon of diversity in general and encouraging the scientific community to continue the investigation.

Regarding the present study, Figure 2 reveals that the contextual reality of the geographic areas in which the data were collected is reflected in the words that constitute the shared category. Recall that Malaga and Cadiz, the two speech communities under study, are two cities in southern Spain, meaning they see high levels of immigration from the north of Africa. This may be the reason for the prominent position of the words *inmigrante* 'immigrant', *negro* 'black person', *patera* 'small boat', *pobreza* 'poverty', and

racismo 'racism'. The association of immigration with *problema* 'problem' and *conflicto* 'conflict' is striking, as is the association with the far-right Spanish political party Vox. The following sections present more specific results relating to the social groups under study.



Figure 2. General results. Migratory movements.

4.2.2 Migratory movements. Educational level

Table 2 presents the words included in the level of maximum prototypicality of each educational level considered regarding migratory movements. The words are organised according to their frequency of appearance in the lists. We have also emphasised certain words in the table, as they may be significant in the group's perception: highlighted in bold and underlined are certain words that only appear for one of the three groups; simply highlighted in bold are certain words that only appear for two of the three groups; and simply underlined are certain words that appear for all three groups but where a difference in frequency of appearance can be observed.

From the results in Table 2, we can see that the shared perception gradually changes as educational level increases. The higher the educational level, the lower the number of words that have a negative connotation. The youngest group of students even went as far as to provide *delincuencia* 'delinquency', while the group of university students was the only one to provide *oportunidad* 'opportunity', *cultura* 'culture', *miedo* 'fear', *derecho* 'right', and *legal* 'legal', the latter of which contrasts with *ilegal* 'illegal', provided only by the other two groups.

Table 2. Migratory movements. Educational level.

Centre of interest	Compulsory secondary education	High school	University
Migratory movements	*patera* 'small boat' *negro* 'black person' *inmigrante* 'immigrant' *país* 'country' *trabajo* 'work' *frontera* 'border' *persona* 'person' *guerra* 'war' *extranjero* 'foreigner' *África* 'Africa' *barco* 'boat' *pobreza* 'poverty' *muerte* 'death' ***ilegal* 'illegal'** *ayuda* 'help' *racismo* 'racism' *familia* 'family' *Marruecos* 'Morocco' ***mar* 'sea'** *dinero* 'money' *inmigración* 'immigration' ***delincuencia* 'delinquency'** *España* 'Spain' *huir* 'to flee' *viajar* 'to travel' *cambio* 'change' *valla* 'wall'	*patera* 'small boat' *negro* 'black person' *inmigrante* 'immigrant' *guerra* 'war' *trabajo* 'work' *África* 'Africa' *pobreza* 'poverty' *país* 'country' ***ilegal* 'illegal'** *extranjero* 'foreigner' *persona* 'person' *racismo* 'racism' *ayuda* 'help' *familia* 'family' *Marruecos* 'Morocco' *muerte* 'death' *frontera* 'border' *barco* 'boat' *valla* 'wall' ***discriminación* 'discrimination'** *Ucrania* 'Ukraine' *refugiado* 'refugee' ***moro* 'Arab'** ***necesidad* 'need'** ***injusticia* 'injustice'** *dinero* 'money' ***mar* 'sea'** ***tristeza* 'sadness'** *hambre* 'hunger' *vida* 'life'	*patera* 'small boat' *racismo* 'racism' *frontera* 'border' *persona* 'person' *extranjero* 'foreigner' *trabajo* 'work' *pobreza* 'poverty' *inmigrante* 'immigrant' *guerra* 'war' *país* 'country' ***necesidad* 'need'** *África* 'Africa' *negro* 'black person' *ayuda* 'help' *familia* 'family' ***oportunidad* 'opportunity'** *política* 'politics' ***cultura* 'culture'** ***injusticia* 'injustice'** *Vox* 'Vox' *dinero* 'money' *Marruecos* 'Morocco' *refugiado* 'refugee' *viaje* 'journey' *papeles* 'papers' *muerte* 'death' *economía* 'economy' ***tristeza* 'sadness'** ***miedo* 'fear'** *mena* 'unaccompanied foreign minors' ***derecho* 'right'** ***discriminación* 'discrimination'** ***legal* 'legal'**

4.2.3 Migratory movements. Type of centre (public/private)

The first part of Table 3 (above the line of separation) presents the words obtaining the highest Indices of Lexical Compatibility (ILCs) in this category for students at public centres, meaning these words are included in the level of maximum prototypicality for this group. Each word's ILC is compared with its ILC for students at private centres, where the word was not necessarily included in the level of maximum prototypicality. The second part of Table 3 (below the line of separation) presents words in any level of compatibility that simply show a significant difference between the indices obtained for the two types of centre.

Table 3. Migratory movements. Type of centre.

Word	ILC public centres	ILC private centres
patera 'small boat'	0.9961686	0.9999471
trabajo 'work'	0.9647823	0.7049926
inmigrante 'immigrant'	0.9191585	0.9434146
frontera 'border'	0.9173449	0.5508172
negro 'black person'	0.9172475	0.9965749
racismo 'racism'	0.9153842	0.7913813
necesidad 'need'	0.7187469	0.3616513
xenofobia 'xenophobia'	0.3050167	0.0678244
oportunidad 'opportunity'	0.5559345	0.1973123
cultura 'culture'	0.4843022	0.2665902
tristeza 'sadness'	0.5138097	0.3680571
pena 'sorrow'	0.3533612	0.0964122
valla 'wall'	0.4907781	0.7082927
sin papeles 'without papers'	0.0678332	0.5105562
rechazo 'rejection'	0.2982154	0.6473926
riesgo 'risk'	0.0701732	0.3852311
okupa 'squatter'	0.0108333	0.2736785
robo 'theft'	0.1152139	0.3623819
ilegalidad 'illegality'	0.0892047	0.3078041
paro 'unemployment'	0.0771550	0.2903616

Almost all the students at both types of centre associate the words *patera* 'small boat', *inmigrante* 'immigrant', and *negro* 'black person' with this phenomenon. However, differences between the two groups can be observed in the words *trabajo* 'work', *frontera* 'border', and *racismo* 'racism', which are significantly more compatible for the students at public centres.

The second part of Table 3 shows that the words *necesidad* 'need', *xenofobia* 'xenophobia', *oportunidad* 'opportunity', *cultura* 'culture', *tristeza* 'sadness', and *pena* 'sorrow' are also more compatible for students at public centres. Meanwhile, the words *valla* 'wall', *sin papeles* 'without papers', *rechazo* 'rejection', *riesgo* 'risk', *okupa* 'squatter', *robo* 'theft', *ilegalidad* 'illegality', and *paro* 'unemployment' are more compatible for students at private centres and refer to negative connotations or rejection.

4.2.4 Migratory movements. Gender identity

Gender identity seems to play a substantial role in determining perception since we have identified highly significant differences for all three categories, as shown below.

In Table 4, the 20 most compatible words are listed according to their general ILC, and their general ILC is compared with the ILC they obtain for men and women.

As is evident, the perceptions held by men and women differ in certain respects: the words *negro* 'black person', *frontera* 'border', *África* 'Africa', and *ilegal* 'illegal' are more compatible among men and describe the problem, whereas women build their perceptions around the words *país* 'country', *ayuda* 'help', *familia* 'family', and *necesidad* 'need'.

Table 4. Migratory movements. Gender identity I.

Word	ILC general	ILC men	ILC women
patera 'small boat'	0.9993485	0.9987485	0.9949058
negro 'black person'	0.9708908	0.9932601	0.7603543
trabajo 'work'	0.9671623	0.9222318	0.9379769
inmigrante 'immigrant'	0.9547893	0.9649064	0.8521882
guerra 'war'	0.9468946	0.9179428	0.8887088
país 'country'	0.9369550	0.8273929	0.9147521
pobreza 'poverty'	0.9263570	0.8838338	0.8641747
racismo 'racism'	0.9205250	0.9083473	0.8276946
persona 'person'	0.9158461	0.8465738	0.8677508
extranjero 'foreigner'	0.9156313	0.8947484	0.8333712
frontera 'border'	0.9085385	0.9478744	0.6999336
África 'Africa'	0.8988496	0.9069291	0.7647208
ilegal 'illegal'	0.8913020	0.9278564	0.6818465
ayuda 'help'	0.8388971	0.6645127	0.8043583
familia 'family'	0.8151982	0.6523778	0.7771711
muerte 'death'	0.7844474	0.6932053	0.7101806
barco 'boat'	0.7418035	0.5885925	0.6937857
Marruecos 'Morocco'	0.7327239	0.7781030	0.5302377
necesidad 'need'	0.9993485	0.9987485	0.9949058
dinero 'money'	0.9708908	0.9932601	0.7603543

Table 5 broadens the view to words showing significant differences between the two groups but contained in any level of compatibility.

We can observe here that the perception held by women is more closely related to *empatía* 'empathy', *solidaridad* 'solidarity', *cambio* 'change', and family (*niño* 'child', *hogar* 'home'), while the perception held by men features words that are more geographical (*Ceuta* 'Ceuta', *Melilla* 'Melilla', *Marruecos* 'Morocco', *España* 'Spain'), controversial (*robo* 'theft', *ilegal* 'illegal', *ilegalidad* 'illegality', *sobrepoblación* 'overpopulation', *policía* 'police', *mafia* 'mafia', *conflicto* 'conflict'), or political (*Vox* 'Vox', *política* 'politics').

Table 5. Migratory movements. Gender identity II.

Word	ILC men	ILC women
Ceuta 'Ceuta'	0.5577277	0.0273734
Melilla 'Melilla'	0.5994694	0.0856952
valla 'wall'	0.6889957	0.2956604
moro 'Arab'	0.6342226	0.2645840
refugiado 'refugee'	0.6294529	0.2887988
saltar 'to jump'	0.3357902	0.0226444
Vox 'Vox'	0.5935399	0.2928826
robo 'theft'	0.2801184	0.0081250
aduana 'customs'	0.3217265	0.0585896
frontera 'border'	0.9478744	0.6999336
Marruecos 'Morocco'	0.7781030	0.5302377
España 'Spain'	0.4309309	0.1843043
ilegal 'illegal'	0.9278564	0.6818465
ilegalidad 'illegality'	0.2876217	0.0541138
negro 'black person'	0.9932601	0.7603543
política 'politics'	0.6437026	0.4166880
sobrepoblación 'overpopulation'	0.2550103	0.0326642
raza 'race'	0.4881416	0.2695160
barrera 'barrier'	0.2709026	0.0578962
mena 'unaccompanied foreign minors'	0.4686798	0.2642311
policía 'police'	0.5633304	0.3638529
emigrante 'migrant'	0.2440000	0.0516244
mafia 'mafia'	0.2534346	0.0644421
muerto 'dead'	0.2546861	0.0677177
chino 'Chinese'	0.2800533	0.0980086
conflicto 'conflict'	0.3273649	0.1517173
cambio 'change'	0.1937114	0.4857288
solidaridad 'solidarity'	0.1365204	0.3757466
idioma 'language'	0.0789357	0.3148409
niño 'child'	0.2559723	0.4602573
nacionalidad 'nationality'	0.0200000	0.2064869
empatía 'empathy'	0.2314463	0.4175851
gente 'people'	0.1300000	0.3125425
sociedad 'society'	0.1024822	0.2828694
hogar 'home'	0.0731636	0.2526326

Notes: The words above the line of separation present a higher ILC for men; the words below the line of separation present a higher ILC for women.

4.2.5 Migratory movements. Type of centre and gender identity

Due to the differences observed between students at private and public centres as well as men and women, we would like to identify whether combining the two factors influences the conceptualisations in any way. Table 6 presents the words with the highest general ILCs and includes the specific ILCs obtained for the different groups according to the two factors.

Table 6. Migratory movements. Comparison of general and specific ILC.

Word	ILC general	ILC men, public	ILC women, public	ILC men, private	ILC women, private
trabajo 'work'	0.9671623	0.8770899	0.9715711	0.5653811	0.6168988
persona 'person'	0.9158461	0.7630378	0.7389398	0.5072208	0.6981600
extranjero 'foreigner'	0.9156313	0.8847488	0.6700537	0.3066667	0.7888845
frontera 'border'	0.9085385	0.9276427	0.5631570	0.6297044	0.2784000
ayuda 'help'	0.8388971	0.5900769	0.7245512	0.3964800	0.6528373
política 'politics'	0.6029197	0.3047291	0.1197257	0.4592000	0.2024123
ilegal 'illegal'	0.8913020	0.6253936	0.5927106	0.9211047	0.7406934

For the students at public centres, gender identity proves irrelevant, and we can observe a tendency towards seeing this phenomenon from the human perspective (*persona* 'person', *trabajo* 'work', *ayuda* 'help'). For the students at private centres, gender identity also proves irrelevant, but here we can observe political and legal nuances (*política* 'politics', *ilegal* 'illegal'). The low ILC of *extranjero* 'foreigner' for men at private centres (0.3066667) compared to the other groups is striking.

If we focus on only men or women, the type of centre seems to become essential. Table 7 shows the biggest differences in ILC between men enrolled at public and private centres.

The categorisations clearly differ for men depending on whether they are enrolled at public or private centres. For those at public centres, we can observe *familia* 'family', *empatía* 'empathy', and words that describe the phenomenon from the human perspective (*persona* 'person', *trabajo* 'work', *ayuda* 'help'). For those at private centres on the other hand, we can observe words with political connotations and words that link migratory movements to problems and illegality.

Similar differences emerge in the categorisations for women, and Table 8 reflects the most significant differences in this respect.

Table 7. Migratory movements. ILC of men at public and private centres.

Word	ILC men, public	ILC men, private	diff
extranjero 'foreigner'	0.8847488	0.3066667	0.5780821
dinero 'money'	0.6008663	0.2067635	0.3941028
familia 'family'	0.5345428	0.2227394	0.3118034
trabajo 'work'	0.8770899	0.5653811	0.3117088
frontera 'border'	0.9276427	0.6297044	0.2979383
persona 'person'	0.7630378	0.5072208	0.2558171
ayuda 'help'	0.5900769	0.3964800	0.1935969
sufrimiento 'suffering'	0.2619293	0.0800000	0.1819293
miedo 'fear'	0.3128939	0.1409524	0.1719415
empatía 'empathy'	0.1868187	0.0470588	0.1397599
crisis 'crisis'	0.3348426	0.2000000	0.1348426
necesidad 'need'	0.4821419	0.3665389	0.1156031
mena 'unaccompanied foreign minors'	0.1143569	0.5367506	0.4223937
papeles 'papers'	0.2114810	0.6130380	0.4015569
problema 'problem'	0.0693918	0.4369231	0.3675313
sin papeles 'without papers'	0.0616667	0.4000000	0.3383333
ilegal 'illegal'	0.6253936	0.9211047	0.2957111
chino 'Chinese'	0.1521079	0.4133333	0.2612254
Vox 'Vox'	0.2500816	0.5010400	0.2509584
política 'politics'	0.3047291	0.4592000	0.1544709

Notes: The words above the line of separation present a higher ILC for men at public centres; the words below the line of separation present a higher ILC for men at private centres.

As can be observed, Table 8 confirms the tendencies identified above for men: women at public centres give greater relevance to words describing the phenomenon from the human perspective, whereas those at private centres provide words with more negative connotations and words indicating rejection.

Table 8. Migratory movements. ILC of women at public and private centres.

Word	ILC women, public	ILC women, private	diff
vida 'life'	0.4944574	0.1200000	0.3744574
trabajo 'work'	0.9715711	0.6168988	0.3546723
cambio 'change'	0.5587911	0.2300000	0.3287911
avión 'aeroplane'	0.3931947	0.0702041	0.3229906
frontera 'border'	0.5631570	0.2784000	0.2847570
comida 'food'	0.3888843	0.1291594	0.2597249
dolor 'pain'	0.3391715	0.0907143	0.2484572
economía 'economy'	0.3571410	0.1161905	0.2409505
necesidad 'need'	0.4411546	0.2256000	0.2155546
tristeza 'sadness'	0.5516560	0.3989413	0.1527148
dinero 'money'	0.4032223	0.2609250	0.1422973
pena 'sorrow'	0.2273058	0.0857143	0.1415915
raza 'race'	0.1717976	0.2827281	0.1109305
mena 'unaccompanied foreign minors'	0.0900000	0.2000000	0.1100000
sin papeles 'without papers'	0.1023000	0.4564985	0.3541985
chino 'Chinese'	0.0400000	0.3600000	0.3200000
peligro 'danger'	0.0977924	0.4100403	0.3122479
Cruz Roja 'Red Cross'	0.3372387	0.6068037	0.2695650
racismo 'racism'	0.5642365	0.7239715	0.1597350
ilegal 'illegal'	0.5927106	0.7406934	0.1479827

Notes: The words above the line of separation present a higher ILC for women at public centres; the words below the line of separation present a higher ILC for women at private centres.

4.3 Animal rights movements. General results

In the characterisation of animal rights movements presented in Figure 3, we find words that seem to justify the existence of these movements (*maltrato* 'maltreatment', *cuidar* 'to look after', *ayuda* 'help') as well as words relating to consumption habits (*vegetariano* 'vegetarian', *vegano* 'vegan') and the characteristic spirit of protest and of raising social awareness (*lucha* 'struggle', *manifestación* 'demonstration', *derecho* 'right').



Figure 3. General results. Animal rights movements.

Analysis reflecting the sociocultural determinants considered in this work will help us to gain a better understanding of this community perception.

4.3.1 Animal rights movements. Educational level

Table 9 presents the words included in the level of maximum prototypicality of each educational level considered regarding animal rights movements.

The similarities between the perceptions held by these three groups are self-evident. Overall, they imply a general respect towards animals, with university students extending this to include *naturaleza* 'nature'. The group of university students is also the only one to have provided *igualdad* 'equality', a word that adds the human perspective to their perception of the phenomenon. Similarly interesting is the appearance across all educational levels of the world of bullfighting, with *antitaurino* 'anti-bullfighting' appearing for all three groups.

4.3.2 Animal rights movements. Type of centre (public/private)

Table 10 shows that the words attaining the highest ILC are the same for the two types of centre considered.

Table 9. Animal rights movements. Educational level.

Centre of interest	Compulsory secondary education	High school	University
Animal rights movements	*animal* 'animal' *vegano* 'vegan' *perro* 'dog' *protección* 'protection' *vegetariano* 'vegetarian' *maltrato* 'maltreatment' *persona* 'person' *toro* 'bull' *gato* 'cat' *amor* 'love' *ayuda* 'help' *cuidar* 'to look after' *matadero* 'slaughterhouse' *PACMA* 'PACMA' *antitaurino* 'anti-bullfighting' ***manifestación* 'demonstration'** *cuidado* 'care' *ayudar* 'to help' *vida* 'life' ***zoológico* 'zoological'** ***extinción* 'extinction'** ***león* 'lion'** *proteger* 'to protect' *veganismo* 'veganism' ***caza* 'hunting'**	*animal* 'animal' *protección* 'protection' *PACMA* 'PACMA' *perro* 'dog' *vegetariano* 'vegetarian' *maltrato* 'maltreatment' *vegano* 'vegan' *derecho* 'right' *cuidado* 'care' *persona* 'person' *toro* 'bull' *política* 'politics' *gato* 'cat' *defensa* 'defence' ***carne* 'meat'** *amor* 'love' *ayuda* 'help' ***mascota* 'pet'** *vida* 'life' *veganismo* 'veganism' ***empatía* 'empathy'** *lucha* 'struggle' ***tauromaquia* 'bullfighting'** ***extinción* 'extinction'** *antitaurino* 'anti-bullfighting' *cuidar* 'to look after' ***abandono* 'neglect'**	*animal* 'animal' *vegano* 'vegan' *vegetariano* 'vegetarian' *derecho* 'right' *protección* 'protection' *perro* 'dog' *maltrato* 'maltreatment' *persona* 'person' *PACMA* 'PACMA' *amor* 'love' *lucha* 'struggle' *defensa* 'defence' *política* 'politics' *vida* 'life' *cuidado* 'care' *respeto* 'respect' ***naturaleza* 'nature'** *movimiento* 'movement' ***empatía* 'empathy'** *toro* 'bull' *veganismo* 'veganism' ***carne* 'meat'** ***mascota* 'pet'** *gato* 'cat' *ayuda* 'help' ***abandono* 'neglect'** ***manifestación* 'demonstration'** *cuidar* 'to look after' ***igualdad* 'equality'** *antitaurino* 'anti-bullfighting' *proteger* 'to protect' ***caza* 'hunting'**

Notes: In **bold and underlined:** words that only appear for one of the three groups; only in **bold**: certain words that appear for two of the three groups; only underlined: certain words that appear for all three groups but where a difference in frequency of appearance can be observed.

Table 10. Animal rights movements. Type of centre I.

Word	ILC public centres	ILC private centres
animal 'animal'	0.9999874	0.9999612
vegano 'vegan'	0.9599040	0.9778746
protección 'protection'	0.9382153	0.9751917
vegetariano 'vegetarian'	0.9479035	0.9524643

However, interesting differences are revealed in Table 11, which presents the words that obtain the biggest differences in ILC irrespective of their level of compatibility. The first part of the table (above the line of separation) presents the words that obtain the highest ILC for students at public centres. These relate almost exclusively to protection (*proteger* 'to protect', *protectora* 'animal shelter', *ayuda* 'help', *cuidar* 'to look after', *ayudar* 'to help', *abandono* 'neglect', *maltrato* 'maltreatment'), emotion (*cariño* 'affection', *amor* 'love'), and animal rights (*derecho* 'right', *igualdad* 'equality', *respeto* 'respect').

The second part of the table (below the line of separation) presents the words that obtain a higher ILC for students at private centres. We can observe a clear difference here, with these words relating either to bullfighting (*tauromaquia* 'bullfighting', *toro* 'bull', *corrida de toros* 'bull fight') or politics (*político* 'politician', *política* 'politics', *Podemos* 'Podemos', *chiringuito* 'beach bar'). This last word (*chiringuito* 'beach bar') refers by semantic extension to political corruption.

Table 11. Animal rights movements. Type of centre II.

Word	ILC public centres	ILC private centres
proteger 'to protect'	0.5436316	0.1120611
persona 'person'	0.8284955	0.3978775
cariño 'affection'	0.4641505	0.0383333
vida 'life'	0.6981224	0.3008400
protectora 'animal shelter'	0.4647289	0.1152788
ayuda 'help'	0.6888394	0.3433546
amor 'love'	0.7504322	0.4441979
abandono 'neglect'	0.5570646	0.2537027
igualdad 'equality'	0.4925885	0.2300000
respeto 'respect'	0.5144168	0.2962625
maltrato 'maltreatment'	0.9067693	0.6521773
cuidar 'to look after'	0.6564308	0.4249917
derecho 'right'	0.9154849	0.6258089
ayudar 'to help'	0.3379972	0.0511111
tauromaquia 'bullfighting'	0.3774829	0.6407255
corrida (de toros) '(bull) fight'	0.0048148	0.3480667
toro 'bull'	0.5953429	0.8873418
Podemos 'Podemos'	0.0522167	0.2806000
política 'politics'	0.4796137	0.8836565
chiringuito 'beach bar'	0.0185714	0.2300000
político 'politician'	0.0300385	0.2300000

Notes: The words above the line of separation present a higher ILC for students at public centres; the words below the line of separation present a higher ILC for students at private centres.

4.3.3. Animal rights movements. Gender identity

Here, Figure 4 offers a visual representation of the differences between the two groups as well as the many words with very low compatibility that were provided by both (agglomeration of points in the bottom left corner of Figure 4, irrelevant for the characterisation of the shared prototype). We can again observe a significant difference between men and women in terms of the nature and connotations of the words provided more frequently by each group. The words with an ILC of above 0.50 in the case of women and below 0.50 in the case of men relate, again, to emotions and feelings (*amor* 'love', *abandono* 'neglect', *cuidar* 'to look after', *cariño* 'affection', although the latter lies just under the limit of 0.50 for women), as well as to the characteristic spirit of struggle and protest (*lucha* 'struggle', *política* 'politics'). Meanwhile, the words obtaining the opposite, meaning an ILC of above 0.50 for men and below 0.50 for women, include *toro* 'bull', *carne* 'meat', *caza* 'hunting', and *tauromaquia* 'bullfighting'.

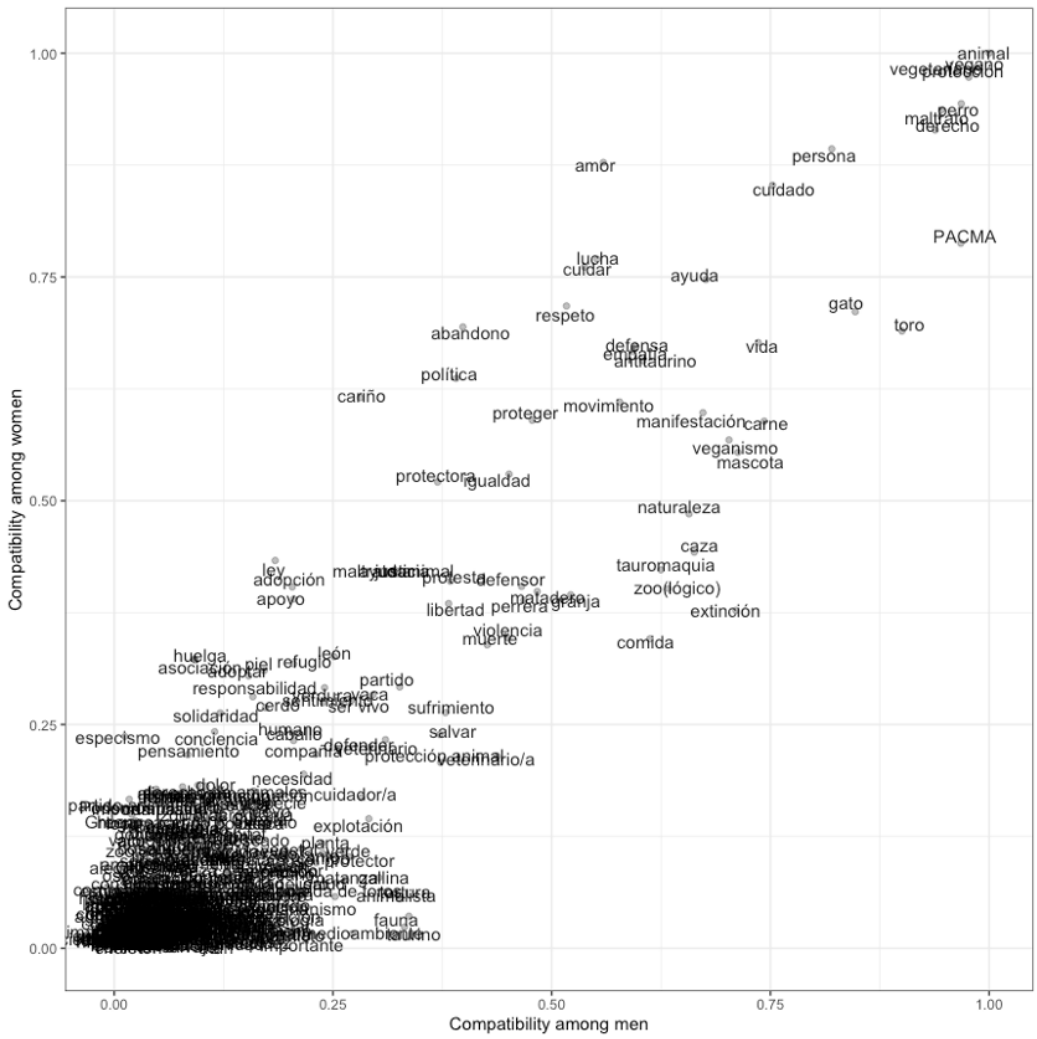


Figure 4. Animal rights movements. Gender identity.

4.3.4 Animal rights movements. Type of centre and gender identity

Table 12 presents the words obtaining the highest general ILCs for this category and compares it with the specific ILCs obtained in each case for the groups under study.

Table 12. Animal rights movements. Comparison of general and specific ILC.

Word	ILC general	ILC men, public	ILC women, public	ILC men, private	ILC women, private
animal 'animal'	0.9999985	0.9999742	0.9999806	0.9998015	0.9994090
maltrato 'maltreatment'	0.9196230	0.8674026	0.9107663	0.4115552	0.6030309
derecho 'right'	0.9072857	0.6834791	0.7390629	0.6040000	0.3904990
PACMA 'PACMA'	0.8804997	0.8494248	0.6409647	0.7154733	0.5835000
persona 'person'	0.8367290	0.7048382	0.8296569	0.3840000	0.1500000
cuidado 'care'	0.7710037	0.4503801	0.7535416	0.3504762	0.3941200
ayuda 'help'	0.6889419	0.5896996	0.6794660	0.3066667	0.2520000
política 'politics'	0.6192866	0.0528571	0.1192004	0.7840000	0.8193789
veganismo 'veganism'	0.6036621	0.1200567	0.1552000	0.4133333	0.4240000
vegano 'vegan'	0.9778993	0.8442982	0.7780725	0.9378981	0.9527590
antitaurino 'anti-bullfighting'	0.5998457	0.2352583	0.1446000	0.7285658	0.8320652
empatía 'empathy'	0.5959223	0.2621644	0.4407622	0.1698765	0.4880000
tauromaquia 'bullfighting'	0.4681299	0.3885456	0.0984485	0.7633778	0.2000000
toro 'bull'	0.7733572	0.6176034	0.2759826	0.9348244	0.4743467
matadero 'slaughterhouse'	0.4189024	0.1381187	0.1197818	0.8020754	0.7314595

Notes: The words above the line of separation generally present a higher ILC for students at public centres; the words below the line of separation generally present a higher ILC for students at private centres.

We can observe first differences in the ILCs of words relating to food (*veganismo* 'veganism', *vegano* 'vegan', *matadero* 'slaughterhouse'). These show a tendency towards being more significant among men and women at private centres. The association with politics and bullfighting is also highly significant for these two groups.

On the other hand, men and women at public centres give relevance to *cuidado* 'care', *ayuda* 'help', and words that describe the phenomenon from the human perspective (*persona* 'person' and, again, *ayuda* 'help'). Overall, the high ILC of the Spanish political party PACMA is significant here, as it is more representative for men than women regardless of the type of centre.

Table 13 presents the words with the biggest differences in ILC between men and women at public centres.

Table 13. Animal rights movements. ILC for men and women at public centres.

Word	ILC men, public	ILC women, public
extinción 'extinction'	0.7256022	0.1044934
veganismo 'veganism'	0.5200567	0.1552000
toro 'bull'	0.6176034	0.2759826
caza 'hunting'	0.5120825	0.2192054
tauromaquia 'bullfighting'	0.3885456	0.0984485
adopción 'adoption'	0.0430557	0.4489620
abandono 'neglect'	0.1484625	0.5228318
justicia 'justice'	0.0264286	0.3637750
cuidado 'care'	0.4503801	0.7535416
respeto 'respect'	0.0847156	0.3786396

Notes: The words above the line of separation present a higher ILC for men at public centres; the words below the line of separation present a higher ILC for women at public centres.

We can observe that, at public centres, sentimental words and words linking to active involvement are more significant among women than men. As shown in Table 14, the sentimental connotation prevails for women at private centres, although the active participation disappears, while men, again, give relevance to words related to bullfighting.

Table 14. Animal rights movements. ILC for men and women at private centres.

Word	ILC men, private	ILC women, private	diff
tauromaquia 'bullfighting'	0.7633778	0.2000000	0.5633778
movimiento 'movement'	0.6189460	0.1500000	0.4689460
toro 'bull'	0.9348244	0.4743467	0.4604778
zoo(lógico) 'zoo(logical)'	0.7971407	0.4585500	0.3385907
mascota 'pet'	0.4584532	0.2198095	0.2386437
persona 'person'	0.3840000	0.1500000	0.2340000
salvación 'salvation'	0.3840000	0.1500000	0.2340000
perro 'dog'	0.7171328	0.4882389	0.2288939
ley 'law'	0.0571429	0.2860000	0.2288571
empatía 'empathy'	0.1698765	0.4880000	0.3181235
violencia 'violence'	0.0727273	0.3051429	0.2324156

The differences in perception between men at public centres and men at private centres are also relevant, as demonstrated in Table 15.

Table 15. Animal rights movements. ILC for men at public and private centres.

Word	ILC men, public	ILC men, private	diff
maltrato 'maltreatment'	0.8674026	0.4115552	0.4558474
veterinario 'vet'	0.6058203	0.1617778	0.4440425
defensor 'defender'	0.5293763	0.0888889	0.4404874
persona 'person'	0.7048382	0.3840000	0.3208382
carne 'meat'	0.5402674	0.2210909	0.3191765
ayuda 'help'	0.5896996	0.3066667	0.2830329
protectora 'animal shelter'	0.3545804	0.0727273	0.2818531
comida 'food'	0.4069777	0.2405118	0.1664659
extinción 'extinction'	0.7256022	0.5666944	0.1589078
política 'politics'	0.0528571	0.7840000	0.7311429
matadero 'slaughterhouse'	0.1381187	0.8020754	0.6639567
justicia 'justice'	0.0264286	0.5200000	0.4935714
zoo(lógico) 'zoo(logical)'	0.3986498	0.7971407	0.3984910
tauromaquia 'bullfighting'	0.3885456	0.7633778	0.3748322
salvación 'salvation'	0.0231250	0.3840000	0.3608750
toro 'bull'	0.6176034	0.9348244	0.3172210
lucha 'struggle'	0.2745625	0.5200000	0.2454375
protesta 'protest'	0.0740000	0.3125348	0.2385348

Notes: The words above the line of separation present a higher ILC for men at public centres; the words below the line of separation present a higher ILC for men at private centres.

At private centres, words relating to bullfighting and politics are once again more significant as well as the words *lucha* 'struggle' and *protesta* 'protest', whereas at public centres, it is the human perspective that is again more evident. This tendency is corroborated in the comparison with the results obtained for women at public and private centres, as represented in the top left, top right, and bottom right extremes of Figure 5 (the bottom left encompasses words with a very low ILC, meaning they are insignificant in the categorisation produced by the group).

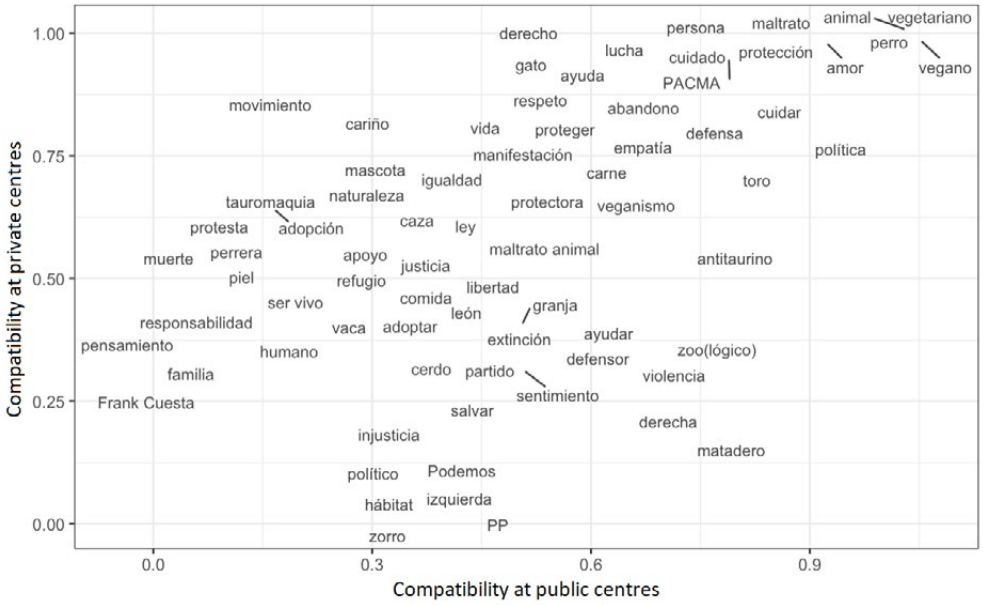


Figure 5. Animal rights movements. ILC of women at public and private centres.

The results presented above regarding animal rights movements are broadly similar to those of recent works aiming to identify the sociological characteristics that determine student attitudes towards animal rights and use by society. Bennett-Wimbush et al. (2015), for example, demonstrated that the variables gender, age, and home residence of their 136 participants were indeed significant. Particularly women between the ages of 17 and 20 living in non-urban environments proved more aware of animal rights and welfare.

4.4 Gender-based violence. General results

Gender-based violence is a serious public health issue that requires early intervention. Professionals note that difficulties in addressing gender-based violence include the lack and distortion of information regarding the issue. Many studies have revealed incorrect attitudes and perceptions among students at all levels of education, describing inadequate or insufficient teaching of the subject as the cause (Diéguez Méndez et al., 2020; Ferrer Pérez et al., 2006). In addition, recent works have shown that providing education early on is an important factor in changing the attitudes of young people and preventing gender-based violence (Currier & Carlson, 2009).

In connection with the present work, Figure 6 presents the entire sample's shared perception regarding gender-based violence. All students perceive this issue as very serious, as revealed by words such as *asesinato* 'murder', *desigualdad* 'inequality', *injusticia* 'injustice', *agresión* 'aggression', *muerte* 'death', and *violación* 'violation'. The words *ayuda* 'help', *denuncia* 'report', and *derecho* 'right' refer to possible solutions, and other words indicate what the sample seems to identify as the source of the issue: *hombre* 'man', *machista* 'sexist'. Finally, words referring to emotions are also included: *miedo* 'fear', *sufrimiento* 'suffering', *dolor* 'pain'.



Figure 6. General results. Gender-based violence.

4.4.1 Gender-based violence. Educational level

Table 16 presents the words included in the level of maximum prototypicality of each educational level considered regarding gender-based violence.

Based on the very similar results obtained for each group, we can conclude that gender-based violence is an issue that causes serious concern at all three educational levels. Nevertheless, the group of university students does stand out, as this was the only one to provide words relating to the family environment (*familia* 'family', *hogar* 'home', *pareja* 'partner', *hijo* 'son/daughter') and to perceive this phenomenon as a problem suffered by victims (*problema* 'problem', *víctima* 'victim'). Meanwhile, students enrolled in compulsory secondary education were the only ones to provide *denuncia falsa* 'false accusation' and *exagerado* 'exaggerated'. These words are a cause for concern, as they could indicate a distorted perception of this phenomenon among the youngest population under study.

4.4.2 Gender-based violence. Type of centre (public/private)

Although the words with the highest ILC are the same for both types of centre (*mujer* 'woman', *maltrato* 'maltreatment', *hombre* 'man', *machismo* 'machismo', *violencia* 'violence'), we can observe notable differences in the words obtaining the biggest differences in ILC irrespective of their level of compatibility, as shown in Table 17.

Table 16. Gender-based violence. Educational level.

Centre of interest	Compulsory secondary education	High school	University
Gender-based violence	*mujer* 'woman' *maltrato* 'maltreatment' *hombre* 'man' *machismo* 'machismo' *violación* 'violation' *violencia* 'violence' *muerte* 'death' *feminismo* 'feminism' *miedo* 'fear' *agresión* 'aggression' *pegar* 'to hit' *abuso* 'abuse' *igualdad* 'equality' *machista* 'sexist' *injusticia* 'injustice' *asesinato* 'murder' *pelea* 'argument' *acoso* 'harassment' ***denuncia* falsa 'false accusation'** *desigualdad* 'inequality' *ayuda* 'help' *feminista* 'feminist' *cárcel* 'prison' *golpe* 'strike' *dolor* 'pain' *psicológico* 'psychological' *lucha* 'struggle' *moretón* 'bruise' ***exagerado* 'exaggerated'**	*mujer* 'woman' *hombre* 'man' *machismo* 'machismo' *maltrato* 'maltreatment' *violencia* 'violence' *muerte* 'death' *violación* 'violation' *abuso* 'abuse' *desigualdad* 'inequality' *feminismo* 'feminism' *asesinato* 'murder' *miedo* 'fear' *injusticia* 'injustice' ***ley* 'law'** *pegar* 'to hit' *agresión* 'aggression' *acoso* 'harassment' *igualdad* 'equality' *dolor* 'pain' *denuncia* 'report' *físico* 'physical' *lucha* 'struggle' *ayuda* 'help' *cárcel* 'prison' *superioridad* 'superiority' *pelea* 'argument' *daño* 'harm' *psicológico* 'psychological' *sufrimiento* 'suffering' *policía* 'police'	*mujer* 'woman' *machismo* 'machismo' *maltrato* 'maltreatment' *hombre* 'man' *muerte* 'death' *violencia* 'violence' *feminismo* 'feminism' *dolor* 'pain' *desigualdad* 'inequality' *miedo* 'fear' *ayuda* 'help' *igualdad* 'equality' *lucha* 'struggle' *injusticia* 'injustice' *abuso* 'abuse' *violación* 'violation' *golpe* 'strike' ***problema* 'problem'** *denuncia* 'report' *asesinato* 'murder' ***víctima* 'victim'** *psicológico* 'psychological' ***familia* 'family'** ***hogar* 'home'** *cárcel* 'prison' *acoso* 'harassment' *físico* 'physical' ***ley* 'law'** ***pareja* 'partner'** ***protección* 'protection'** *tristeza* 'sadness' *derecho* 'right' ***hijo* 'son/daughter'** *psicología* 'psychology'

Notes: In **bold and underlined**: words that only appear for one of the three groups; only in **bold**: certain words that appear for two of the three groups.

Table 17. Gender-based violence. Type of centre.

Word	ILC public centre	ILC private centre
feminismo 'feminism'	0.7796637	0.9405251
feminista 'feminist'	0.1861851	0.5616668
abuso 'abuse'	0.7529421	0.8525307
desigualdad 'inequality'	0.6629894	0.8480935
injusticia 'injustice'	0.6102292	0.9350579
discriminación 'discrimination'	0.2242342	0.4189445
mentira 'lie'	0.2037384	0.5940843
mala 'bad'	0.0433333	0.2300000
016 '016'	0.3216332	0.5153744
ayuda 'help'	0.7295399	0.4177590
psicológico 'psychological'	0.5616585	0.2870291
derecho 'right'	0.4441351	0.2927877
justicia 'justice'	0.3356398	0.0907919
pareja 'partner'	0.4635637	0.2629271
problema 'problem'	0.4932958	0.1177381
familia 'family'	0.4479110	0.2437710
niño 'child'	0.3508039	0.1032125
hogar 'home'	0.3758290	0.1648310
hijo 'son/daughter'	0.3877566	0.1929976
pena 'sorrow'	0.2730791	0.0383333
dolor 'pain'	0.7332792	0.5022335

Notes: The words above the line of separation present a higher ILC for students at private centres; the words below the line of separation present a higher ILC for students at public centres.

At private centres, gender-based violence is identified with *feminismo* 'feminism', *abuso* 'abuse', *desigualdad* 'inequality', and *injusticia* 'injustice'. The appearance of *feminismo* 'feminism' and *feminista* 'feminist' stands out here. These two words lead us to interpret other words provided with caution (*abuso* 'abuse', *desigualdad* 'inequality', *injusticia* 'injustice', *discriminación* 'discrimination'), as it is unclear whether they are linked to a misinterpretation of the feminist movements or to an actual sexist perception of gender-based violence. The words *mentira* 'lie' and *mala* 'bad' point more towards the first of these two interpretations. At the same time, however, the telephone helpline 016 for victims of gender-based violence in Spain does seem to be more present for this group.

At public centres, the words obtaining a higher ILC describe the issue as a problem that affects the domestic environment (*problema* 'problem', *familia* 'family', *pareja* 'partner', *niño* 'child', *hogar* 'home', *hijo* 'son/daughter') and that requires different forms of help (*psicológico* 'psychological', *derecho* 'right', *justicia* 'justice'). Certain words alluding to feelings and emotions are also more present here (*pena* 'sorrow', *dolor* 'pain').

4.4.3 Gender-based violence. Gender identity

In the levels of maximum prototypicality for gender-based violence by gender identity, no significant differences can be observed. This is demonstrated by Table 18, which presents the words that obtain a general ILC of over 0.90 and indicates the specific ILC they obtain for men and women.

Table 18. Gender-based violence. Gender identity I.

Word	ILC general	ILC men	ILC women
mujer 'woman'	0.9998888	0.9994206	0.9991195
maltrato 'maltreatment'	0.9993565	0.9976568	0.9965132
hombre 'man'	0.9990731	0.9985515	0.9925861
machismo 'machismo'	0.9974576	0.9926571	0.9902239
muerte 'death'	0.9701567	0.9159631	0.9491055
violencia 'violence'	0.9589164	0.9707622	0.8513772

Differences between these two groups are only revealed if we expand the comparison to include words in any level of compatibility. Table 19 reveals these differences – and they certainly warrant reflection.

In our view, the perception held by men regarding gender-based violence contains a concerning distortion of reality. We have therefore underlined the words in Table 19 that were most surprising due to their implications: *denuncia falsa* 'false accusation', *mentira* 'lie', *política* 'politics', *feminista* 'feminist', *feminazi* 'feminazi', *desigualdad* 'inequality', *discriminación* 'discrimination', *injusto* 'unfair', and *feminismo* 'feminism'. Most of these obtain a very high ILC, making them very characteristic of men's shared perception regarding this phenomenon.

Meanwhile, women feel *miedo* 'fear' and *peligro* 'danger' in the face of a situation that affects them more directly and that, more so than men, they identify with *pareja* 'partner' and *hogar* 'home'. This may be why we can observe here the need to fight and gain recognition (*lucha* 'struggle', *25N* '25 November'). In this sense, however, the date 8 March stands out due to its absence from the level of maximum prototypicality, since it is a frequently used symbol of the fight for equality between men and women and the eradication of gender-based violence.

Table 19. Gender-based violence. Gender identity II.

Word	ILC men	ILC women
denuncia falsa 'false accusation'	0.4213163	0.0260875
mentira 'lie'	0.4776369	0.1197978
política 'politics'	0.4234162	0.0995964
feminista 'feminist'	0.4605985	0.1643183
feminazi 'feminazi'	0.2765514	0.0162500
desigualdad 'inequality'	0.8355920	0.6111341
discriminación 'discrimination'	0.3663221	0.1418968
injusto 'unfair'	0.3332578	0.1206046
feminismo 'feminism'	0.9070950	0.6981746
opresión 'oppression'	0.2440280	0.0903580
crimen 'crime'	0.3519335	0.0144444
manada 'group/La Manada'	0.3336560	0.0100000
cárcel 'prison'	0.7284015	0.4172009
protesta 'protest'	0.2702120	0.1214912
hogar 'home'	0.1934786	0.3399651
25N '25 November'	0.0500000	0.1896838
lucha 'struggle'	0.3772004	0.6690732
pareja 'partner'	0.3065175	0.4865272
peligro 'danger'	0.1466797	0.3243971
miedo 'fear'	0.6615028	0.8345655
paliza 'beating'	0.1735435	0.3457610
insulto 'insult'	0.2713708	0.4389208

Notes: The words above the line of separation present a higher ILC for men; the words below the line of separation present a higher ILC for women.

4.4.4 Gender-based violence. Type of centre and gender identity

In Table 20, we present the words with the highest general ILCs and the specific ILCs they obtain for each of the groups analysed.

Table 20. Gender-based violence. Comparison of general and specific ILC.

Word	ILC general	ILC men, public	ILC women, public	ILC men, private	ILC women, private
mujer 'woman'	0.9998888	0.9982504	0.9985226	0.9946064	0.9941818
maltrato 'maltreatment'	0.9993565	0.9961664	0.9989411	0.9566344	0.9930699
hombre 'man'	0.9990731	0.9930703	0.9871949	0.9932165	0.9560642
machismo 'machismo'	0.9974576	0.9757611	0.9629610	0.9821774	0.9911747
muerte 'death'	0.9701567	0.8960101	0.9273774	0.4163304	0.8830611
violencia 'violence'	0.9589164	0.9322583	0.8203897	0.9149677	0.8709499
violación 'violation'	0.9328294	0.8311804	0.8460827	0.9775480	0.9192215
feminismo 'feminism'	0.8798729	0.7138703	0.3829889	0.9355541	0.7975646
miedo 'fear'	0.8537508	0.5072934	0.8768207	0.3546331	0.7998326
abuso 'abuse'	0.8333308	0.6190697	0.7466074	0.9091939	0.5454512
desigualdad 'inequality'	0.8110112	0.4693112	0.3808379	0.7421133	0.7327125

The initial four words are very characteristic for all groups (*mujer* 'woman', *maltrato* 'maltreatment', *hombre* 'man', *machismo* 'machismo'), but notable differences emerge from thereon. First, women at public centres consider the word *muerte* 'death' to be incredibly important, whereas men at private centres give it a noticeably lower ILC, and the other two groups give it ILCs in between these two. Second, *violencia* 'violence' is more characteristic for men than women regardless of type of centre. Third, *feminismo* 'feminism' obtains a significantly lower ILC for women at public centres (0.3829889) as compared to all other groups, including women at private centres (0.7975646). Fourth, the feeling of *miedo* 'fear' is more present for women than men. Fifth, the word *abuso* 'abuse' assumes great importance for men at private centres, and finally, sixth, the word *desigualdad* 'inequality' is particularly significant for both men and women at private centres.

The biggest differences between men and women at public centres are presented in Table 21. We can observe here that for women at public centres, the consequences of gender-based violence predominate (*moretón* 'bruise', *miedo* 'fear', *psicológico* 'psychological', *golpe* 'strike', *físico* 'physical') as well as the need to fight (*lucha* 'struggle'), whereas for men, it is the penal consequences of gender-based violence (*cárcel* 'prison') as well as *discriminación* 'discrimination' and *feminismo* 'feminism' that obtain higher ILCs.

Similar tendencies (except in the case of *cárcel* 'prison', now scoring higher for women than men) can be observed in Table 22, which presents the biggest differences between men and women at private centres.

Table 21. Comparison of ILC for men and women at public centres.

Word	ILC men, public	ILC women, public	diff
moretón 'bruise'	0.0185000	0.4370555	0.4185555
miedo 'fear'	0.5072934	0.8768207	0.3695273
psicológico 'psychological'	0.2141287	0.5833818	0.3692531
golpe 'strike'	0.2379726	0.5966594	0.3586868
físico 'physical'	0.2112127	0.5158399	0.3046272
lucha 'struggle'	0.2554730	0.5572010	0.3017280
discriminación 'discrimination'	0.3068465	0.0327273	0.2741192
cárcel 'prison'	0.6854839	0.2688415	0.4166424
feminismo 'feminism'	0.7138703	0.3829889	0.3308814

Table 22. Comparison of ILC for men and women at private centres.

Word	ILC men, private	ILC women, private	diff
lucha 'struggle'	0.1000000	0.5923409	0.4923409
muerte 'death'	0.4163304	0.8830611	0.4667307
miedo 'fear'	0.3546331	0.7998326	0.4451994
manifestación 'demonstration'	0.1851429	0.5198201	0.3346772
cárcel 'prison'	0.2481143	0.5462935	0.2981792
ayuda 'help'	0.1615238	0.4118433	0.2503195
pelea 'argument'	0.1333333	0.3743360	0.2410027
injusticia 'injustice'	0.6950800	0.9336194	0.2385394
morado 'purple'	0.0727273	0.3005714	0.2278442
denuncia 'report'	0.4399547	0.6637040	0.2237492
mentira 'lie'	0.7639052	0.0666667	0.6972385
abuso 'abuse'	0.9091939	0.5454512	0.3637427
feminista 'feminist'	0.6550400	0.3000000	0.3550400
discriminación 'discrimination'	0.4624000	0.2066667	0.2557333
sexo 'sex'	0.3253333	0.0750000	0.2503333

Notes: The words above the line of separation present a higher ILC for women at private centres; the words below the line of separation present a higher ILC for men at private centres.

Despite the similarities noted above, some of the words appearing for men at private centres warrant reflection: the higher ILCs obtained for the words *mentira* 'lie', *abuso* 'abuse', *feminista* 'feminist', and *discriminación* 'discrimination' are alarming indicators.

Furthermore, the appearance of the word *sexo* 'sex' is highly significant. Table 23 presents a comparison between men at private centres and men at public centres to identify whether the tendencies observed in Table 22 for men at private centres differ in any way.

Table 23. Comparison of ILC for men at public and private centres.

Word	ILC men, public	ILC men, private	diff
pelea 'argument'	0.6572453	0.1333333	0.5239120
muerte 'death'	0.8960101	0.4163304	0.4796797
cárcel 'prison'	0.6854839	0.2481143	0.4373696
ayuda 'help'	0.5604823	0.1615238	0.3989585
sangre 'blood'	0.4102414	0.0615385	0.3487030
pegar 'to hit'	0.8466520	0.5626074	0.2840446
denuncia 'report'	0.6688225	0.4399547	0.2288677
matar 'to kill'	0.2935469	0.1142857	0.1792612
machista 'sexist'	0.5011831	0.3319184	0.1692648
lucha 'struggle'	0.2554730	0.1000000	0.1554730
miedo 'fear'	0.5072934	0.3546331	0.1526603
padre 'father'	0.0308333	0.1795556	0.1487222
psicología 'psychology'	0.2046389	0.0571429	0.1474961
violación 'violation'	0.8311804	0.9775480	0.1463676
arma 'weapon'	0.0284615	0.1741176	0.1456561
herida 'injury'	0.2403640	0.1000000	0.1403640
acoso 'harassment'	0.6475453	0.5097143	0.1378311
manifestación 'demonstration'	0.3205896	0.1851429	0.1354468
sufrimiento 'suffering'	0.3169448	0.2012630	0.1156817
pareja 'partner'	0.2501386	0.1345455	0.1155931
problema 'problem'	0.1700547	0.0666667	0.1033880
psicológico 'psychological'	0.2141287	0.1115897	0.1025390
mentira 'lie'	0.2453100	0.7639052	0.5185952
feminista 'feminist'	0.2412203	0.6550400	0.4138197
injusticia 'injustice'	0.3944407	0.6950800	0.3006392
abuso 'abuse'	0.6190697	0.9091939	0.2901242
sexo 'sex'	0.0370000	0.3253333	0.2883333
desigualdad 'inequality'	0.4693112	0.7421133	0.2728020
víctima 'victim'	0.0217647	0.2666667	0.2449020
feminismo 'feminism'	0.7138703	0.9355541	0.2216838
injusto 'unfair'	0.1850000	0.4000000	0.2150000
016 '016'	0.2877739	0.4624000	0.1746261
discriminación 'discrimination'	0.3068465	0.4624000	0.1555535

Below the line of separation in Table 23, we have included other words mentioned above during the course of this analysis, as we feel they indicate a very serious problem in the perception of gender-based violence held by men at private centres: *mentira* 'lie', *feminista* 'feminist', *injusticia* 'injustice', *abuso* 'abuse', *sexo* 'sex', *desigualdad* 'inequality', *víctima* 'victim', *feminismo* 'feminism', *injusto* 'unfair', *016* '016', and *discriminación* 'discrimination'. Table 23 shows that these words obtain higher ILCs for men at private centres, meaning the problem in perception is specific to this group.

Figure 7 presents the biggest differences in ILC between women at public and private centres. As can be observed, the problem in perception is unfortunately not exclusive to men; it also seems to apply to women at private centres. To demonstrate the gravity of the results obtained, we have circled the words obtaining an ILC higher than 0.50 for women at private centres.

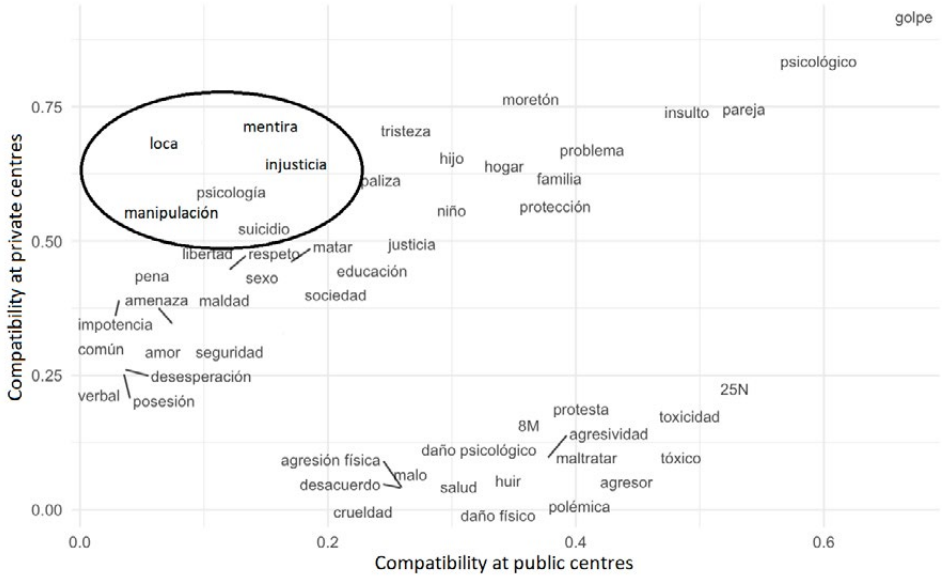


Figure 7. Comparison of ILC for women at public and private centres.

5. Discussion

5.1 Lexical availability and the Index of Lexical Compatibility

Lexical availability is based on a relatively simple principle: members of the same speech community share a vocabulary linked to certain very frequently observed cognitive prototypes. In the case of tests of lexical availability, these prototypes are usually presented to participants in the form of centres of interest (Ávila-Muñoz & Sánchez-Sáez, 2010). For the purpose of this work, we adapted the lexical availability index, described in Section 2.1., from being an attribute of individual words to being a community indicator. This transformation assumes that the stimulus that initiates the association process is an access point to a network of lexical elements perceived by the participant as interrelated as well as related to the concept proposed via the stimulus (centre of interest). The structure

of this network is subjective and inherent to the individual, meaning it cannot be strictly extrapolated to other research participants. It is also highly dynamic since it is constantly being modified. Nevertheless, for several reasons including both social and cultural factors, individuals do construct similar lexical structures. We consider the shared sociocultural metastructure to constitute the vocabulary of the community cognitive prototype. In other words, the shared community prototype does not exist in itself but is rather produced by a group of speakers. It is possible and even plausible that changing the group of speakers would therefore change the shared metastructure.

It is natural to assume that when an individual is asked to provide a list of available vocabulary, they first access lexical elements closest to the shared concept proposed via the cognitive stimulus (centre of interest). They then move through their lexical network in the direction of words that are further from this access point, always providing the most accessible words and generally travelling via words that are related in their personal lexical network. They also may re-enter their lexical network via a new access point when they feel they have travelled too far (Ávila-Muñoz & Sanchez-Sáez, 2011).

Based on this approach, the structure of a cognitive prototype is considered to consist of a nucleus – accessible to all speakers in a speech community – and a periphery – accessible to individuals depending on various factors including higher lexical diversity (Villena Ponsoda et al., 2023). The progression from nucleus to periphery is gradual rather than abrupt. These foundations of lexical availability allow for the development of the model underlying the Index of Lexical Compatibility (ILC), and it is this index that we used in the present study to provide the quantifications needed to produce the structure and, thus, the community cognitive prototypes. The ILC results from a theoretical approach that allows us to translate the model underlying studies of lexical availability into a consolidated mathematical framework. This framework permits the interpretation of compatibility as an index (between 0, minimum compatibility, and 1, maximum compatibility) within the context of fuzzy set theory (Zadeh, 1965; Zimmermann, 2001) and, in our specific approach, that of possibility theory (Zadeh, 1978). The ILC provides the truest possible picture of the shared structures. However, other approaches could also be used, and we believe it would be advantageous – even ideal – to explore them in future stages of our research.

5.2 Migratory movements

The phenomenon of migratory movements is one of the most serious causes for concern of the European Union. This is not only because the EU must guarantee population flows between its member states (Meltzer et al., 2018) but also because its geographical borders have seen too many humanitarian crises. The reality in which the EU must operate encompasses diverse social, cultural, and religious traditions, and the region it represents has become a place of refuge for people from different races, religions, ethnicities, and nationalities. It is therefore unsurprising that the EU aims to raise awareness among

its citizens for the need to adapt to an increasingly globalised world, in which there is constant interaction with people of different cultures, customs, and languages (Rudiger & Spencer, 2003).

This being the case, identifying the shared perceptions regarding this phenomenon held by students in one of the border regions of the EU (Malaga and Cadiz, both in southern Spain, which presents a natural border of the EU with the north of Africa) is a matter of great importance and absolutely in line with the need to raise awareness in society so as to avoid conflicts stemming from distorted perceptions. To this effect, the appearance of words such as *problema* 'problem' and *conflicto* 'conflict' in the results obtained should lead us to reflect above all on whether their appearance is linked to the rise of far-right political parties (*Vox* 'Vox', also provided by participants). Equally concerning is the appearance of words such as *delincuencia* 'delinquency' and *ilegalidad* 'illegality' among students with the lowest educational level considered. However, we should remain relatively optimistic, since, as observed above, words such as *cultura* 'culture', *derecho* 'right', and *oportunidad* 'opportunity' appear for students enrolled in the highest educational level – which presumably indicates a higher degree of maturity and analytical capacity. Be that as it may, the students at private centres show a tendency to provide words more closely related to negative perceptions of the phenomenon, while those at public centres show this to a lesser degree. The same tendency also seems more closely linked to masculine than feminine gender identity.

5.3 Animal rights movements

The phenomenon of animal rights movements has led to a change in relationship between animals and the general population as compared to a few years ago, with this change affecting various social and legal aspects of society (Jacobsson & Lindblom, 2022; Pelé et al., 2021).

Studies that reach us from the US suggest that these movements are endorsed by women of upper-middle class who consider themselves independent of political approaches though of moderately liberal ideology (Jamison & Lunch, 1992). Jamison and Lunch suggest that animal rights activism is part of a symbolic manifestation that interlaces egalitarian social and political views of scientific and technological change, meaning it is worth identifying the perception held by the population under study here with regard to these movements. The results obtained seem to corroborate that the phenomenon revolves around a general advocacy of rights. This is combined with a spirit of protest targeting issues beyond those strictly related to animal welfare and specifically supporting non-traditional approaches to diet (*vegetariano* 'vegetarian', *vegano* 'vegan') and therefore lifestyles that are more in tune with the environment.

5.4 Gender-based violence

The presence of gender-based violence in society in the twenty-first century is a complete disgrace. International associations such as the UN Refugee Agency (https://www.unhcr.org/gender-based-violence.html), the UN (https://www.unfpa.org/gender-based-violence), UNICEF (https://www.unicef.org/protection/gender-based-violence-in-emergencies), and even the EU (https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/gender-based-violence/what-gender-based-violence_en) caution of the dangers it presents at the global level. Such is the scale of international concern that there are scientific journals focussing solely on this phenomenon, including the *Journal of Gender-Based Violence*. The effects of gender-based violence are not only physical but also mental. In this respect, it is concerning that for the university population in the United Kingdom, for example, it has in fact been necessary to create a list of recommendations to help victims in this collective (Rakshasa-Loots, 2022).

The results obtained in the present work show that the population under study considers this phenomenon a source of concern, although they do not seem to consider it a possibility in the domestic context. This at least applies to the students enrolled in compulsory secondary and pre-university education, as these did not provide vocabulary relating to gender-based violence in the family environment. Nevertheless, numerous recent studies show that the phenomenon can end up being even more tragic at these educational levels than in others more prominently referred to in society, specifically due to the silence and resignation of victims in these groups (Banks et al., 2008; Brännvall & Ekström, 2022; Dutton, 1993; Fahmy et al., 2018; Gill & Anitha, 2022; Hamilton, 2009; Hester, 2013; Hester & Westmarland, 2005; Imkaan, 2016; Kanyeredzi, 2018; Kourti et al., 2021; Notko et al., 2022; Peckover & Golding, 2017; Rajah & Osborn, [2020] 2022; Zhang, 2022).

We believe it is imperative to focus on the prevention of gender-based violence and raise awareness in the vulnerable population – especially in those enrolled in education – of the need to identify, and react to, the deplorable actions that constitute gender-based violence. Many studies show that young people tolerate and may even justify situations that can be classed as gender-based violence more often than one might expect (Lucariello & Fajardo Caldera, 2011; Pérez Camarero, 2019; Rivera-Rivera et al., 2006; Valdemoro Pascual & Peyró Arcas, 2009).

Against this background, the present study provides cause for reflection due to the appearance of certain words for the youngest group of participants considered: *denuncia falsa* ‘false accusation’ and *exagerado* ‘exaggerated’. There is no doubt that these words demonstrate a need to implement educational programmes to reinforce this issue, which will help individuals to detect behaviours that may be classed as gender-based violence and allow for the development of shared perceptions that improve our society and protect vulnerable groups.

6. Conclusions

This work represents an advancement within the area of studies on lexical variation in terms of theory, methodology, and possibilities, which pertain principally to sociolinguistic and psychocognitive aspects of a community.

In this work, we have observed the social impact of three phenomena that are of socio-community significance – migratory movements, animal rights movements, and gender-based violence –, and we have done so based on word association tests that have allowed us to construct and analyse shared categorisations. All three phenomena have become issues of community concern at the international level that, in some cases, have become entwined with ideology. We have observed how the Spanish compulsory secondary, pre-university and university students under study construct shared categorisations regarding these phenomena. By combining the lists of available vocabulary provided by the individuals, we have obtained snapshots depicting the shared perceptions. The interpretation of these snapshots as fuzzy sets has allowed us to access the words that are most compatible with the fuzzy set obtained, and the comparisons made between certain social characteristics have led to results that mean we can now revisit the starting hypothesis and conclude the following:

(1) The student population analysed in this study exhibits a strong social awareness of the stimuli proposed. This social awareness suggests that there has been a change in the traditional lifestyle patterns, in our relationship with the environment and our fellow human beings, and even in our eating habits.

(2) Despite the foregoing, some deficits in perception have been observed for students enrolled in the lowest level of education considered, based on certain words appearing in the level of maximum prototypicality for this group.

(3) When the analysis is expanded to include the full shared perceptions (all the levels of compatibility), these gaps become more apparent for students enrolled at private centres than for those at public centres, and, in general, more apparent among men than women.

(4) Regarding migratory movements, we have obtained words suggesting that particularly the students enrolled in the lowest level of education associate this phenomenon more with conflict, delinquency, and illegality than with culture and an opportunity to learn. These associations become more concerning where far-right political parties also appear.

(5) The animal rights movements paint a fairly homogenous picture for the population under study, with the individual social characteristics not showing any effect. In line with previous studies, a concern for the environment and nature in general seems to underpin the concern for animal rights, and this concern is even linked to changes in lifestyle affecting aspects as fundamental as diet.

(6) As for gender-based violence, we have observed words that suggest limited or distorted information primarily among men (although also among women) enrolled at private centres for compulsory secondary and pre-university education. These individuals construct their prototypes using words such as *denuncia falsa* 'false accusation', *feminazi* 'feminazi', *mentira* 'lie', *loca* 'crazy', and *injusto* 'unfair'. It is worth mentioning that, in some cases, the problem is considered to arise outside of the home. This indicates a community perception regarding gender-based violence that is incorrect to a certain degree and that could lead to harmful behaviours in the private environment remaining unidentified.

Finally, we suggest that the agents involved in teaching and training students enrolled in compulsory secondary, pre-university and university education become aware of the results obtained in this study, and that they promote measures designed to both mitigate the deficits in perception observed and reinforce areas that appear to be well established. It is partly in their hands that lies the responsibility to construct fairer, more egalitarian societies that are more respectful of the environment and the individual.

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La eficacia de un foco en la forma significativo para facilitar el aprendizaje del subjuntivo imperfecto

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Resumen: Como profesores de lenguas extranjeras queremos que nuestros estudiantes sean capaces de expresarse comunicativamente, pero también con cierta corrección gramatical. Especialmente en niveles avanzados, donde algunos estudiantes a veces prestan menos atención a nuevas formas gramaticales, ya que son capaces de comunicarse con bastante éxito empleando estructuras básicas, puede ser difícil encontrar este equilibrio. Una manera de facilitar el aprendizaje de nuevas formas gramaticales sin sacrificar el desarrollo de la competencia comunicativa es trabajar con un foco en la forma significativo. El presente trabajo ha investigado, mediante un análisis de pretest y postest y una intervención didáctica, la eficacia de un foco en la forma (FonF) significativo para el aprendizaje del subjuntivo imperfecto. Se han encontrado efectos de aprendizaje significativos para la metodología FonF significativo tanto al nivel receptivo como al nivel productivo con tamaños de efecto altos. Además, en comparación con una metodología FonFs, el FonF significativo tuvo efectos de aprendizaje significativamente más grandes al nivel receptivo. Se concluye que introducir un FonF significativo en las clases de español puede facilitar al aprendizaje de nuevas estructuras gramaticales, sobre todo en niveles más avanzados, ya que hace hincapié en la conexión entre la forma de la lengua y su significado.

Palabras clave: *enseñanza de idiomas, adquisición de lenguas extranjeras, español como lengua extranjera, enfoque por tareas, foco en la forma.*

The efficiency of a meaningful focus on form to facilitate the learning of imperfect subjunctive

Abstract: As foreign language teachers we want our students to be able to express themselves communicatively, but also with certain grammatical correctness. Especially at advanced levels, where some students sometimes pay less attention to new grammatical forms, as they are able to communicate quite successfully using basic structures, it can be difficult to find this balance. One way to facilitate the learning of new grammatical forms without sacrificing the development of communicative competence is to work with a meaningful focus on form (FonF). The present paper has investigated, by means of a pretest-posttest analysis and a didactic intervention, the effectiveness of a meaningful FonF for learning the imperfect subjunctive. Significant learning effects were found for the meaningful FonF methodology at both the receptive and productive levels with high effect sizes. Furthermore, compared to a FonFs methodology, the meaningful FonF had significantly larger learning effects at the receptive level. It is concluded that introducing a meaningful FonF in Spanish classes can facilitate the learning of new grammatical structures, especially at more advanced levels, since it emphasizes the connection between the form of the language and its meaning.

Keywords: *language teaching, foreign language acquisition, Spanish as a foreign language, task-based language teaching, focus on form.*

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1. Introduction

En el ámbito de la adquisición de lenguas extranjeras, es importante encontrar un equilibrio entre enseñar a los estudiantes cómo comunicar en la lengua meta y asegurarse de que su producción sea gramaticalmente correcta. Como profesores queremos que nuestros estudiantes sean capaces de transmitir con éxito sus ideas en la lengua extranjera, pero no hay que olvidar que la corrección lingüística puede ser de gran ayuda, ya que puede evitar confusiones y malentendidos. Esta visión de utilizar la gramática y la corrección lingüística para facilitar la comunicación y la transferencia del significado de la lengua se ve reflejada en los enfoques basados en el uso (Tyler & Ortega, 2016) y en la gramática nocional-funcional, una teoría gramatical que pone énfasis en la conexión entre sus formas lingüísticas y las funciones comunicativas (Finocchiaro & Brumfit, 1983; Trujillo & Gómez, 2020). Además, esta teoría considera la gramática como una herramienta más para expresarse en la lengua extranjera y no como un objeto de estudio en sí. Esta visión más libre del aprendizaje de gramática encaja bien en la infraestructura del enfoque por tareas o *task-based language teaching* (Long, 1991; Nunan, 2011), ya que esta metodología les da la libertad a los estudiantes de ser creativos y experimentar con la lengua al hacer las diferentes tareas comunicativas. Sin embargo, la desventaja de esa libertad es que los estudiantes no necesariamente tienen que utilizar las nuevas estructuras gramaticales más avanzadas si pueden comunicarse con éxito empleando estructuras básicas, lo cual podría dificultar el desarrollo de la riqueza lingüística en la lengua meta.

Entre los dos extremos de la enseñanza tradicional de la lengua centrada en la gramática (foco en las formas o *Focus un FormS* (FonFs)) y el aprendizaje implícito y contextual de la lengua (foco en el significado o *Focus on Meaning* FonM) se encuentra una práctica docente que pretende facilitar un espacio de aprendizaje en el que los alumnos se sientan libres para experimentar con la lengua y utilizarla de forma creativa, pero en el que también se introduce un enfoque incidental y explícito en la forma. Es decir, se reserva un parte de la clase para discutir la forma de la lengua explícitamente. Esta estrategia didáctica se denomina foco en la forma o *Focus un Form* (FonF) (Long, 1991; Blake & Zyzik, 2016; Sánchez Cuadrado, 2019; Doughty & Williams, 1998). Dentro de la literatura sobre FonF, existe un debate en torno a la cuestión de cuándo y de qué manera introducir dicho foco. Es a este debate al que el presente proyecto intentará sumarse, investigando el efecto de un FonF significativo sobre el desarrollo de una forma gramatical avanzada del español: el subjuntivo imperfecto. Este FonF significativo creará primero una necesidad de aprendizaje al confrontar a los estudiantes con tareas para las que aún no están totalmente equipados lingüísticamente, e introducirá el enfoque explícito en la forma cuando el estudiante se dé cuenta de que necesita aprender nuevas estructuras para completar la tarea (Samuda, 2001). Esta necesidad podría agilizar la retención y el aprendizaje de la lengua y estimular a los estudiantes a que aprendan nuevas formas gramaticales, al mismo tiempo ampliando y enriqueciendo sus recursos lingüísticos.

Hasta ahora, no se han llevado a cabo muchas investigaciones que indaguen en la eficacia de un FonF centrado en el aprendizaje del subjuntivo imperfecto y el presente trabajo intentará poner en práctica esa metodología para comprobar su eficacia para el aprendizaje de esa estructura gramatical avanzada en el proceso de aprendizaje de estudiantes universitarios de español como lengua extranjera (ELE).

En los siguientes apartados se discutirá en más detalle este proyecto de investigación. Se empezará con un resumen de los conceptos y teorías más importantes que juntos forman la columna vertebral teórica del presente proyecto y se presentarán las preguntas de investigación. Luego, se discutirá la metodología de la investigación, presentando una descripción de los participantes, materiales, el procedimiento, y la codificación y análisis de datos. A continuación, se presentarán los resultados de cada uno de los análisis estadísticos. Seguidamente, se dará una interpretación de estos datos y se relacionarán los hallazgos con las teorías presentadas en el marco teórico. También se formularán respuestas a las preguntas de investigación. Se concluye el presente trabajo con un resumen de los hallazgos principales.

2. Marco teórico

A continuación, se tratarán la enseñanza de la gramática; la enseñanza con enfoque por tareas y el FonF; el subjuntivo y sus dificultades; y se concluirá este capítulo con una exposición de las preguntas de investigación y las hipótesis correspondientes. La enseñanza de la gramática y el enfoque por tareas serán discutidos para establecer un marco metodológico-didáctico dentro del cual se situará la presente investigación. Se tratará el subjuntivo y sus dificultades para ver qué significa y por qué puede ser difícil de aprender para estudiantes extranjeros.

2.1 La enseñanza de la gramática

Visto que el presente trabajo se centrará en la enseñanza de una forma gramatical, se considera oportuno tratar las diferentes perspectivas que existen con respecto a la enseñanza de la gramática de lenguas extranjeras. Existe una discusión sobre la eficacia de la enseñanza de la gramática vinculada a la cuestión sobre la interrelación entre la enseñanza explícita y el desarrollo de conocimiento implícito (Nassaji, 2017). En líneas generales, el conocimiento explícito surge a través de la memorización consciente y resulta en conocimiento que uno puede verbalizar (Ellis, 2009). Conocimiento implícito, por otro lado, es conocimiento adquirido a través de procesos inconscientes como inferir reglas gramaticales de un *input* y, por lo tanto, el aprendiz puede utilizar esas normas al hablar, pero no podrá necesariamente verbalizarlas. Sin embargo, existen matices, por ejemplo, el aprendizaje implícito puede resultar en la capacidad de verbalizar lo que ha aprendido el estudiante (Ellis, 2009). Existe entonces una discusión sobre la posibilidad de transformar conocimiento explícito, adquirido mediante la enseñanza explícita, en conocimiento implícito-procedimental. La primera posición en cuanto a esta discusión defiende que no existe tal interrelación y está basada en la idea de Krashen (1985) de

que la enseñanza explícita facilita el desarrollo del conocimiento explícito, el cual nunca podrá transformarse en conocimiento implícito. Sin embargo, hoy en día tenemos más información en cuanto a la interrelación entre la enseñanza explícita y el conocimiento implícito y que cabe matizar el punto de vista de Krashen (Andringa & Rebuschat, 2015). Por ejemplo, existe el punto de vista que propone que hay una interrelación fuerte entre la enseñanza explícita y el desarrollo de conocimiento implícito. Esta perspectiva argumenta que el conocimiento declarativo facilitado por la enseñanza explícita se volverá procedimental a través de la práctica y ejercicios de automatización (DeKeyser, 2003; Andringa & Curcic, 2015). Además, existe una posición intremedia que promueve que sí hay una interrelación, pero una interrelación débil, que dice que el conocimiento explícito de normas gramaticales ayudará a que estas se interioricen a través de su prominencialización (Nassaji, 2017).

En el presente trabajo se adoptará la idea de una interrelación que permite la transformación de conocimiento explícito en conocimiento implícito, ya que existe evidencia de que la enseñanza explícita contribuye al desarrollo del conocimiento implícito. En un análisis meta de la literatura en torno a la enseñanza con un FonF, Rod Ellis (2002) argumenta que este tipo de enseñanza puede contribuir al desarrollo de conocimiento implícito. Otra revisión sistemática que miró los efectos de enseñanza explícita e implícita para la adquisición de formas gramaticales mostró efectos de aprendizaje más grandes para la enseñanza explícita (Spada & Tomita, 2010). También reveló que la enseñanza explícita influye positivamente en el uso espontáneo de las formas gramaticales (Spada & Tomita, 2010). El análisis meta llevado a cabo por John Norris y Lourdes Ortega (2000) también llegó a conclusiones similares y mostró la eficacia de la enseñanza explícita y FonF. Estas investigaciones sugieren que hay cierta interrelación entre la enseñanza explícita de formas gramaticales y el desarrollo de conocimiento implícito y por eso se adopta esta visión.

Ahora que se ha adoptado la idea de que la enseñanza de la gramática funciona para el desarrollo del conocimiento explícito, queda por discutir la cuestión de cómo emplearla con mayor éxito. Tradicionalmente, se han dividido las diferentes didácticas gramaticales en dos categorías opuestas: la gramática tradicional y la gramatical funcional (Derewianka & Jones, 2010, p. 6). Con la gramática tradicional se entiende aquella enseñanza en la que la gramática es un objeto de estudio en sí mismo y se estudia de forma aislada de su contexto. Por la gramática funcional se entienden aquellos planes curriculares en los que no se estudia la gramática de forma aislada, sino que se centra en el conjunto del contexto comunicativo (las nociones) y las diferentes intenciones comunicativas que tienen los hablantes cuando emplean estructuras gramaticales específicas (las funciones). Un ejemplo de un currículo que sigue esta tradición es el currículo nocional-funcional, que tiene el desarrollo de la competencia gramatical de los estudiantes como meta principal con respecto a las diferentes destrezas lingüísticas: leer, escuchar, escribir, y hablar (Finocchiaro & Brumfit, 1983). A esta perspectiva se podría vincular también la noción de FonF una metodología didáctica que combina la enseñanza explícita de formas gramaticales con su contexto comunicativo (Long, 1991). A pesar de la prevalencia de

esta clasificación compuesta por dos polos extremos en oposición, se podría considerar esta manera de resumir la discusión demasiado simplificada, ya que han sido propuestos diferentes currículos con una posición intermedia. Por eso, se debería considerar la distinción entre gramáticas tradicionales y funcionales no como dos polos opuestos, sino como una gama continua (Derewianka & Jones, 2010, p. 6).

Una de las teorías lingüística que pretende combinar los mejores aspectos de la gramática tradicional y la funcional es la gramática sistémica-funcional (Halliday & Matthiessen, 2004). Esta gramática está basada en la teoría sistémica que ve el lenguaje como holístico. Es decir, siempre se tiene que considerar los aspectos que se estudian con referencia a su contexto (lo cual sería la influencia de la gramática nocional-funcional) y al lenguaje en general (lo cual sería la influencia de la gramática tradicional) (Halliday & Matthiessen, 2004, p. 19). En cuanto a la aplicación de esta teoría, sobre todo se ha investigado su eficacia en el ámbito de la enseñanza de inglés como lengua extranjera. Por ejemplo, se ha demostrado que este tipo de enseñanza ha mejorado las competencias de los estudiantes en cuanto a su alfabetización académica (Rose & Martin, 2012; Hyland, 2007). Sin embargo, hasta donde se sabe no se ha mirado mucho la eficacia de metodologías basadas en la gramática sistémica-funcional en el ámbito de la enseñanza de Español como lengua extranjera (ELE). De ahí que la presente investigación intentará aplicar una metodología que sigue esa visión de la gramática en el ámbito de ELE.

2.2 El enfoque por tareas y foco en la forma

La metodología bajo investigación en este trabajo también adopta la visión del lenguaje y la gramática como algo holístico y considera que se debería estudiar y enseñar aspectos gramaticales dentro de su contexto y con énfasis en la función que tienen. Una metodología didáctica que también adopta esta visión holística en la que la forma y el significado están conectadas es el enfoque por tareas (Long, 1985). Los objetivos de esta metodología son sumergir a los estudiantes en el lenguaje natural y promover su adquisición través de tareas comunicativas (Ellis, 2017). Así se intenta facilitar el desarrollo de las competencias lingüísticas y comunicativas de los alumnos. De la descripción del enfoque por tareas, se puede concluir que el énfasis de esta metodología está puesto en el uso del lenguaje natural dentro de un contexto comunicativo. Sin embargo, eso no quiere decir que no haya espacio para fomentar la corrección lingüística de los alumnos, ya que se pone atención en la forma con un FonF (Long, 1991; Doughty & Williams, 1998). FonF quiere decir que en algunos momentos específicos se entrará en más detalle sobre la gramática, pero siempre dentro del marco del lenguaje comunicativo. Es decir, se pone énfasis en la forma gramatical de la lengua, por un período breve, para luego continuar con los ejercicios comunicativos.

Aunque existe un consenso sobre la necesidad del FonF dentro de la enseñanza con el enfoque por tareas, hay bastante debate sobre su aplicación. Mike Long (2014) argumenta que un FonF surgiría con más naturalidad durante la fase principal de una tarea, cuando ocurre un problema de comunicación y los estudiantes tienen que hacer una negociación

de significado. Jane Willis y Dave Willis (2013) mencionan que el FonF debería tener lugar durante la fase final de la tarea y que durante la fase principal solo se debería centrar en el significado y la comunicación. Por otro lado, Peter Skehan (1998) defiende que se debería poner énfasis en la forma gramatical durante la fase de planificación de la tarea, para que los alumnos puedan prestar más atención a la forma cuando hacen la tarea. Finalmente, Ellis (2003) dice que existen oportunidades para FonF en cada fase de la tarea. En breve, se puede decir que no hay un método que sea mejor que los otros y que el profesor es libre para elegir cuándo introducir el FonF en sus clases.

La metodología bajo investigación adoptará otra visión de la aplicación del FonF. Virginia Samuda (2001) argumenta que se puede emplear FonF para despertar una necesidad para aprender en los estudiantes, lo cual facilitará el aprendizaje y la adquisición de nuevas estructuras gramaticales. Samuda denomina esta metodología *meaning-form-meaning progression* (p. 383) y defiende que se debería poner énfasis en la forma del lenguaje cuando el estudiante tenga despierta esa necesidad para aprender. Esa necesidad se crea a través de *seeded input* lo cual implica que se emplea la estructura meta en las instrucciones de la tarea o en cualquier otro *input* sin llamarle atención explícita a ella. Sin embargo, se puede hacer destacar la estructura meta a través del realce de *input*. Luego, los estudiantes tendrán que llevar a cabo una tarea comunicativa que requiere esa estructura meta y la idea es que se van dando cuenta de que les falta alguna pieza en su repertorio lingüístico para completar la tarea con éxito. Es en este momento, cuando haya sido despertado ese interés en la forma, que se introduce el FonF. Este tipo de FonF a partir de aquí se denominará FonF significativo, ya que pone la forma dentro de su contexto significativo. Se investigará si esta manera de poner énfasis en la forma, es decir, centrar la forma en medio de su significado, en realidad aumenta la adquisición de nuevas formas gramaticales.

2.3 El subjuntivo imperfecto y sus dificultades

Como el presente trabajo investiga el aprendizaje del subjuntivo imperfecto, se considera oportuno explicar qué implica exactamente el subjuntivo y por qué los estudiantes de ELE tienen problemas a la hora de aprenderlo.

Para entender la función del subjuntivo en español, primeramente, hay que exponer dos conceptos importantes: 'modalidad' y 'modo'. El subjuntivo es una manera de expresar cómo el hablante ve el mundo, es decir, permite expresar cierta modalidad (Baralt, 2010). Modalidad es la expresión léxica o morfológica que indica la certeza o incerteza del enunciado que uno pronuncia (Collentine, 2010, p. 40). Diferentes palabras pueden expresar diferentes niveles de realidad percibida y, por tanto, expresan diferentes modalidades. Por ejemplo, el adverbio 'quizás' expresa más incerteza que el adverbio 'seguro' y, por consecuencia, tiene una modalidad diferente. Por otro lado, 'modo' es la manifestación morfológica-inflexional de la modalidad de un enunciado (Collentine, 2010, p. 40). En español son las inflexiones verbales las que marcan el modo (Gudmestad, 2015). Véase los siguientes ejemplos adaptados de Collentine, 2010 (p. 40 – 41):

1. Deseo [modalidad] que me compr*es* [modo subjuntivo] algo
2. Busco a la chica [modalidad] que compr*a* [modo indicativo] muchos dulces

En líneas generales, el subjuntivo imperfecto funciona similarmente al subjuntivo presente en que se usa el subjuntivo imperfecto si la frase principal expresa modalidad (incerteza, duda, deseo etc.). La diferencia entre el subjuntivo imperfecto y el subjuntivo presente frecuentemente es una cuestión de tiempo gramatical. Si la frase principal está en presente, se usa el subjuntivo presente, pero si la frase principal está en pasado, se usa el subjuntivo imperfecto.[1] Por ejemplo:

1. Deseo [modalidad en presente] que me compr*es* [modo subjuntivo presente] algo
2. Deseaba [modalidad en pasado] que me compr*aras* [modo subjuntivo imperfecto] algo[2]

El subjuntivo entonces es un modo verbal que expresa modalidad y les permite a los hablantes del español modificar el grado de seguridad con el que hablan. A pesar de que el subjuntivo tiene esa función clara e importante en el lenguaje, sigue siendo uno de los aspectos que con más frecuencia causa errores por parte de los aprendices del español (Fernández-López, 1996). Se han analizado las dificultades que tienen los estudiantes del español a la hora de adquirir el subjuntivo desde un punto de vista psicolingüístico. Esta línea de investigación pone énfasis en el hecho de que el subjuntivo no tiene suficiente prominencia lingüística. Claudia Fernández (2008) defiende que el subjuntivo no destaca porque los estudiantes están enfocados en el contenido léxico de los verbos y no tanto en la información morfológica de las inflexiones verbales. También se ha argumentado que las formas regulares del subjuntivo no destacan lo suficiente porque difieren poco del modo indicativo (habl*o* → habl*e*, habla*ba* → habla*ra*). Hay estudios que muestran que después de una estancia en el extranjero muchos aprendices adquieren el subjuntivo por la abundancia de *input* (Sanz, 2014; Sanz, 2016), pero este trabajo está enfocado en el aprendizaje del subjuntivo imperfecto en situaciones de enseñanza explícita, por eso, no se discutirán más las estancias en el extranjero. Por todas estas razones se argumenta que el papel de la enseñanza es hacer destacar el subjuntivo en el *input* oral o escrito, lo que implica que el aprendizaje del subjuntivo puede beneficiarse de la enseñanza explícita, por ejemplo, a través de un FonF que llame la atención a este modo verbal.

En breve, el subjuntivo es un modo verbal que expresa modalidad y permite a los hablantes alterar el grado de realidad de sus enunciados y en español la realización lingüística de la modalidad, el modo verbal, se encuentra en las inflexiones verbales. Puede ser difícil de adquirir para personas que aprenden el español como lengua extranjera, por la baja prominencia lingüística que tiene esta forma verbal, y el enfoque que tienen los aprendices en el contenido léxico de los verbos. Se argumenta que el FonF significativo

[1] También existen más diferencias entre el presente e imperfecto de subjuntivo, como menor o mayor grado de posibilidad, y situaciones en la que una frase principal en presente es seguida por una frase subordinada con un subjuntivo imperfecto. Sin embargo, estas diferencias no se discutirán en este trabajo.

[2] El primer ejemplo es sacado de Collentine (2010). El segundo ejemplo es una adaptación propia del primero.

puede facilitar el aprendizaje del subjuntivo imperfecto, ya que soluciona exactamente estos dos problemas. Por medio del realce de input y un enfoque explícito en la forma, se hacen más prominentes las inflexiones verbales y el hecho de que se trabaja en detalle el contenido del input antes de discutir las formas gramaticales hace que haya más espacio para enfocarse en la información morfológica, pues el contenido léxico estará ya trabajado.

2.4 Preguntas de investigación e hipótesis

El primer objetivo de este trabajo es ver la eficacia de una metodología didáctica, basada en el enfoque por tareas, que emplea también un FonF para el aprendizaje del subjuntivo imperfecto. Como se ha establecido anteriormente, existen bastante pruebas que muestran la eficacia de la enseñanza explícita para el desarrollo de conocimiento implícito, también de formas gramaticales (Ellis, 2002; Ellis, 2016; Spada & Tomita, 2010; Norris & Ortega, 2000). El enfoque por tareas es una de esas formas de enseñanza explícita y se ha argumentado que esta metodología requiere un FonF para facilitar el aprendizaje de la gramática. Existen diferentes propuestas en cuanto a la aplicación del FonF (Long, 2014; Willis & Willis, 2013, Skehan, 1998; Ellis, 2003) y la presente investigación quiere atribuir a este debate investigando la aplicación de un FonF significativo (Samuda, 2001) en el ámbito de ELE para el aprendizaje de una estructura gramatical avanzada, el subjuntivo imperfecto. Por lo tanto, la primera pregunta de investigación es:

1. *¿Cuál es la eficacia del FonF significativo para el aprendizaje del subjuntivo imperfecto por parte de estudiantes universitarios de español como lengua extranjera?*

Con respecto a esta primera pregunta, se espera que el conocimiento del subjuntivo imperfecto se mejorará tanto al nivel interpretativo como al nivel productivo. Ya que el FonF significativo está diseñado para despertar una necesidad de aprendizaje en los estudiantes a través de tareas que están justamente fuera de su alcance lingüístico, se espera que, al darse cuenta de que les faltan recursos lingüísticos, los estudiantes presten más atención si se introduce el FonF, ya que serán conscientes de que la nueva estructura gramatical que van a aprender les será realmente útil. Esta concienciación gramatical facilitará entonces el aprendizaje de la nueva estructura. Además, se cree que la metodología FonF significativo llevará a un aprendizaje fructífero del subjuntivo imperfecto, puesto que combate justamente las causas principales de su dificultad. El mayor enfoque en el contenido léxico de los verbos (Fernández, 2008) se ve solucionado por el enfoque inicial en el significado, es decir, el contenido léxico del input, lo cual cree más espacio a la hora de trabajar en la forma gramatical. La baja prominencia lingüística de las inflexiones morfológicas (Gudmestad, 2012) será combatido por el realce de input de estas inflexiones y un enfoque explícito en la forma lo cual hará destacar más la forma verbal.

Para contribuir con más detalle al debate sobre la eficacia de FonF, se va a comparar también la eficacia de la metodología FonF significativo con una metodología basada en estructuras con un FonFs. La segunda pregunta de investigación ha sido formulada de la siguiente manera:

2. *¿Cómo se compara la eficacia del FonF significativo en cuanto al aprendizaje del subjuntivo imperfecto con una metodología FonFs basada en las estructuras?*

En cuanto a esta segunda pregunta de investigación, se espera que el FonF significativo llevará a un aprendizaje del subjuntivo imperfecto más fructífero, ya que la creación de una necesidad tangible para aprender junto con la fuerte relación entre la forma y su significado beneficiará al aprendizaje de la estructura meta. Además, el hecho de que el FonF significativo pide que los estudiantes creen sus propias hipótesis, que luego se discutirán con toda la clase, es considerado un factor que incrementa el compromiso que tienen con el proceso de aprendizaje, lo cual facilitará su aprendizaje.

3. Metodología

3.1 Participantes

Para encontrar una respuesta a las preguntas de investigación expuestas en la sección anterior, se llevó a cabo un proyecto de investigación en el que participaron 42 estudiantes universitarios (13 hombres y 29 mujeres). Todos los participantes tenían entre 19 y 28 años (edad media de 21.4, desviación típica (SD) = 1.81). 10 de los participantes estaban cursando un grado de lenguas modernas con su enfoque principal en el español. 32 de los participantes estaban cursando un grado de relaciones internacionales y por lo tanto no tenían el aprendizaje del español como enfoque principal de sus estudios, aunque formaba una parte obligatoria del currículum de ese programa. Estaban en el último curso del trayecto básico para aprender español que ofrece la universidad y ese curso estaba diseñado para llevar a los estudiantes al nivel B2.1. Habían seguido cursos de español en la universidad durante 1 año académico antes de empezar el curso en el que se hizo la presente investigación. Se excluyeron los datos de los participantes que habían vivido en un país hispanohablante para un período de tiempo superior a 3 meses. Todos los participantes eran estudiantes de español como L2, no había hablantes de herencia.

Los participantes fueron distribuidos en dos grupos: un grupo de intervención en la que se implementó la metodología didáctica con el FonF significativo, y un grupo de control que recibió una enseñanza basada en una metodología FonFs. Dado que el presente estudio fue llevado a cabo en un entrono de clase auténtico, podría considerarse una investigación cuasi experimental. En consecuencia, las limitaciones de dicho contexto se contrapesan con su validez ecológica.

3.2 Materiales

Para recoger los datos, a los participantes se les presentaron tres cuestionarios. En el primer cuestionario, los participantes dieron su consentimiento informado e indicaron sus datos personales (edad, identidad de género, carrera actual, y una posible estancia en un país hispanohablante). El segundo cuestionario estaba enfocado en el conocimiento receptivo y productivo que tenían los participantes del subjuntivo imperfecto. Se optó por incluir dos tareas diferentes para obtener una imagen más completa del conocimiento gramatical de los estudiantes. Su conocimiento receptivo fue asesorado con una tarea receptiva desarrollada por Sergio Adrada-Rafael (2017) y las capacidades productivas fueron medidas con una tarea productiva desarrollada por Melissa Baralt (2010). El último cuestionario estaba diseñado para medir el conocimiento del subjuntivo imperfecto de los estudiantes después de la intervención. Ese tercer cuestionario estaba compuesto por tareas interpretativas y productivas similares, pero con situaciones diferentes. Además, cabe mencionar que tanto las tareas interpretativas como las productivas fueron contrarrestadas para aumentar el valor estadístico de la investigación. En los siguientes párrafos se entrará más en detalle sobre las tareas y los materiales didácticos.

3.2.1 Tarea Receptiva

La tarea receptiva medía el conocimiento receptivo del subjuntivo imperfecto. Esta tarea, desarrollada por Adrada-Rafael (2017), estaba compuesta por 15 situaciones descritas en inglés y los participantes tenían que elegir la frase en español que mejor describía las situaciones. Diez situaciones midieron el conocimiento del subjuntivo y las otras 5 situaciones eran distractores que midieron el conocimiento de otras estructuras gramaticales. Véase el apéndice 1 para un ejemplo.

Se optó por una tarea de este tipo porque se quería incluir una tarea interpretativa con un enfoque más comunicativo. Ya que la metodología empleada en la presente investigación estaba enfocada en la relación entre forma y significado y ponía énfasis en un contexto comunicativo, no se quiso incluir una tarea con frases descontextualizadas, como una prueba de juicio de gramaticalidad.

3.2.2 Tarea productiva

La otra tarea que se empleó en la presente investigación para medir el conocimiento productivo del subjuntivo imperfecto era la tarea productiva. Esta tarea fue adoptada de Baralt (2010) y estaba diseñada para sonsacar una producción más o menos libre del subjuntivo imperfecto. En la tarea, los participantes fueron presentados con un texto en inglés que luego tenían que contar de nuevo en español con la ayuda de un cómic. El cómic funcionaba como guía para que el participante pudiera resumir la historia con más facilidad, pero también daba pistas sobre cómo contar la historia. Por ejemplo, había nubes de texto en los cómics que tenían expresiones que requerían el subjuntivo, como “estaba contenta de que…”. Así se podía introducir contextos que sonsacaban el subjuntivo imperfecto y se podía medir el conocimiento de esa forma verbal. Véase el apéndice 2 para un ejemplo.

Los participantes tuvieron que resumir 3 pequeñas historias de este modo para el pretest y tres otras historias para el postest. Recibieron instrucciones que tenían que contar su historia en el pasado y también podían hacerle preguntas al investigador y plantear dudas en cuanto al vocabulario. Las historias se produjeron de forma escrita para hacer más fácil la colección y el análisis de los datos.

3.2.3 Materiales didácticos

Como se ha discutido en la sección 2, el presente trabajo investiga la eficacia de un FonF significativo basado en una metodología de Samuda (2001). Se diseñaron entonces los materiales didácticos desde el enfoque de esa metodología y progresión de tareas. Ya se han discutido sus pilares metodológicos más importantes y aquí se describirá cómo se diseñaron los materiales didácticos. Antes de todo, hay que destacar que se diseñaron los materiales a partir de una unidad didáctica ya existente, que fue adaptada para seguir la metodología con el FonF significativo. También cabe destacar que solo se adaptaron los ejercicios y tareas que trataron el subjuntivo imperfecto, y que el resto de la unidad didáctica no fue cambiado.

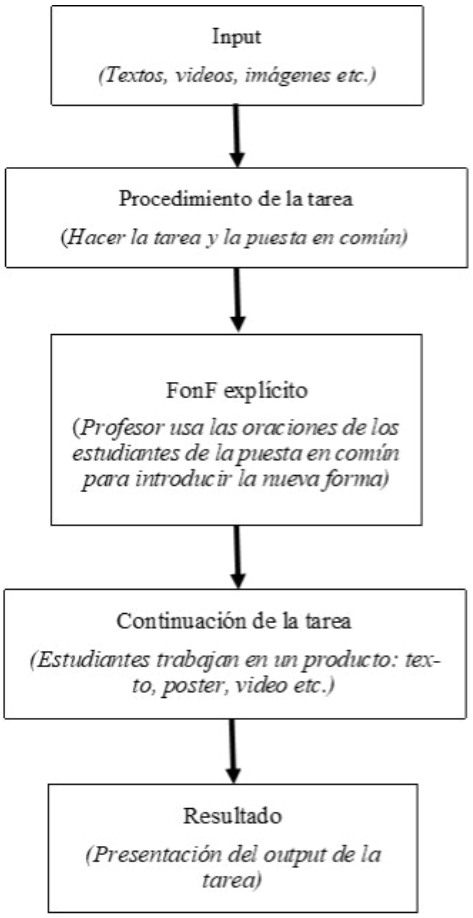


Figure 1. Esquema de secuenciación de tareas.

Nota: Figura que ilustra la secuenciación de las tareas diseñadas para la intervención metodológica.

La secuenciación de una tarea seguía el esquema descrito en la Figura 1 adaptado de Samuda (2001, p. 387). Se empezó cada tarea con un *input* en el que se realzó la estructura meta. A continuación, se procedió con la tarea y el profesor aquí adoptó el papel de co-comunicador y guía. Luego se puso en común la tarea con toda la clase y aquí el profesor introdujo la nueva forma gramatical explícitamente utilizando las oraciones del *input* o las que produjeron los estudiantes. Sin embargo, era imprescindible que se siguiera haciendo referencia al significado de la nueva forma también. Luego se continuó con la tarea, o se pasó a otra tarea similar que les permitió a los estudiantes trabajar en un producto final, que fue puesto en común con todo el grupo. Esta secuenciación de las fases de la tarea fue diseñada para despertar una necesidad de aprendizaje y para facilitar la formación de conexiones entre la forma y su significado. Veáse el apéndice 3 para un ejemplo.

3.3 Procedimiento

Ahora que se han discutido en detalle los materiales empleados en el presente trabajo, queda por discutir el procedimiento y la aplicación de dichos materiales. Se llevó a cabo la recolección de datos en un periodo de siete semanas (desde el 20 de abril, 2022 hasta el 3 de junio, 2022), y se utilizó un diseño con pretest y postest para asesorar el aprendizaje del subjuntivo imperfecto. Primeramente, se distribuyeron los primeros dos cuestionarios durante las clases de ELE. Los participantes tomaron unos 15 minutos para completar cada cuestionario. Los datos fueron recopilados y guardados de manera anónima utilizando códigos para cada participante.

Desde el 9 de mayo hasta el 1 de junio se hizo la intervención en los grupos experimentales, mientras que los grupos de control recibieron la educación 'estándar'. Esa metodología 'estándar' fue basada también en el enfoque por tareas (siguiendo los manuales Gente Hoy 2 y Gente Hoy 3) (Martín Peris & Sans Baulenas., 2014; Martín Peris et al., 2013), pero incluía enfoques en las formas explícitas guiadas por el profesor. Ambos grupos de intervención fueron enseñados por el investigador, mientras que los grupos de control fueron enseñados por otros dos profesores. Después de la intervención se distribuyó el último cuestionario, es decir, el postest, para medir cuánto habían aprendido los participantes durante las clases.

3.4. Codificación y análisis

Los resultados de la tarea receptiva fueron codificados atribuyendo un punto para cada respuesta correcta, sin incluir las respuestas a las preguntas de distracción. Por lo tanto, los participantes pudieron obtener un puntaje máximo de 10 puntos para la tarea receptiva, es decir, un punto para cada pregunta correcta.

Los textos producidos por los estudiantes para la tarea productiva fueron analizados con un enfoque en el uso del subjuntivo imperfecto. Para este análisis se adaptó una clasificación de Marije Michel & Laura Stiefenhöfer (2019, p. 200) que contiene una clasificación compuesta por tres partes:

1. El uso correcto del subjuntivo: El estudiante empleó un subjuntivo en un contexto donde era necesario
2. La falta del subjuntivo: El estudiante empleó otra forma verbal en un contexto donde hacía falta emplear un subjuntivo
3. Uso excesivo del subjuntivo: El estudiante empleó un subjuntivo en un contexto donde no hacía falta.

A partir de esta clasificación se atribuyeron puntos al uso del subjuntivo de los estudiantes. Se atribuyó un punto para la creación de un contexto en el que un subjuntivo era necesario, otro punto más para el uso del subjuntivo dentro de este contexto, y un último punto para una conjugación correcta del subjuntivo imperfecto. Además, para los usos superfluos del subjuntivo se atribuyeron 0 puntos. No se quiso quitar puntos para usos superfluos del subjuntivo porque se considera importante fomentar la toma de riesgo en el aprendizaje de segundas lenguas (Marín Cervantes, 2014). Se juntaron todos los puntos de cada estudiante para obtener un puntaje que expresaba el uso del subjuntivo imperfecto.

Todos los datos fueron analizados estadísticamente utilizando el programa R (R core team, 2014). Para evaluar la eficacia del FonF significativo, se compararon los resultados del pretest y postest para las tareas productivas y receptivas con un *Dependent samples t-test*. La diferencia entre la metodología bajo investigación y la metodología FonFs fue analizada con un *Independent samples t-test*. Después de verificar si los datos seguían una distribución normal empleando un *Shapiro-Wilk test* y de llevar a cabo un *Levene's test* para asesorar la homogeneidad de la variación, se concluyó que se pudieron utilizar las variantes paramétricas de las pruebas estadísticas (Tabla 1). Para cada análisis se usó un valor alfa de 0.05.

Table 1. Datos de los test de Shapiro-Wilk y de Levene.

	Shapiro-Wilk (*p*)	**Levene's (*Pr(>F)*)**
Tarea Productiva (Intervención)	0.396	0.289
Tarea Productiva (Control)	0.225	0.289
Tarea Receptiva (Intervención)	0.613	0.652
Tarea Receptiva (Control)	0.265	0.652

Nota: Tabla que muestra los datos descriptivos para los test de Shapiro-Wilk y de Levene para el grupo de intervención (N=10) y el grupo de control (N=11) separado por el tipo de tarea realizada.

4. Resultados

A continuación, se discutirán los resultados relevantes para las preguntas de investigación establecidas anteriormente. Por lo tanto, se discutirán la eficacia de la metodología FonF significativo, y su eficacia en comparación con una metodología FonFs.

4.1 La eficacia de la metodología FonF significativo

Como ha sido establecido en la sección anterior, se ha investigado la eficacia de la metodología FonF significativo haciendo una comparación de pretest y postest con los puntajes de dos tareas que midieron el conocimiento del subjuntivo imperfecto de los participantes: una tarea receptiva y una tarea productiva. Se pueden encontrar los datos estadísticos en la Tabla 2.

Table 2. Datos del pretest y postest.

	Pretest			Postest		
	Media	**SD**	**Min/Max**	**Media**	**SD**	**Min/Max**
Tarea Productiva (Intervención)	2.4	1.78	0/5	6.9	4.72	1/14
Tarea Receptiva (Intervención)	4.8	2.1	1/8	8.4	1.17	7/10
Tarea Productiva (Control)	1.45	1.44	0/4	5.45	5.43	-2/15
Tarea Receptiva (Control)	4.27	2.41	2/8	4.82	1.72	3/8

Nota: Tabla que muestra los datos descriptivos (Medias, SD y Min/Max) para el grupo de intervención (N=10) y el grupo de control (N=11).

De los datos descriptivos del grupo de intervención se puede observar que las medias de los postest son más altas que las del pretest. Además, se puede ver que los puntajes mínimos y máximos de los postest son más altos que los del pretest. Estos datos sugieren que los participantes en el grupo de intervención, en general, obtuvieron puntajes más altos en los postest que en los pretest. Con respecto a la tarea productiva, un *paired samples t-test* reveló que la diferencia era estadísticamente significativa, $t(9) = 3.81$, $p = 0.004$, 95% *CI* [1.54, 6.06] y mostró un efecto de aprendizaje en el grupo de intervención. La magnitud del efecto es grande (Cohen's $d = 1.26$). Para la tarea receptiva, un *paired samples t-test* reveló que la diferencia entre los pretest y los postest era estadísticamente significativa, $t(9) = 4.91$, $p < 0.001$, 95% *CI* [1.94, 5.26] y mostró un efecto de aprendizaje en el grupo de la intervención con respecto a la tarea receptiva también. La magnitud de este efecto es grande (Cohen's $d = 2.12$).

En breve, se han encontrado diferencias significativas tanto con respecto a la tarea productiva, como la tarea receptiva lo cual implica que hay efectos de aprendizaje grandes en el grupo de intervención para ambos tipos de tareas.

4.2 La eficacia del FonF significativo en comparación con la metodología FonFs

Para investigar la eficacia del FonF significativo comparado con una metodología FonFs, se ha llevado a cabo una comparación entre los efectos de aprendizaje del grupo de intervención y el grupo de control tanto para la tarea receptiva como para la tarea productiva. Se establecieron los efectos de aprendizaje para cada tarea, restando

los puntajes de los pretest de los puntajes de los postest, así obteniendo un puntaje de ganancia que indicó el efecto de aprendizaje de cada participante. Un resumen de los datos estadísticos puede encontrarse en la Tabla 3.

Table 3. Resumen de los datos estadísticos de la comparación de los grupos.

	Intervención			Control		
	Media	**SD**	**Min/Max**	**Media**	**SD**	**Min/Max**
Tarea Productiva	4.5	3.41	0/10	4.18	5.62	-2/14
Tarea Receptiva	3.6	2.32	0/7	0.55	2.84	-4/5

Nota: Tabla que muestra los datos descriptivos (Media, SD y Min/Max) de los puntajes de ganancia para el grupo de control (N=11) y el grupo de intervención (N=10).

De los datos descriptivos se puede observar varias cosas. En primer lugar, se puede notar que el grupo de intervención tenía un puntaje de ganancia medio marginalmente más alto que el grupo de control en cuanto a la tarea productiva. Encima, en cuanto a la tarea receptiva, el grupo de intervención tenía un puntaje de ganancia medio considerablemente más alto que el grupo de control. Además, si se comparan los puntajes mínimos y máximos entre los dos grupos, se puede notar que en general el grupo de intervención tenía puntajes de ganancia neutrales o positivos, mientras que en el grupo de control también había participantes con puntajes de ganancia negativos. Finalmente, se puede observar que las desviaciones estándares en el grupo de control eran más grandes que las del grupo de intervención, lo cual implica que el grupo de intervención progresó más homogéneamente. Estos datos podrían sugerir que el grupo de intervención tenía, en general, un efecto de aprendizaje más grande que el grupo de control, especialmente en cuanto a la tarea receptiva.

Un *two-samples t-test* reveló que la diferencia en los puntajes de ganancia para la tarea productiva no era estadísticamente significativo $t(19) = -0.15$, $p = 0.879$, 95% *CI* [-4.62, 3.98]. La magnitud del efecto de esta diferencia es insignificante. Para la tarea receptiva, un *two samples t-test* reveló que la diferencia en puntajes de ganancia entre los dos grupos fue estadísticamente significativa, $t(19) = -2.68$, $p = 0.015$, 95% *CI* [-5.42, -0.69]. Estos resultados implican una diferencia notable entre los efectos de aprendizaje del grupo de control y el grupo de la intervención. La magnitud de este efecto es grande.

Para resumir, se encontró una diferencia significativa en el efecto de aprendizaje de las metodologías bajo investigación con respecto a la tarea receptiva. Para esta tarea, los estudiantes del grupo de la intervención tenían puntajes de ganancia significativamente más altos que los estudiantes del grupo de control. Por otro lado, en cuanto a la tarea productiva, no se encontró tal diferencia.

5. Discusión

En la sección anterior, se han presentado los resultados de la investigación llevada a cabo en el presente trabajo. En esta sección se entrará en más detalle sobre qué significan exactamente estos resultados en comparación con la literatura y las preguntas de investigación.

5.1 La eficacia de la metodología FonF significativo

La primera pregunta de investigación estaba centrada en la eficacia del FonF significativo para el aprendizaje del subjuntivo imperfecto. En cuanto a esta pregunta se ha hipotetizado que el uso del subjuntivo imperfecto mejoraría tanto al nivel productivo como al nivel receptivo debido al hecho de que la metodología FonF significativo pretende despertar una necesidad de aprendizaje de nuevas estructuras gramaticales en los estudiantes (Samuda, 2001). El presente trabajo investigó, mediante una intervención didáctica y un análisis de pretest y postest, si esta manera de poner énfasis en la forma en realidad fomenta el aprendizaje del subjuntivo imperfecto.

Los resultados del análisis de eficacia de la metodología FonF significativo discutidos en la sección anterior mostraron que los posttest en general tenían puntajes medios, mínimos, y máximos más altos que los pretest para ambos tipos de tarea. Además, la diferencia entre los pretests y postest resultó estadísticamente significativo para ambos tipos de tarea con magnitudes de efecto grandes. De estos análisis y de los efectos de aprendizaje descubiertos, se puede concluir que la intervención, y, por tanto, la metodología FonF significativo, ha sido eficaz para enseñar el subjuntivo imperfecto en español. El hecho de que las tareas que formaban la intervención estaban diseñadas siguiendo la secuenciación elaborada por Samuda (2001, p. 387) y, por consecuencia, estaban enfocadas en despertar una necesidad para aprender nuevas formas gramaticales al confrontar los estudiantes con huecos en su repertorio lingüístico y hacer hincapié en las conexiones entre el significado y la forma de la lengua, junto con los resultados del análisis estadístico sugieren que utilizar un FonF significativo para enseñar formas gramaticales avanzada podría ser una buena estrategia de enseñanza.

Los resultados entonces muestran que la metodología FonF significativo ha sido exitosa a la hora de enseñar el subjuntivo imperfecto a los estudiantes universitarios que participaron en este estudio. Esto también implica que la metodología explícita empleada en este proyecto ha podido fomentar el desarrollo del conocimiento implícito de los estudiantes en cuanto al subjuntivo imperfecto. Los estudiantes mostraron que eran capaces de reconocer contextos que requerían el subjuntivo imperfecto y emplear este modo verbal dentro de dichos contextos. Esto demuestra que han adquirido, hasta cierto punto, conocimiento implícito del subjuntivo imperfecto a través de la enseñanza explícita. En comparación con el debate discutido en la sección 2 sobre la posibilidad de emplear la enseñanza explícita para fomentar el desarrollo de conocimiento implícito, se podría considerar que la presente investigación ha demostrado que la enseñanza explícita, de hecho, puede facilitar la adquisición de conocimiento implícito. El hecho de que los

estudiantes fueron capaces de reconocer el subjuntivo imperfecto dentro de un texto, de interpretarlo y también de reconocer contextos en los que se debería emplear este modo verbal a la hora de producir textos escritos, apoya la perspectiva de Nassaji (2017) que argumenta que la enseñanza explícita ayudará a interiorizar las normas gramaticales a través de su prominencialización. En otras palabras, la enseñanza explícita con el FonF significativo ayudará a los estudiantes a aprender normas gramaticales porque les proporciona los recursos necesarios para reconocer, y sucesivamente interiorizar, las diferentes normas gramaticales y sus contextos comunicativos.

Además, se ha argumentado que el FonF significativo se encontraba entre la gramática tradicional y la gramática nocional-funcional (Finocchiaro & Brumfit, 1983) en la gama continua que representa las diferentes visiones de la enseñanza de la gramática. De esta manera, se atribuyó ese tipo de FonF a la gramática sistémica-funcional (Halliday & Matthiessen, 2004). Otro objetivo entonces de este trabajo era investigar la eficacia de una metodología basada en la gramática sistémica-funcional en el ámbito de ELE. Entonces, los resultados de la presente investigación muestran que una estrategia didáctica basada en la gramática sistémica-funcional (como el FonF significativo) también funciona en el ámbito de ELE y con respecto a estructuras gramaticales más avanzadas. La combinación de elementos de la gramática tradicional con la gramática nocional-funcional, llevó a una didáctica que no solo funciona en la enseñanza de inglés (Rose & Martin, 2012; Hyland, 2007), sino también en el ámbito de español como lengua extranjera.

En breve, los resultados sugieren que un FonF significativo en realidad puede ser una metodología eficaz para el aprendizaje del subjuntivo imperfecto. Con respecto a la pregunta de investigación expuesta, se puede decir entonces que un FonF significativo tiene eficacia para el aprendizaje del subjuntivo imperfecto. También se puede concluir que la hipótesis establecida puede ser aceptada, ya que el uso del subjuntivo imperfecto mejoró tanto al nivel receptivo como al nivel productivo gracias a la creación de una necesidad de aprendizaje de nuevas formas gramaticales en los estudiantes.

5.2 La eficacia del FonF significativo en comparación con FonFs

La segunda pregunta de investigación analizaba la eficacia de la metodología FonF significativo en comparación con una metodología en FonFs. Se ha hipotetizado que el uso de la metodología FonF significativo llevaría a un aprendizaje más fructífero del subjuntivo imperfecto, ya que la creación de una necesidad tangible para aprender nuevas estructuras gramaticales (Samuda, 2001) junto con la fuerte conexión entre el significado y la forma beneficiaría el aprendizaje del subjuntivo imperfecto.

Los resultados mostraron una diferencia significativa entre los efectos de aprendizaje del grupo de control y el grupo de intervención para la tarea receptiva con una magnitud de efecto grande. Por otro lado, el grupo de intervención tuvo un puntaje de ganancia más alto que el grupo de control en cuanto a la tarea productiva, pero esta diferencia carece de significancia estadística. En su totalidad, se puede decir que la metodología FonF ha sido más eficaz que la metodología FonFs.

La metodología FonF significativo tuvo más eficacia en general en cuanto a la enseñanza del subjuntivo imperfecto que la metodología FonFs. Se argumenta que la diferencia más grande entre el FonF significativo y el FonFs era el grado de compromiso que tenían los estudiantes con las nuevas formas gramaticales. El FonFs presentaba las nuevas formas gramaticales mediante una explicación explícita del profesor después de una actividad introductoria. Con el FonF significativo se quiso hacer más hincapié en la experimentación y la creación de hipótesis, así aumentando la intensidad con la que los estudiantes tenían que relacionarse con las nuevas formas gramaticales. Los estudiantes tenían que ir construyendo y comprobando sus hipótesis gramaticales a partir de un *seeded input.* Luego, se discutieron estas hipótesis con toda la clase para compararlas y sacar una conclusión grupal. A través de este aspecto exploratorio del FonF significativo, junto con el confrontar a los estudiantes con huecos en la interlengua, se quería despertar una necesidad de aprendizaje que motivara a los estudiantes para que aprendieran mejor esta nueva forma gramatical. Se puede concluir entonces que los resultados mostraron que el FonF significativo tuvo éxito a la hora de despertar ese interés en la nueva forma gramatical y que este interés, junto con el compromiso aumentado por la experimentación, explica la mayor eficacia del FonF significativo a la hora de enseñar el subjuntivo imperfecto.

También es importante discutir cómo la forma gramatical bajo investigación se relaciona con los resultados. Como ha sido establecido en la sección 2.3, la perspectiva psicolingüística ofrece dos explicaciones por la dificultad del subjuntivo (imperfecto): 1) los estudiantes están demasiado ocupados con el contenido léxico de las palabras para fijarse en su información morfológica (Fernández, 2008), y 2) el subjuntivo no destaca suficientemente en el input debido a la pequeña diferencia morfológica con el indicativo (Gudmestad, 2012). Se defiende que la metodología FonF significativo ha funcionado mejor que la metodología FonFs porque ha podido combatir justamente estos dos problemas. Primeramente, ya que cada secuenciación de tareas empezaba con trabajar en el significado de la lengua antes de trabajar en las formas gramaticales, los estudiantes tenían suficiente tiempo para trabajar y discutir sobre el contenido léxico de las palabras. Luego, a la hora de introducir el FonF, el contenido léxico ya estaba trabajado y había más espacio mental para enfocarse en la forma de la lengua. El segundo problema se ve combatido por el uso del realce de *input*. Durante toda la duración de la tarea, las diferentes formas del subjuntivo imperfecto fueron realzadas en el *input* que recibieron los estudiantes. Este realce de *input* hizo más prominentes las inflexiones morfológicas que expresaban el subjuntivo y, por tanto, hizo que esta forma gramatical destacara más. La metodología FonF significativo ha sido bastante eficaz entonces a la hora de combatir las principales dificultades del aprendizaje del subjuntivo (imperfecto) y este hecho podría haber atribuido a que el FonF significativo haya sido exitosa.

Además, cabe discutir la carencia de significancia estadística con respecto a la tarea productiva. Si se comparan las diferentes tareas que midieron el conocimiento del subjuntivo imperfecto utilizado en este proyecto con el *Triadic Componential Framework* (Robinson & Gilabert, 2007), una infraestructura que clasifica los diferentes componentes que hacen más o menos compleja una tarea pedagógica, se puede concluir que la tarea

receptiva era menos compleja que la tarea productiva. Para la tarea receptiva, los estudiantes sólo tenían que elegir la frase correcta mientras que la tarea productiva requería la lectura de un texto, recordar los acontecimientos más importantes, recontar la historia en español y también hacerlo en el pasado. De ahí, y basado en la *Triadic Componential Framework,* la tarea receptiva tenía menos factores que aumentaban su complejidad que la tarea productiva (por ejemplo, +/- elementos, +/- fases diferentes, Aquí y ahora vs. Allí y entonces, y Baja vs. Alta demanda de la memoria funcional). Puede que la intervención con el FonF significativo haya sido demasiado corta para resultar en un aumento significativo de afectos de aprendizaje para una tarea tan compleja como la productiva empleada en este trabajo.

Para concluir, se puede decir que en cuanto a la eficacia de la metodología FonF en comparación con FonFs, se encontró que el FonF significativo llevó a efectos de aprendizaje estadísticamente más altos que el FonFs en cuanto a la tarea receptiva. Este hallazgo también está en concordancia con la hipótesis formulada. Por otra parte, no se ha encontrado una diferencia clara entre la eficacia de las dos metodologías en cuanto a la tarea productiva. Se ha argumentado que esta falta de un efecto claro podría ser por la complejidad de la tarea productiva. Sin embargo, a pesar de una falta de una diferencia significativa para la tarea productiva, se defiende que la metodología FonF significativa, en general, ha sido más exitosa a la hora de enseñar el subjuntivo imperfecto que la metodología FonFs.

5.3 Limitaciones y sugerencias para futuros estudios

La presente investigación, aunque llegó a resultados interesantes, también tenía sus puntos de mejora que podría ser interesantes tener en cuenta para futuros estudios. Por ejemplo, el hecho de que la intervención duró solo unas semanas podría haber influenciado en los resultados, sobre todo con respecto a la adquisición de conocimiento productivo del subjuntivo imperfecto. Se recomienda emplear la metodología FonF significativo en una intervención más duradera para investigar si se encuentran efectos de aprendizajes más grandes al nivel productivo también. Además, cabe recalcar que, por motivos de gestión de tiempo y recursos, no se ha podido asegurar que todos los participantes del pretest y postest tuvieran clase del mismo profesor. Es decir, los participantes que formaban el grupo de intervención fueron enseñados por el investigador, mientras que los otros participantes que formaban el grupo de control fueron enseñados por otros profesores. Este efecto del profesor podía influenciar en el éxito de aprendizaje de los estudiantes y, por tanto, podría considerarse una variable confusa. Se podría llevar a cabo una investigación similar a la presente en la que se controla el efecto del profesor. Asimismo, cabe mencionar que sólo se ha investigado la eficacia del FonF significativo para algunos usos del subjuntivo imperfecto. Se tendrá que investigar si las otras funciones de esta forma verbal también benefician de la misma forma de una enseñanza con un FonF significativo. Finalmente, sería interesante emplear el FonF significativo en niveles iniciales para ver si funciona también para estructuras menos avanzadas.

6. Conclusión

A modo de conclusión, el presente trabajo ha investigado la eficacia de una metodología con un FonF significativo para el aprendizaje de una nueva estructura gramatical, despertando interés en las nuevas formas gramaticales y creando una necesidad para aprenderla. Se han encontrado efectos de aprendizaje significativos para el FonF significativo, lo cual implica que es una metodología bastante eficaz para enseñar el subjuntivo imperfecto. Al comparar el FonF significativo con una metodología FonFs, se encontró que el FonF significativo llevó a efectos de aprendizaje más impactantes en cuanto a la interpretación y recepción del subjuntivo imperfecto, pero no se encontró tal diferencia en cuanto a su producción. Estos resultados sugieren que el FonF significativo, en general, funcionó mejor que la metodología FonFs.

El presente estudio tiene diferentes implicaciones didácticas. El FonF significativo, como ha sido propuesto por Samuda (2001) y puesto en práctica en esta investigación, podría ser una manera eficaz de introducir un FonF. Se ha podido conseguir despertar un interés y una necesidad para aprender nuevas estructuras gramaticales en los estudiantes mediante esta metodología, lo cual llevó a un aprendizaje bastante fructífero del subjuntivo imperfecto por parte de los estudiantes. El FonF significativo podría ser una buena opción para encontrar el equilibrio entre desarrollar la competencia comunicativa de los estudiantes y facilitar el aprendizaje de nuevas estructuras gramaticales. Se argumenta que esta metodología podría ser de especial interés en niveles de ELE más altos, donde los estudiantes a veces ya no prestan tanta atención a nuevas formas verbales, puesto que las estructuras conocidas les permiten comunicarse con bastante éxito. La metodología FonF significativo podría funcionar bien para fomentar el aprendizaje de nuevas estructuras gramaticales, sin perder el enfoque en la comunicación y el significado de la lengua.

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Apéndice 1 Ejemplo tarea receptiva

1) You do not sleep more than 5-6 hours at night, and as a result, you are tired all day long. You know that being able to sleep more hours is good for your productivity.

- ○ Procesarías mejor la información si lograbas dormir más horas.
- ○ Procesarías mejor la información si lograrías dormir más horas.
- ○ Procesarías mejor la información si lograras dormir más horas.

Apéndice 2 Ejemplo tarea productiva[3]

Alejandro and Luís were best friends. They had much in common, especially their love for soccer. Every day they practiced together. To Alejandro, soccer was everything. For example, Alejandro often talked of going to the major leagues, both he and Luís together. "Luís, one day we'll play for our country!" He wanted them to go far. Luís didn't take it so seriously, rather, he just enjoyed the game. But to Alejandro, soccer was life.

Please retell the story you just read as best as you can **in Spanish and in past tense** using the comic strip above as a guideline. You can write your retelling of the story in the box below.

Apéndice 3 Ejemplo de una tarea didáctica

1) Leed el siguiente texto de dos personas que hablan por un foro en línea y responded a las preguntas:
    a. ¿Qué prefieres, vivir sólo o vivir con otras personas? ¿Por qué?
    b. ¿Cómo os lleváis vosotros con vuestros compañeros de piso?
    c. ¿Habéis tenido algún problema similar cuando vivíais con otra persona?
    d. ¿Cómo lo habéis resuelto?

Hola amigos!

Tengo un problema y necesito vuestros consejos. Desde hace un año tengo una nueva compi de piso. Al principio me cayó genial y no lo pasamos muy bien, pero últimamente tengo algunos problemas con ella. Por ejemplo, yo soy una persona muy limpia y me gusta tener la casa limpia. Sin embargo, ella es una persona más desorganizada, digamos, y a ella no le molesta que la casa a veces esté hecha un desastre. Me irrita bastante que nunca me ayude con la limpieza y que siempre deje sus cosas tiradas por toda la casa. Además, como nuestra casa sólo tiene un baño, me cabrea que pase dos horas duchándose por la mañana.

Aunque mi compi de piso hace cosas que me irritan, no quiere ser demasiado borde con ella porque me sigue cayendo bien. Por ejemplo, me encanta que podamos salir juntos para bailar y que a veces cocine para mi si tengo que trabajar hasta tarde. ¿Cómo le aviso de mis problemas sin enojarse demasiado? ¡¡Ayudadme porfi!!

Un beso,

Marta

Holi Marta,

[3] Por motivos de derechos de autor, no se he podido incluir el cómic que acompaña la historia. Si el lector desea ver los cómics, se recomienda consultar el estudio original de Baralt (2010) o el banco de datos IRIS.

Entiendo muy bien tus problemas. Cuando era estudiante también vivía con un compañero de piso que a veces me irritaba mucho. No tuvimos problemas con la limpieza porque él era una persona muy limpia también y me encantó que *siempre limpiáramos la casa juntos. Sin embargo, solía hacer fiestas en nuestra casa e invitaba a todo tipo de gente. Al principio* me gustó *conocer a sus amigos, pero después de un tiempo* me molestó bastante que *siempre hubiera gente en nuestra casa. Ya que en esa época me madrugaba cada día para ir al trabajo,* me irritaba mucho que *sonara* música hasta tarde. Al final tuvimos un argumento bastante grande y no nos hablamos por un rato, lo que no mejoró nuestra relación :(. Yo te aconsejaría que hablaras con tu compi de piso lo antes posible para evitar una pelea como pasó en mi caso.

¡Espero que te ayude y mucho ánimo!

Un abrazo,

Luis

2) ¿Qué diferentes maneras de expresar sentimientos o irritaciones encontráis en el texto? ¿Y cuáles son las cosas o acciones que provocan esas emociones? Rellenad la siguiente tabla con un compañero.

Por ejemplo, en la siguiente frase, ¿cuál es la frase que expresa una emoción y cuál es la frase que especifica la acción o cosa que provoca esa emoción?: “a ella no le molesta que la casa a veces esté hecha un desastre.”

Frase que especifica la emoción	La acción o cosa que provoca la emoción
1) No le molesta que … …	1) la casa a veces esté hecha un desastre … …

3) ¿Tenéis las mismas respuestas? Comparad vuestras respuestas con la tabla aquí abajo. ¿Habéis notado algo en cuanto a la relación entre la frase que expresa la emoción, y la frase que expresa la acción o cosa que provoca la emoción? ¿Y en cuanto a los verbos utilizados?

Frase que especifica la emoción	La acción o cosa que provoca la emoción

1) No le molesta que 2) Me gusta 3) Me irrita bastante que 4) Me cabrea que 5) Me encantó que 6) Me gustó que 7) Me molestó bastante que	1) la casa a veces esté hecha un desastre 2) tener la casa limpia 3) nunca me ayude con la limpieza y que siempre deje sus cosas por toda la casa 4) pase dos horas duchándose por la mañana 5) siempre limpiáramos la casa juntos 6) conocer a sus amigos 7) siempre hubiera gente en nuestra casa

4) ¡Ahora vosotros! Vais a escribir otra respuesta a la pregunta de Marta con vuestras experiencias con la convivencia y con algunas recomendaciones para ayudarla con su problema. Pensad en dos experiencias vuestras con la convivencia (cosas que te gustaron, cosas que te molestaron etc.) y unos consejos para ayudar a Marta con su problema (¿qué la aconsejarías que hiciera?).

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Book review: Sánchez-García, D., Sánchez-Hernández, A., & Dafouz, E. (Eds.). (2026). *Navigating disciplinary literacies in English-medium higher education. Insights from lecturers, students, and professional developers.* Routledge

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This book is a long-awaited volume on disciplinary literacies in English-Medium higher education (EME), showcasing findings from the research project SHIFT[1] and the fruitful collaboration of its members with other researchers. As stated by the editors, the volume fills the gap of addressing students' experiences and languages needs in EME research, in particular the study of disciplinary literacies, which are defined as "the set of discipline-specific skills and communication practices that students require to navigate and engage effectively with disciplinary practices in both global and local contexts" (Dafouz et al., 2023: 3). Connected to this need, professional developers are also placed center stage, given their facilitating role in helping EME lecturers become aware of students' needs. Framing disciplinary literacy within the dimensions embraced in English-medium education in multilingual university settings (EMEMUS) (Dafouz & Smit, 2016, 2020) effectively allows to tackle the multilingual university settings and the role of languages in education, particularly English, when language learning occurs incidentally. Disciplinary literacy is studied from both the lens of a final product text and as the process of all teaching and learning activities that are quintessential in the development of disciplinary knowledge.

The volume is divided into three parts. The first part sets the scene with two opening chapters; the former (authored by Sánchez-García and Sánchez-Hernandez) provides a very well supported and updated context and introduction to disciplinary literacy in EME, a necessary chapter for all readers, regardless of their expertise. The latter (Chapter 2) offers a three-pronged conceptual model for approaching disciplinary literacy in EME

[1] The SHIFT project (*Understanding the Internationalisation of Higher Education from the Student Perspective: A Longitudinal Examination of Disciplinary Literacies in English- medium Education*) is an international collaborative initiative that unites researchers from five different universities in Austria and Spain. The project was funded by the Spanish Ministry of Research, Development and Innovation (Grant Reference: PID2019- 103862RB- 100).

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settings, as summarized below. The second part revolves around disciplinary literacy in the classroom (Chapters 3 to 10), and finally the third part deals with teacher development in disciplinary literacy (Chapters 11 to 15). The chapters in the volume are authored by well-known researchers within EME as well as by early- and mid-career authors, thus connecting researchers from the SHIFT research project with other experts in disciplinary literacy from different places, with Europe and the global north being clearly represented.

I would like to begin by pointing to the three-strand conceptual model outlined in Chapter 2 written by Dafouz, Hüttner and Smit. The model comprehensively caters for those language practices that feature relevant aspects in disciplinary literacies in EME, identifying three main strands. The first strand refers to the linguistic or multimodal expressions of thought patterns as appropriate for a specific discipline that students need to access to acculturate to the discipline. The second embraces those language practices used to develop knowledge, that aspect of disciplinary literacy that students learn while learning disciplinary knowledge, among which we find multimodal expressions, discourse functions or all linguistic practices present in classroom interaction. The third relates to those "language practices to display expertise, which represent the targeted expert communicative practices" (page 24) and which display the disciplinary literacy and genre knowledge (Tardy et al., 2020) of students when they convey (write or speak) the contents they have learnt, more often than not, productions in class or to be assessed. The three types of language practices embody the layers involved in the process of disciplinary literacy development and socialization that students undergo and, for this reason, the tripartite model clearly has the potential of becoming an indispensable tool for EME teachers, researchers, and professional developers to enhance students' development of subject matter together with linguistic, genre or vocabulary learning. Ultimately, the outcome is expected to positively impact the quality of EME given the direct impact that mastery of disciplinary literacy seems to have on academic achievement (McQuillan, 2016).

In the second part, *DLs in the classroom: Lecturer and student perspectives and practices*, a wide range of studies using different research and pedagogical methodologies can be found. Here chapters sharing similar content will be presented together. In Chapter 3, for instance, Dafouz, Komori-Glatz and Moore illustrate the accurate methodological process the researchers followed in a step-by-step manner to elicit EME teachers and students' views on their skills and practices as well as on their understanding of disciplinary literacies. Business and economics, different soft and hard science disciplines, different conceptualizations, skills and genres emerge across different courses. Interestingly, some teachers expect students to automatically transfer their literacy from their mother tongue and mostly aim at developing their students' higher-level and critical thinking whereas students' ordeal resides in meeting basic task-based learning outcomes rather than developing a specific skill.

A mixed-methods design is used in Chapter 4 by Birch-Becaas and Pagèze to delve into how French students develop their disciplinary literacy in English for specific purposes (ESP) and EME learning environments. This is done by examining students, ESP specialists,

and disciplinary teachers. Worth mentioning is their proposal of ESP and disciplinary teachers co-teaching and how they identify the risk that language learning models (LLMs) and Artificial Intelligence are pushing universities toward "simplistic solutions that pitch EME against ESP (…) in an either/or approach" (page 86).

Apart from providing findings that point to the need to make the implicit explicit, chapters suggest that attention to disciplinary literacy should also combine awareness of various practices, registers and genres in order to develop resourceful and capable speakers. In this way, performing a discipline-based needs analysis is proposed in Chapter 9. Here, Yuksel and Altay analyze the language needs and challenges of Turkish students with different English language skills (reading, writing, speaking, and listening), comparing English-medium instruction (EMI) engineering students with EMI international relations students. This chapter reveals that speaking is the most challenging skill, followed by writing. Productive skills, therefore, remain a common area of difficulty, hinting that EMI programs need to address these challenges through targeted support, regardless of students' level of English proficiency.

The lack of impact of academic year on the students' view of disciplinary literacy development (Chapter 6) is an interesting and surprising finding as well, pointing to the need to pay more attention to disciplinary literacy to gain an eagle's view of students' perceptions from beginning to end of their studies. In this chapter, Orduna Nocito suggests that older students do not perceive to have improved their communicative practices in English as they advanced in their studies and unveils, again, that speaking skills remain one of the skills students feel they have improved the least. Since findings show the low impact of the academic year, the author recommends that EME programs focus more explicitly on increasing students' awareness of disciplinary literacy and providing students with more cognitively demanding practices.

The role of language is paramount in almost all chapters. Chapter 5 by Soriano-Flórez explores, from a translanguaging perspective, the participants' subject literacy needs, beliefs and reported learning and practices, highlighting the need to foreground language and enhance disciplinary understanding by making it more explicit. Translanguaging is also analyzed in a Hispanic university in the Mexico-US border by Esquinca and Herrera-Rocha in Chapter 10, where Mexican-American engineering students are seen to develop multilingual language ecologies in the context of existing language policy, including disciplinary practices that draw on the full range of students' repertoires, in particular bi-literacy Hispanic-US. On another note, Chapter 7 examines the role of extramural English in two EME contexts (Spain and Austria), i.e., the role of the English that learners come in contact with outside the classroom. Departing from the assumption that extracurricular English also facilitates informal, incidental language learning in both productive and reception skills in similar ways to EME, Ghamarian-Krenn, Grau and Smit examine whether and how using English with parents or friends, watching TV or English movies, and reading papers in English exerts any influence on students' perception of belonging to an international group and their disciplinary practices. This chapter suggests that the

international profile and use of English students make in their personal life does have some effect because participants in both countries reveal a similar readiness to watch, read and play computer games in English at their own volition. Using English with friends has a slight positive effect on the perception of being part of an international but no other important correlations were identified, thus disproving the hypothesis of a dependency between extramural English and disciplinary literacy. Regarding the international profile development, the results resonate with Soria and Troisi's (2014) study on internationalization at home activities which seemed to positively influence students' development of global, intercultural and international competencies.

Chapter 8, another interesting and novel contribution in the volume, examines group work. More specifically, Kuteeva and Kaufhold explore the kind of English that is seen as appropriate, acceptable and functional in lingua-culturally diverse peer collaboration in Sweden. Because group work in an EME setting is expected to develop disciplinary literacy among students, those group work activities aiming at producing assignment texts require and entail discussions and recontextualization of content into a written assignment. These peer interaction and discussions do not exist without tensions around regulating language, making the connection between intercultural communicative competence and groupwork in EME discernible. Indeed, such peer interaction and negotiation usually allow for more diversity in language uses and yet the eventual written assignment is likely to be written in a standard variety of academic English. Among the strategies deployed by students to solve communicative problems in these EME group work activities, the authors identify solving disagreements, negotiating relationships, navigating roles (leadership roles) or workload.

Finally, the third and last part on *teacher professional development and disciplinary literacies in English-medium education* is made up of five chapters which, roughly speaking, advocate for disciplinary oracy as an important part of disciplinary literacy, claiming for the adoption of a plurilingual genre-based approach to academic writing and for an informed writing practice toward genre knowledge. This second part thus seeks to provide EME lecturers and professional developers with insights that help them "see their roles as one of socialising students into the discourse of their discipline" (Airey, 2011: 50).

More specifically, a point is made in Chapter 11 in order to accommodate disciplinary oracy and feedback to disciplinary literacy at a Swiss bi- and multi-lingual university. The chapter is a narrative account of the author's personal experience when teaching an elective professional development module to EME lecturers. Schaller-Schwaner documents EME lecturers' apprehension of focusing on language and reluctance toward the need to focus on the *E* (i.e., English). Highlighting that language is always present in teaching and learning, this author also argues for the need to raise awareness of recognizing oral class discussion as a form of teaching and source of learning. The chapter seeks to help lecturers improve their skills in order to engage in discussions in a more informal and

conversational register, grab attention, reduce speed, create redundancy, explicitness, and predictability, and emphasize key concepts among other strategies inherent to good teaching.

In Chapter 12, Zhang describes how synergy between English for academic purposes (EAP) and EME lectures can be created in Australian teacher education, making the case for the ideal position EME lecturers are in to teach disciplinary literacies. The step-by step explanation of how disciplinary literacy and numeracy can be taught in a genre by EME content teachers is worth highlighting. Disciplinary teachers' frequent complaints about the lack of time and priority of covering disciplinary content first are taken into account but the difficulty in establishing a collaboration between EME-EAP in some institutions may need to be acknowledged.

Genres are an excellent site for teaching disciplinary literacy in a professional development course, as Mancho-Barés, Khan and Vraciu illustrate. Adding a plurilingual layer to the previous chapters, this rigorous study takes a plurilingual genre-based approach to academic writing and pinpoints some useful guidelines for disciplinary literacy-oriented teacher training. Exploring the centrality of disciplinary genres in higher education discourse communities and the role of plurilingualism in fostering students' plurilingual genre-based literacy, this chapter argues for an EMI teacher training geared towards raising lecturers' awareness of plurilingual disciplinary literacy. The analysis of three out of the four years in a Bachelor's program reveals missed opportunities to cater for students' plurilingual disciplinary literacy, possibly due to lack of coordination and communication across the whole Bachelor's program. The lack of a sequence genre chain across subjects, with no progression from first to final year, results in some genres being over- or underrepresented.

Chapter 14 *had to* appear at the end of the volume. It is after the knowledge accrued about disciplinary literacies in the volume that we are ready to process the deep epistemological, ontological and linguistic discussion about the extent to which we teach cross- and transdisciplinary literacies to our students in our current higher education institutions. In this chapter, Gustafsson gives food for thought when we are made to realize that forward-looking academics will need to be prepared to think beyond one's own professional specialization. Indeed, readers are pushed to reflect on how lecturers teaching cross-disciplinary literacies in double degrees on, for example, medicine and mechanics, should deeply understand and embrace cross-disciplinary literacy. The author reinstates the idea that we need to let our students know that, as active agents in generating new discourses, they may need to be ready to work with uncertainty and imprecision temporarily. This is a stimulating chapter where the elusive notion of disciplinary literacy in a cross-disciplinary context is discussed.

Finally, the volume wraps up with an excellent review itself, Chapter 15. This last chapter summarizes and weaves an excellent discursive thread that binds the volume, streamlining its main strength and value, a coda for navigating disciplinary literacies. Its author, Dalton-Puffer, points to the fact that the written genre remains the most studied

aspect of disciplinary literacy, followed by oracy. Lamenting that the volume reflects this reality, the author also points to the fact that the semiotic nature of disciplinary literacies "does not surface to a significant degree in EME participants' verbalizations about their practices" (page 318) and that the instructors in the studies tend to disregard and relegate the role of educational genres because their professional identity of academics and researchers drives them to prioritize what is important for their students to develop. Chapter 15 particularly highlights the contribution made by Dafouz, Huettner and Smit in Chapter 2 when proposing a model that embraces the basic purposes that disciplinary literacy language practices may have in EME: i) accessing the disciplinary community; ii) developing knowledge structures/constructing disciplinary content; and iii) displaying expertise. The model complements other disciplinary models and can be applicable in many areas.

As Dalton-Puffer rightly says, the volume serves as an agenda of improving the teaching and learning experience in EMEMUS and points to avenues for action. The volume evidences how vibrant disciplinary literacy research is within English-medium education in higher education and identifies contradictions, needs, and limitations to address in disciplinary literacy in EME, steppingstones toward an inclusive and quality EME. For these reasons, the volume is a necessary read for researchers in the fields of disciplinary literacies, EME and bilingual education, as well as for professional developers interested in literacy and English-medium instruction. Among the future avenues, I would like to underline the following paths: the need to research oral disciplinary literacies (Chapters 6 and 9 identified speaking as the most difficult skills for students), the impact of Artificial Intelligence on disciplinary literacy in EME (only mentioned in Chapter 4), and recent developments in higher education around digital teaching modalities in EME now on the rise, like COIL (Collaborative Online International Learning) and Virtual Exchange (Hackett et al., 2024). The last two were incipient when the volume was being developed but they emerge as future directions within disciplinary literacy in EME research.

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Book review: Habibie, P., & Sawyer, R. D. (Eds.). (2025). *Reflexive and reflective research approaches in applied linguistics*. John Benjamins

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In applied linguistics, *reflection* and *reflexivity* often appear as familiar methodological keywords after abstracts in journal articles. They are also used in positionality sections or paragraphs in articles or theses. In some cases, they are referred to in passing usually in the limitations sections or ethics statements. However, they are less often treated as fully fledged epistemic commitments that reshape what counts as data, analysis, warrant, and knowledge contribution. The epistemic focus aligns with a broader move toward methodological diversification in applied linguistics, including recent efforts to document and legitimize less frequently used approaches such as narrative inquiry and phenomenology (Riazi, 2024).

The present edited volume places reflexive and reflective inquiry at the center of research design and representation, not at its margins. The overall book's accomplishment is that it has made reflexive methodologies clear to understand. That is, it does not merely advocate reflexivity as a qualitative aspect, but it clarifies what reflexive research does, what it requires, and how it can be pursued with rigor and ethical accountability across a range of applied-linguistic domains. To achieve its goal, the book is organized into three parts plus an introductory chapter and a coda. It moves from conceptual and methodological foundations in the first part to discipline-specific uptake and critique, and finally to illustrative studies that demonstrate how reflexive and reflective methodologies are used in research studies. This progression makes the volume potentially useful for graduate students and for early-career scholars seeking a principled entry point into approaches that foreground lived experience, positionality, and the ethics of knowledge production.

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From methodological family to methodological practice

In the introduction chapter, the editors frame the volume around four reflexive methodologies, namely, autoethnography, duoethnography, narrative inquiry, and currere. They position these methodologies within the interpretive qualitative traditions that address "subjective yet socially situated questions" (p. 1) through sustained reflection and reflexivity. This framing is important because reflexive research is frequently misunderstood as a merely personal endeavor, or as an acknowledgement for some weaknesses that substitutes experience for analysis. Instead, the book repeatedly demands that reflexive methodologies treat the self not as an end point, but as an analytic site through which cultural, institutional, ideological, and historical forces become visible.

Part I of the book includes Chapters 2–5. The autoethnography chapter explicitly acknowledges the method's growing popularity and its controversies, then clarifies how autoethnography draws on autobiographical writing, ethnography, and narrative inquiry to critique personal, social, and cultural phenomena. The chapter crucially foregrounds methodological resources, such as self-reflexivity, emotionality, subjectivity/intersubjectivity, and storytelling that enable researchers to connect inner experience to socio-cultural worlds, and it notes debates over analytic, critical, interpretive, evocative, and artistic orientations. Pedagogically, this is a strong move because it helps readers avoid treating *autoethnography* as a single genre with a single quality standard, and instead understand it as a methodological family with different aims and warrants.

The duoethnography chapter complements the above discussion by shifting attention from solitary self-study to dialogic, relational inquiry. Duoethnography is presented as a collaborative, *living* methodology that intertwines storytelling and story-listening, engaging transtemporal and trans-conceptual movements across past, present, and future, and emphasizing how positionality discursively frames inquiry. The narrative inquiry chapter, similarly, treats narrative not as an intuitive act of telling stories but as a research methodology with ethical and epistemological stakes, including challenges such as interpretive multiplicity (the *Rashomon effect*) and the complexities of *backyard research*.

Currere, perhaps less widely known in applied linguistics than narrative inquiry (see, e.g., Ghanbar et al., 2024) or autoethnography, is introduced as both a concept in curriculum studies and a research method rooted in *running the course* of lived curriculum experience while attending to social, political, and cultural enactment. Its recursive movements between self and world are structured through four steps, namely, regression, progression, analysis, and synthesis, providing a procedural grammar for inward-turning work that remains socially situated.

Taken as a whole, Part I functions as a methodological primer with a distinctive contribution that equips readers with a vocabulary for methodological accountability. That is, how reflexive work can justify its claims, define its analytic movement, and articulate its ethical commitments.

Reflexivity in applied linguistics: Uptake, critique, and guidance

Part II (Chapters 6–9) is where the book's contribution becomes most explicitly disciplinary. Rather than assuming that reflexive methodologies travel seamlessly into applied linguistics, the chapters examine what changes applied linguistics researchers need to consider when they address topics, such as language ideologies, identity, pedagogy, power, and the ethics of representing others. For example, the chapter on autoethnography in applied linguistics (with attention to ELT/TESOL and academic literacies) highlights both affordances and limitations, and directly addresses ethical dilemmas during research and writing. The timeliness of this contribution is underscored by the recent appearance of methodological syntheses charting how autoethnography has been taken up in TESOL teacher education (see Ghanbar & Kamali, 2026).

The duoethnography chapter offers one of the volume's more theoretically ambitious moves. It places duoethnography within critical pedagogy and ELT research and engages with meta-theories, such as Marxism, critical realism, and early Frankfurt School critical theory, to propose duoethnography as an engine for ideology critique and praxis rather than simply a dialogic narrative form. Even readers who do not share the chapter's theoretical commitments may appreciate its methodological provocation that reflexive methods can be vehicles for theory-building and consciousness-raising, not merely descriptive accounts of experience.

The chapter on currere demonstrates how it can be used to develop critical pedagogy by systematically revisiting past experiences, envisioning future commitments, and reworking present practice. Using currere as a methodological framework, the authors structure a collaborative inquiry around four common movements in currere, namely, regressive, progressive, analytical, and synthetical. These moves are used to examine how past, present, and future orientations shape teaching and to position currere as a transformative alternative to conventional language-teaching models. The authors argue that currere's transtemporal and trans-conceptual work enables educators and researchers in applied linguistics and language education to deepen critical reflection, advance socially just pedagogy, and generate practice-informed research.

Finally, the chapter narrative inquiry reports a study with Grade 3 children identified as struggling readers in a First Nations in-community school. Working with the principal and classroom teacher, the researchers co-designed a structured literacy intervention and used narrative inquiry to generate rich, experience-near accounts of learning to read and participating in remediation. Guided by the narrative commonplaces of temporality, sociality, and place, the study was designed, enacted, analyzed, and reported in ways that also supported ongoing attention to ethical challenges. The chapter includes an overall narrative as well as participant and researcher stories, supplemented by artwork and artifacts that capture meanings not easily conveyed in words. Data collection took place two mornings per week over five months; although the study was intended to follow students from Grade 3 into Grade 4 across two years, the project was curtailed by the pandemic and resulting restrictions on school access.

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Taken together, the chapters in Part II, convey the message that reflexive methodologies can enrich applied linguistics research. This is because applied linguistics is a field in which language, identity, power, and institutional life are deeply entangled. Notwithstanding, reflexive methods require explicit design choices and discipline-specific sensitivity, especially when the boundaries between researcher, participant, and practitioner are as clear as in other methodologies.

Demonstrations: What reflexive research can illuminate

Part III of the book that includes Chapters 10–13, demonstrates studies that show how reflexive and reflective methods can be used to generate knowledge claims with practical and ethical significance. A critical autoethnography of migration in Australia, with attention to English linguistic imperialism and interactional pressures, examines how power structures and dominant language ideologies shape everyday language choices. The contribution of the study is not merely an empathy for the participants, rather it is an analytic illumination of how macro-level views (about English, legitimacy, belonging) materialize in micro-level interaction, with implications for inclusion in multilingual societies.

The duoethnographic study of translingualism and language teacher identity explores the lived constraints of monolingualism and native-speakerism across two contrasting contexts (United Kingdom and Japan). It shows how these ideologies affect willingness to claim bilingual identity and shape professional identity negotiation, while also documenting small acts of resistance. The chapter demonstrates a key strength of duoethnography in applied linguistics, which is the capacity to make contradiction analytically productive by revealing how identities are both enabled and constrained by local ideologies, and how agency can be partial, strategic, and context-dependent.

A currere-based chapter demonstrates how currere can be used to develop critical pedagogy for language educators by deconstructing past experiences, co-constructing the present, and reconstructing future teaching orientations. A discussion that positions currere as a counter-narrative to traditional language teaching methods through a transformative lens. The chapter is significant for readers interested in praxis since it illustrates how reflective inquiry can be organized as a disciplined, staged process that feeds directly into pedagogical redesign.

The narrative inquiry chapter embedded in an intervention study on children labeled *struggling readers* offers a compelling example of methodological hybridity. That is, narrative inquiry is not treated as incompatible with intervention, but as a framework for designing, living out, analyzing, and ethically managing an intervention, attending to temporality, sociality, and place. The chapter also records pandemic disruption and reminds readers that reflexive methodologies are often well suited to capturing the contingency and instability of educational research contexts.

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Part III thus puts forward the argument that reflexive methodologies are especially valuable when the object of inquiry involves identity work, ideological constraint, educational transformation, and ethical entanglement. These are domains where *objective distance*, as a trend in other methodologies, can obscure how knowledge and power are co-produced.

The coda and the volume's field-level significance

Matthew T. Prior's closing commentary usefully places the collection in the wider landscape of contemporary applied linguistics. The author briefly traces key developments in the field and revisits how *reflection* and *reflexivity* have been understood and mobilized in qualitative research. Rather than simply recapping what came before, the coda works as a connective piece, linking the volume's methodological focus to ongoing debates in applied linguistics and pointing to promising directions for future work. The coda is a good ending for a methods-oriented book because it helps readers see reflexive methodologies not as a specialist aspect of the field, but as part of a broader shift in how applied linguists conceptualize research problems, evidence, and scholarly contribution.

Evaluation and constructive tensions

The volume's key strength is its coherence. Many edited collections read as thematically related but uneven in cumulative impact. Here, the three-part structure supports a deliberate learning trajectory from conceptual foundations to applied-linguistics relevance to demonstrations. The book also succeeds in treating reflexive approaches as rigorous methodologies rather than stylistic alternatives to conventional research writing.

At the same time, the volume raises productive tensions that can be framed as invitations for further work in the field. These tensions are outlined below.

From *reflexivity* as principle to *reflexivity* as evidence. The book repeatedly insists on methodological seriousness, but readers, especially doctoral or graduate students, may still want more explicit cross-chapter guidance on how reflexivity becomes visible and assessable in research reporting. What textual and analytic markers signal reflexive movement beyond narrative presentation? How can researchers demonstrate that reflexivity has transformed interpretation, not merely accompanied it?

Quality criteria and evaluation heuristics. Several chapters discuss affordances, limitations, and ethical dilemmas, yet a consolidated set of evaluative heuristics (even in the form of a brief synthesis) would further strengthen the volume's usefulness as a teaching text. Such heuristics could address, for example, analytic warrant in autoethnography, relational ethics in duoethnography, and how currere's steps map onto claims and contributions.

Interface with broader methodological ecologies in applied linguistics. The volume is appropriately centered on interpretive qualitative approaches. Still, applied linguistics is methodologically diverse and plural, and many researchers work across paradigms.

A more explicit discussion of how reflexive commitments interface with mixed-methods designs, corpus-assisted qualitative inquiry, design-based research, or intervention studies (beyond the single narrative-intervention example) would broaden the volume's uptake. This may indeed be more a direction for future volumes in this Research Methods in Applied Linguistics (RMAL) series than a limitation of the present book.

These points do not detract from the volume's contribution; rather, they reflect the book's success in making reflexive methodologies salient enough that readers will want to operationalize them more systematically.

Conclusion

Overall, *Reflexive and reflective research approaches in applied linguistics* is a timely and well-constructed addition to the applied linguistics methods literature. It explains the core reflexive approaches with clarity, shows how they speak to recurring disciplinary concerns, and illustrates what rigorous reflexive work looks like through carefully chosen studies. The volume's main contribution is to treat reflexive inquiry as a fully legitimate way of producing knowledge, one that can bring into sharper focus how language, identity, ideology, and pedagogy are experienced, negotiated, and reshaped in practice. For graduate students, qualitative researchers, and those teaching research methods, the book offers both a reliable conceptual orientation and a set of workable models to draw on.

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Book review: Alba-Juez, L., & Haugh, M. (Eds.). (2026). *The sociopragmatics of emotions.* Cambridge University Press

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Quite undeniably, emotion permeates every facet of human activity. Not only does it impact personal experience of reality, but it also serves as a pillar of our social and relational selves. It is precisely this omnipresence that has garnered significant attention across a diverse array of disciplines, from psychology (e.g., Niedenthal & Ric, 2017; Scherer, 2000) and sociology (e.g., Gordon, 2017; Turner & Stets, 2005) to anthropology (e.g., Beatty, 2019; Lindholm, 2005) and neuroscience (e.g., Adolphs & Anderson, 2018; Lane & Nadel, 1999). Historically, these fields have sought to map the cognitive, affective and cultural terrains of human feeling and have explored how internal states manifest in external social behaviours.

Within the realm of linguistics, and more specifically across the disciplines of pragmatics and discourse analysis, the study of emotion has evolved from treating affect as a mere marginal variable (e.g., Brown & Gilman, 1989; Spencer-Oatey, 1996) to recognising it as an intrinsic, structuring and filtering component of communication (e.g., Alba-Juez, 2021; de Saussure & Wharton, 2020; Wharton et al., 2021; Wharton & Strey, 2019). Rather than being viewed as a disruptive, irrational byproduct, emotion is now increasingly analysed as a systematic, interactional phenomenon. It is within this burgeoning paradigm that *The sociopragmatics of emotion*, edited by Laura Alba-Juez and Michael Haugh, makes a most illuminating contribution.

By bridging the gap between linguistic structures and social interaction, this edited collection champions a multidimensional and multidisciplinary framework that explores how emotions are dynamic, context-dependent resources vital to human alignment. The volume is organised in three parts addressing three domains tightly connected with emotion: evaluation, social relationships and morality. They comprise a total of ten chapters. Additionally, it features an introductory chapter and an epilogue.

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The first part addresses emotion and evaluation. Its first chapter is "Invoked emotions in times of Coronavirus. A sociopragmatic analysis of the narratives of healthcare workers and victims of Covid-19 in Spain during lockdown", by Laura Alba-Juez. It investigates the discursive construction of emotion within personal narratives recounted by Spanish healthcare personnel and Covid-19 victims during the initial peak of the pandemic (March–June 2020). Relying on Appraisal Theory (Martin & White, 2005), the analysis transcends isolated individual sentences to offer a holistic sociopragmatic view. It examines how sociocultural expectations, multimodal semiotics and the inherently fluid nature of human affect intersect with evaluation, relationships and morality. A primary finding demonstrates that *invoked*—i.e., implicitly triggered—emotion occurs with significantly higher frequency than *inscribed*—i.e., explicitly stated—emotion. This prompts the author to suggest a new taxonomy of invoked emotional mechanisms.

The second chapter is titled "The use of humour as an affiliative strategy in times of Covid" and is coauthored by Carmen Maíz-Arévalo and Francisco Yus. Their study shifts the lens to internet-mediated communication, as it looks into how meme-based humour served as a vital psychological mechanism for Spanish citizens coping the emotional strain of the 2020 lockdown. Based on a corpus of 250 memes collected during the 99-day state of alarm, the authors assess the primary humorous dimensions deployed, their discursive realisations and the pragmatic motivations behind them. Their findings reveal a clear predominance of affiliative humour over more maladaptive types, such as aggressive or self-deprecating forms. This preference underscores a collective sociopragmatic drive to bolster ingroup solidarity, foster empathy and trigger positive digital emotion contagion amid pervasive societal anxiety.

Authored by Carmen Sancho Guinda, the last chapter in this part is "Promoemotion in action. Sci-Tech marketing in university innovation portfolios". It explores the institutional and commercial application of affect by analysing the online dissemination portfolios of Universidad Politécnica de Madrid (UPM). More specifically, the chapter scrutinises *technology disclosures*, a contemporary hybrid genre designed to promote scientific innovations to broader market audiences. Drawing upon Systemic Functional Linguistics, Critical Discourse and Genre Analysis, and Multimodal Semiotics, the study details three core empathy-raising strategies: involvement, amusement and metadiscursive guidance. By examining 134 technical solutions, the author illustrates how digital affordances have allowed traditionally neutral, empirical technical writing to colonise emotional territory, thereby leveraging affect to construct institutional ethos and build trust with prospective investors.

The second part of the volume turns to emotion and social relations. Its first chapter is contributed by Carolina Figueras Bates: "Doing emotions and displaying empathy. The construction of online peer support". It offers a comparative analysis of how emotions are enacted and empathy is structurally displayed within two distinct internet-mediated mental health support forums: one about borderline personality disorder (BPD) and another about eating disorders (ED). Focusing specifically on peer-to-peer interactions concerning

these disorders, the analysis tracks the grammatical and pragmatic deployment of the perceptual verb *to feel*. It uncovers two contrasting discursively constructed selves: within the ED forum, somatic and bodily sensations frequently supersede abstract emotional labels; in contrast, in the BPD forum, distinct emotional boundaries are prioritised in order to stabilise a fluid sense of self. Crucially, both groups embed these tailored feeling states within highly person-centred, empathic displays.

Coauthored by Yongping Ran and Linlin Fan, "Understanding affective aspects of Chinese relational practices. From the perspectives of 'heart' and 'face'" is the second chapter. Acknowledging that the intersection of affect and relational frameworks remains under-theorised within non-Western contexts, this chapter seeks to bridge the gap via a sociopragmatic study of Chinese medical interactions. Hence, the authors examine how doctors balance interpersonal relationships while executing the delicate, potentially tense act of urging patients to settle outstanding fees. The study introduces the conceptual framework of *heart* (*qíng*) to complement traditional, orthodox notions of *face* (*liǎn* and *miànzi*). *Qíng* is defined as an interactional commitment to interlocutors' emotional well-being, realised through *human touch* (*rénqíngwèi*) and *emotional warmth* (*wēnqíng*). The authors identify six distinct interactional strategies—such as evoking past favours or directly disclaiming threat to the heart—to safely manage these sensitive transactions.

Tatiana Larina authors the next chapter in this part: "Emotive politeness and communicative styles. Leave-taking in British and Russian interpersonal interaction". She conducts a cross-cultural, comparative investigation of formulas, communicative styles and polite practices enacted during leave-taking in British English and Russian contexts. Adopting a methodology that blends sociopragmatics, cross-cultural pragmatics and classic politeness theory, the author analyses data gathered from discourse completion tests and naturalistic observations, while advancing her established paradigm of *emotive politeness*, which she defines as the deliberate interactional orientation towards interlocutors' feelings and emotive facework. She finds that British communicative styles demonstrate a substantially higher reliance on explicit emotive politeness than their Russian counterparts, which lends support to the premise that politeness is fundamentally a culture-specific, psychologically variable phenomenon.

The last chapter is "Laughter and embarrassment in a complicated task". Here, Shelby R. Miller, Hilal Ergül and Salvatore Attardo investigate the real-time occurrence of embarrassment and its behavioural correlates during natural, dyadic task-completion exercises—specifically, the collaborative assembly of a complex puzzle. Framing embarrassment as an emotional reaction to a perceived social or moral infraction, they locate face management and stance alignment within a multimodal paradigm. Their empirical data shows that laughter and genuine smiling frequently co-occur with felt embarrassment. This direct correlation challenges earlier assertions that embarrassment yields only artificial smiles or that laughter is solely an index of humour. The authors

outline a sociopragmatic typology consisting of *self*, *vicarious* and *joint* embarrassment, identify *self-absolution* as an interactive strategy for conversational repair and offer exploratory thoughts on the role of individual personality types.

The third part of the volume is dedicated to emotion and morality. Isolda E. Carranza authors its first chapter: "The institutional relevance of emotions. Moral-nexus effects in the courtroom". Drawing on ethnographic data and audio-visual recordings of criminal trials, Carranza explores how institutional actors—specifically prosecutors—discursively construct and evaluate the emotions of non-institutional participants, such as witnesses and defendants. Concentrating on prosecutors' cross-examinations and closing arguments, she demonstrates that metapragmatic commentary regarding an individual's display—or noticeable absence—of grief and love serves a dual purpose: it judges the *appropriateness* of the emotion while verifying its *authenticity* for unaddressed but listening trial audiences—such as judges or juries. Ultimately, this evaluation influences the perceived credibility of the speaker. The chapter introduces the concept of the *moral nexus*, which alludes to a powerful rhetorical alignment of information, affect and culturally available moral scripts enabling institutional figures to project a unified epistemic-affective-moral stance.

The second chapter is contributed by Wei-Lin Melody and Michael Haugh: "Displaying embarrassment as social action in business interactions". It views the display of embarrassment as a highly calculated interactional tool that is used by speakers to orient towards social norms and signal discomfort regarding potential normative violations. Relying on spoken corporate interactions between insurance agents and clients conducted in Mandarin Chinese and Taiwanese Hokkien, the authors look past the psychological state of embarrassment to examine its interactive life-cycle. They track contextual factors triggering these displays, how they are structurally manifested and, crucially, how clients respond. The study emphasises that the broader relational and moral consequences of embarrassment can only be decoded by looking at these sequential, collaborative co-participant responses.

The last chapter is "'I'm so angry!' Anger and taking offence in calls to an insurance company", by Carmen Santamaría-García. It examines the linguistic escalation of anger and the pragmatic process of taking offence through a qualitative analysis of two customer service phone calls recorded at a Spanish insurance helpline. From a sociopragmatic framework, the chapter explores how negative emotional states map directly onto moral frameworks within institutional interaction. The author isolates two primary discursive activities inherent to taking offence: *registering* the offence, which is typically achieved through the explicit verbalisation of negative affect, and *sanctioning* the offence, which appeals directly to an underlying violated moral order. The study successfully demonstrates how these dual actions link emotion and morality to negotiate social rights and expectations in real time.

The book is closed by an epilogue authored by Miriam A. Locher and titled "Revisiting the sociopragmatics of emotion". This is a reflective bookend that synthesises the volume's collective empirical contributions against the theoretical triad proposed by the editors: evaluation, relationships and morality. Additionally, it contextualises the diverse case studies within a broader methodological discussion and advocates for balanced, mixed-method approaches capable of capturing both *showing* (implicit, multimodal or invoked) and *telling* (explicit, lexical or inscribed) emotional cues. Finally, this epilogue concludes with a forward-looking agenda and notes that, while this collection significantly advances the field, ample scope remains for scholars to further untangle and refine these core sociopragmatic concepts.

The sociopragmatics of emotion arrives at a critical historic and academic juncture, which makes it an exceptionally timely contribution to the fields of pragmatics and discourse analysis. In an era marked by profound global crises and rapid technological shifts, the traditional view of emotion as a static, internal psychological state is no longer sufficient. This volume directly challenges it by positioning emotion as a dynamic and interactive phenomenon that is fundamentally immanent to how human beings evaluate the world, manage relationships and abide by distinct moral orders.

The timeliness of this collection is most vividly illustrated through its engagement with the global Covid-19 pandemic, a recent international crisis that greatly affected everyday life in many respects. For example, Alba-Juez's chapter examines the raw, real-time narratives of Spanish healthcare workers and victims during the peak of the 2020 lockdown. By analysing how these individuals relied on implicitly invoked emotional mechanisms to process trauma, her work captures the immediate social reality of crisis communication. Similarly, Carmen Maíz-Arévalo and Francisco Yus investigate the proliferation of internet memes during the same period and provide immediate evidence of how society actively deployed affiliative humour as a vital psychological coping strategy and group-rapport device to combat collective anxiety and fear.

The volume also proves to be an immensely enriching work because it broadens the empirical and theoretical scope of emotion analysis. Rather than relying on a singular school of thought, the contributing authors base their works on multidimensional frameworks blending cross-cultural pragmatics, multimodal semiotics and ethnographic observation. This eclectic approach allows the book to uncover subtle interpersonal dynamics that standard textual analyses frequently overlook. For instance, Ran and Fan's chapter complement Western-centric politeness frameworks by introducing Chinese concepts. In turn, Miller, Ergül and Attardo challenge long-held linguistic assumptions regarding conversational markers. Lastly, Carranza's ethnographic study of criminal trials offers an illuminating look at how emotion is weaponised within institutional discourse.

Another strength is the comprehensive coverage of interaction in face-to-face settings and technology-mediated or digital environments. Addressing emotion in synchronous, physically co-present communication allows researchers to understand the complex, real-time negotiation of social norms, rights and cultural identities. As seen in Chang

and Haugh's analysis of spoken business interactions, tracking the sequential lifecycle of embarrassment displays reveals exactly how corporate actors signal discomfort with potential normative violations to alter the trajectory of a transaction. In turn, Larina's comparative study of British and Russian leave-taking illustrates how face-to-face interactional routines are deeply shaped by culture-specific levels of emotive politeness. Furthermore, Santamaría-García's study of helpline telephone calls demonstrates how the verbal registration of anger allows institutional customers to sanction perceived injustices and actively appeal to a shared moral order.

In the digital sphere, looking at emotion is crucial to unravelling how modern communities construct identity, display empathy and commercialise content. Indeed, digital texts rely heavily on unique linguistic markers to anchor the self. This is what Figueras Bates manifests regarding the usage of the verb *to feel* by marginalised individuals in the two online mental health forums: it enables the discursive stabilisation of an unstable sense of self and the construction of highly person-centred, empathic peer-support networks. Conversely, in commercial digital spaces, Sancho Guinda shows how academic institutions actively take advantage of digital affordances to colonise an emotional territory and transform a traditionally dry, empirical type of portfolio into a persuasive tool designed to build trust with investors.

While the collection stands as an insightful and comprehensive volume, a critical evaluation reveals a couple of notable omissions and methodological areas that warrant further development. These limitations primarily concern the lack of integration with modern corpus linguistics tools (Baker, 2006; Cantos Gómez, 2013; Silverman et al., 2021) and a relatively restricted focus on the cognitive dimensions of affective communication (Padilla Cruz, in press). More specifically, the analyses reported on in this collection do not take advantage of computational software facilitating lexicometric analysis, sentiment analysis and topic modelling, and fail to address the cognitive impact and psychological processing of emotion-conveying elements.

Certainly, the studies provide deep, qualitative and interpretive micro-analyses of specific interactive moments, such as Santamaría-García's reading of two insurance helpline calls or Figueras Bates's examination of *to feel*. However, they rarely scale these insights using computational methods. For example, incorporating lexicometric tracking would have allowed Alba-Juez to statistically validate her newly proposed taxonomy of invoked emotional mechanisms across a much larger corpus of crisis narratives. In the case of Maíz-Arévalo and Yus's corpus, utilising automated sentiment analysis and structural topic modelling would have illuminated broader, macro-level emotional trajectories and thematic shifts across Spanish digital spaces. By relying almost exclusively on manual, qualitative framework applications, the volume misses the opportunity to demonstrate how sociopragmatic theory can be paired with big data and computational humanities.

On the other hand, the volume intentionally anchors itself within a sociopragmatic framework and focuses on the interactional, normative and social dimensions of language use. However, by strictly prioritising how emotions are displayed, negotiated and responded

to externally, their actual cognitive reception and psychological internalisation remain under-theorised. In Sancho Guinda's analysis of promoemotion within university sci-tech portfolios, the text details the empathy-raising strategies used to build institutional ethos and trust. Yet, without experimental or cognitive data, such as eye-tracking or reader-response metrics, the actual cognitive impact of these hybrid texts on prospective investors remains speculative. Similarly, while Chang and Haugh look at how co-participants sequentially respond to displays of embarrassment, their contribution broadly bypasses the psycholinguistic mechanisms driving emotional processing. Bridging the gap between the social performance of emotion and its cognitive reception would have made this already enriching volume an even more powerful, multi-disciplinary tool.

Ultimately, these methodological omissions do not diminish the value of the volume; rather, they illuminate exciting new pathways for future (socio)pragmatic research. *The sociopragmatics of emotion* stands as an indispensable collection that successfully reframes our understanding of emotion as a driving force behind all human sociality. By masterfully balancing rich qualitative insights with cross-cultural breadth, Laura Alba-Juez and Michael Haugh have compiled a work that is as intellectually stimulating as it is practically relevant. It is a highly recommended, essential read for scholars and students alike. Moreover, it is a definitive volume that will undoubtedly shape the trajectory of pragmatics and discourse analysis as regards the study of emotion and its communication for years to come.

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En las últimas décadas, el estudio y la enseñanza de los discursos de especialidad han experimentado un notable desarrollo, especialmente en el inglés con fines específicos (IFE), que ha concentrado la mayor parte de la investigación y de las publicaciones especializadas. Entre dichas publicaciones consolidadas dedicadas al IFE, cabe destacar obras recientes, como las de Basturkmen (2025) o Starfield y Hafner (2025), y colecciones con referencias a diversos fines específicos y técnicas didácticas aplicables al aula, como la de *Routledge Introduction to English for Specific Purposes*. Frente a este panorama, otras lenguas con una amplia proyección internacional, como el español, han contado con una menor sistematización teórica y didáctica en el ámbito de los fines específicos (Lafford, 2024).

Los intercambios comunicativos entre empresas hispanohablantes, la interacción médico-paciente o los discursos legales, entre otros, son fines específicos para los que se aprende el español mediante un "modelo pedagógico sensible al contexto, a los repertorios lingüísticos previos del estudiante y a los objetivos sociales que persigue" (Instituto Cervantes, 2025, p. 20). Así pues, se hace necesario un volumen que presente una panorámica propia del estado del español para fines específicos (EFE) y sus avances en investigación didáctica en distintas zonas geográficas. En esta línea, surge en 2025 el volumen objeto de la presente reseña.

La obra se caracteriza por su variedad temática y metodológica, así como por la novedosa distinción entre investigación y prácticas didácticas llevadas a cabo, principalmente, en Europa, Estados Unidos y América Latina. Por estos motivos, este título viene a complementar otras publicaciones relacionadas, como, por ejemplo, la editada por Santana Negrín (2022), en la que se tratan los ámbitos de especificidad más tradicionales

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de manera sucinta debido a su extensión y marcado enfoque didáctico, o la editada por King Ramírez (2024), centrada en la situación del español para fines específicos en Latinoamérica.

El cambio de perspectiva, tal y como sostiene el Instituto Cervantes (2025), desde lo lingüístico (qué lengua enseñar) hacia el aspecto sociocultural y pragmático (para qué enseñar, a quién, desde dónde y en qué condiciones) se ve reflejado en las cuatro partes que componen esta obra: I. Perspectivas y metodologías en la investigación del español para fines específicos; II. Campos del español para fines específicos; III. Diseño curricular y evaluación en español para fines específicos, y IV. Enseñanza de español para fines específicos. Los treinta capítulos que componen el volumen siguen una estructura uniforme que obedece a las siguientes secciones: introducción, conceptos fundamentales y antecedentes históricos, perspectivas actuales, direcciones futuras y conclusiones, y una amplia selección bibliográfica que incluye, además de las fuentes citadas, un listado de lecturas recomendadas. Estas últimas secciones dedicadas a las proyecciones futuras resultan un punto de especial interés para el avance en la investigación.

La parte I, sobre perspectivas y herramientas en EFE, contiene cinco capítulos. El capítulo inicial, elaborado por Lourdes Sánchez-López, Marcelo Tano, Ángel Felices Lago y Barbara A. Lafford, es una introducción a toda la obra, pues en él se presenta la disciplina, se exponen los antecedentes y se comparan los cursos de español para fines generales, para fines específicos y como lengua de especialidad. El capítulo 2, en el que Lucía Natale y María Cristina Castro Azuara profundizan sobre el análisis del género discursivo en EFE, incorpora bases teóricas relevantes, como la Escuela de Sídney, la Nueva Retórica o el Inglés para Fines Específicos, aplicadas a distintos contextos profesionales y académicos. Los géneros también están presentes en el capítulo 3, dedicado al análisis del discurso escrito, oral y multimodal. En concreto, Carmen Marimón Llorca y Ana Pano Alamán se centran en el discurso multimodal e identifican contextos y relaciones novedosas como resultado de su producción en plataformas digitales. La lexicografía concebida según la Teoría Funcional es la perspectiva a la que se dedica el capítulo 4, en el que Francisco M. Carriscondo Esquivel y Elena Carpi subrayan la importancia de las bases de datos y la *e-lexicografía* para desarrollar la competencia lingüística avanzada en el discurso especializado actual. El análisis de corpus en EFE conforma el capítulo 5, redactado por Pascual Pérez-Paredes y Niall Curry, en el que se estudia la idoneidad de los corpus en las herramientas de procesamiento del lenguaje natural en español, así como las posibilidades del análisis multidimensional, todo ello a pesar de la falta de formación docente en este ámbito.

La parte II, relativa a los campos del EFE, se abre con el capítulo 6, de Miguel A. Jiménez-Crespo y María del Mar Sánchez Ramos, que trata la traductología en EFE. Se pone de relieve la complementariedad interdisciplinar de la comunicación transcultural en traducción e interpretación comunitaria, y el empleo de la traducción automática y los glosarios para mejorar las destrezas comunicativas. Por su parte, Anita Ferreira Cabrera se ocupa del campo académico en el capítulo 7. Esta autora explora el perfil lingüístico-

comunicativo del estudiante, además de la producción y la retroalimentación (*feedback*) proporcionada en centros de redacción en escritura académica. Otro campo de EFE muy productivo es el de la ciencia y la tecnología, ilustrado en el capítulo 8 por Oscar A. Pérez. En él se identifican diferencias geográficas en cuanto al foco en la especialidad, en zonas hispanohablantes, y en la didáctica, en zonas no hispanohablantes. Del mismo modo, se ejemplifican propuestas aplicadas y actualizadas, y se muestran áreas que requieren atención, como el diseño curricular y el desarrollo de materiales auténticos. Por su parte, la docencia del español aplicado a las profesiones sanitarias, particularmente al ámbito médico, suele basarse en metodologías de aprendizaje servicio y programas en el extranjero. Ello demanda competencia intercultural y habilidades de comunicación interpersonal en entrevistas clínicas y otros contextos, como se expone en el capítulo 9, elaborado por Glenn Martínez, Pilar Ortega e Yvonne Gavela-Ramos. El siguiente capítulo, a cargo de Maura Velázquez-Castillo y Shannon Zeller, se centra en otro campo, aún si cabe más invisibilizado como es el español para la industria agropecuaria. Su valor radica en aunar un marco teórico sólido y un análisis de necesidades comunicativas basado en tareas, triangulado con diversos grupos de interés, constituyendo así un ejemplo metodológicamente sólido en el ámbito del español para el cuidado y la salud animal. El capítulo 11, por Javier María Gutiérrez Álvarez y Jorge Luis Morales Pastor, se centra en el español para el ámbito jurídico, se esbozan las relaciones entre lingüística, traducción e interpretación jurídica, y se propone un banco de recursos de manuales didácticos para adaptar los cursos a las necesidades de los estudiantes. En el siguiente capítulo Dieter A. Waldvogel y Silvia M. Peart trabajan en la descripción del contexto sociopolítico y las características pragmáticas, interculturales y de liderazgo necesarias en el caso del español para el ámbito militar. Estas características se retoman de la mano de Anne Lise Laursen, Ismael Arinas Pellón y Michael Scott Doyle en el capítulo 13, con su estudio dedicado a los negocios y en el que resultan útiles los corpus mencionados y los enlaces a recursos para contribuir a la creación de materiales. La segunda parte concluye con el capítulo 14, centrado en el español para el turismo y elaborado por Maria Vittoria Calvi y Julia Sanmartín Sáez. En él se delimitan los antecedentes y se explican la evolución del español del turismo, las aportaciones aplicadas en traducción y lexicografía, y las transformaciones del discurso turístico en el entorno digital (conocido como Turismo 2.0).

En la parte III, en la que se aborda el diseño curricular y evaluación, Mary K. Long y Miluska Benavides recogen los espacios y ámbitos de especialidad en los que tiene lugar el diseño de programas académicos de EFE (capítulo 15). Para la adaptación curricular es necesario realizar un análisis de necesidades, como proponen Alicia Catalá Hall y Sergio Adrada-Rafael en el capítulo 16, donde se traza la evolución del concepto “análisis de necesidades” desde modelos centrados en habilidades hasta los análisis más recientes, actualmente basados en tareas y triangulados en fuentes y métodos de recogida. Además del diseño de un análisis de necesidades propio y las herramientas para realizarlo, en este estudio destaca el cuadro resumen de puntos positivos y negativos de cada procedimiento, adaptable a cualquier contexto. Las actividades basadas en tareas para EFE se proyectan en el capítulo 17, de Julio Torres y Ellen J. Serafini. Para ello, se clasifican las tareas (meta,

pedagógicas y de evaluación), se secuencian en función de criterios, como la dificultad o la frecuencia, y se pauta la conversión de necesidades comunicativas en tareas auténticas. Del mismo modo, la evaluación y la certificación resultan desafiantes en la autenticidad de la simulación de tareas reales específicas y la evaluación de la lengua desligada de su contenido disciplinar. Así pues, Susana Llorián González y Nancy Agray Vargas discuten quince sistemas certificativos y determinan sus características generales en el capítulo 18; asimismo, incluyen líneas futuras entre las que destacan la participación de especialistas disciplinares y la coherencia entre metodologías, evaluación y logro de objetivos. Para finalizar esta tercera parte del volumen, Kris Buyse y Carmen Ramos Méndez abordan la evaluación curricular en EFE en el capítulo 19 y dibujan un plan de acción para la evaluación de programas de EFE, centrado en la co-construcción del conocimiento y la dimensión afectiva del aprendizaje, entre otros.

La obra concluye con la parte IV, que ofrece una visión didáctica del EFE. En comparación con las precedentes, esta parte resulta ser la más extensa y está formada por once capítulos. En el capítulo 20, Christopher D. Mellinger y Enrica Ardemagni recapitulan cuestiones sobre los cursos de EFE ofertados a aprendices de español como L2, detallando los perfiles existentes y sus necesidades. Uno de estos perfiles específicos lo conforman los hablantes de herencia en EFE, caracterizados en el capítulo 21 por Francisco Salgado-Robles y Francisco Lorenzo. Se sintetizan las adaptaciones pedagógicas para la enseñanza del EFE a este colectivo que resultan necesarias en la selección de contenidos, la interacción sociocultural y la evaluación, desde una aproximación crítica que atiende a los factores identitarios y contextuales que los manuales de EFE no suelen abordar. Seguidamente, Mary E. Risner (capítulo 22) se centra en la descripción de las necesidades de los estudiantes preuniversitarios a partir del análisis de cursos, llegando a la conclusión de que se percibe un creciente interés por el aprendizaje integrado de contenidos y lenguas extranjeras (AICLE), el diseño invertido y el análisis de dominio. A su vez, la integración del contenido profesional y académico en cursos de español con fines generales se presenta en el capítulo 23 de Darcy Lear. En él se ofrecen pautas para adquirir competencias profesionales básicas mediante experiencias en ámbitos laborales, especialmente en Estados Unidos y América Latina. Este mismo enfoque experiencial, a través de pasantías y aprendizaje servicio, se amplía en el capítulo 24, realizado por Diana Ruggiero, Megan Jeanette Myers y Barbara A. Lafford. Como señalan las autoras, se requiere una perspectiva ecológica crítica que promueva la justicia social en las comunidades, la competencia intercultural y las habilidades profesionales.

Tal y como se explica en los tres siguientes capítulos, el aprendizaje puede adoptar diversos formatos, ofreciendo el entorno digital claras ventajas. Entre estas destacan el uso de cursos abiertos de tipo MOOC, aplicaciones móviles, intercambios, o juegos inmersivos, como expone Elisabet Arnó Macià en el capítulo 25. La autora revisa el concepto de Enseñanza de Lenguas Asistida por Ordenador (ELAO), en sus vertientes social y tutorial, con el propósito de impulsar un aprendizaje activo y colaborativo. Desde el enfoque del aprendizaje basado en datos, Inmaculada Martínez Martínez presenta en el capítulo 26 diversos corpus que permiten aplicar una metodología sólida y familiarizar al profesorado

con técnicas de análisis de géneros escritos, orales y multimodales. El estudio de casos también se plantea como un marco útil para diseñar secuencias de aprendizaje en la construcción, los negocios o el turismo. En este sentido, en el capítulo 27 Ana Almagro Esteban analiza este enfoque de la enseñanza mediante estudios de caso del aprendizaje basado en tareas y en problemas, enfatizando su potencial para integrar contenido multimodal.

Entre los perfiles estudiantiles y los enfoques pedagógicos en EFE, destaca un interés transversal: el desarrollo de la competencia intercultural. Este tema es abordado por Lorena Cuya Gavilano y María Isabel Pozzo en el capítulo 28, donde analizan la evolución del concepto desde perspectivas clásicas hasta enfoques actuales que buscan fomentar la sensibilidad cultural hacia la lengua aprendida. La formación docente en EFE constituye otra línea de investigación relevante en el contexto del volumen. En el capítulo 29, Carmen King Ramírez y Ana Bocanegra-Valle exploran la formación docente del profesorado de EFE en Europa, Estados Unidos y América Latina, subrayando las carencias de ofertas formativas en esas zonas (especialmente en la última) y destacando la importancia de asociaciones y reuniones científicas, así como la contribución de proyectos internacionales para satisfacer necesidades globales de formación. Por último, el capítulo 30 se centra en la enseñanza del español para maestros bilingües. Virginia Zavala y Ofelia García aplican una educación lingüística crítica con docentes bilingües de origen indígena y latino en Perú y Estados Unidos, guiada por ideologías raciolingüísticas inclusivas y el translingüismo (*translanguaging*).

Esta publicación resulta extensa y densa, no solo por el número de estudios que ofrece, sino también por la variedad de ámbitos de aplicación y la profundidad de contenido de cada capítulo. Asimismo, su contribución significativa al campo del EFE se complementa con una completa y rigurosa revisión bibliográfica, incluso en áreas poco exploradas en EFE (como, por ejemplo, español para la industria agropecuaria o militar). Para una segunda edición, sugeriría ampliar las localizaciones e incluir estudios de otros contextos y países donde el español profesional está creciendo rápidamente, como India, China o Brasil (Instituto Cervantes, 2025). También podrían incorporarse, en la medida de lo posible, elementos ilustrativos adicionales en el propio capítulo, como se ha realizado en los análisis de necesidades de los capítulos 10 y 16.

El valor del manual es considerable, pues no presupone experiencia previa en EFE, ofrece información necesaria para docentes sin especialización disciplinar previa, y, al mismo tiempo, responde a las necesidades de investigadores avanzados debido a las valiosas referencias que contiene y a la identificación de líneas de investigación. Todas estas características la convierten en una publicación necesaria y tremendamente útil tanto para estudiantes e investigadores que comienzan su formación, docencia e investigación en el español para fines específicos como para aquellos que buscan ámbitos de EFE relevantes y menos explorados.

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