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The Relationship between Language Learning Motivation, Language Level and Lexical Availability in Plurilingual CLIL

La relación entre la motivación, el nivel de lengua y la disponibilidad léxica en el AICLE plurilingüe

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Language learning motivation, language level and lexical availability have all been suggested to be of key importance in a CLIL context. However, most research to date has focused solely on English, to the neglect of other foreign languages (FLs) such as French. Given the calls for research into the benefits of CLIL in languages other than English, as well as alongside English, this study aims to determine whether there is a relationship between these three factors in Spanish learners who are simultaneously studying two FLs (English and French) in a plurilingual CLIL context. Results indicate clear differences between the relationships observed depending on the language at hand, with clearer correlations between the three in English as compared to French. The findings offer important implications for CLIL stakeholders in plurilingual contexts, particularly those which involve the teaching of other FLs in the shadow of global English.

Keywords: *lexical availability; language level; motivation; plurilingual CLIL.*

Se ha sugerido que la motivación, el nivel de lengua y la disponibilidad léxica tienen una importancia clave en un contexto de AICLE. Sin embargo, la mayoría de las investigaciones realizadas hasta la fecha se han centrado únicamente en el inglés, dejando de lado otras lenguas extranjeras. Dada la necesidad de investigar los beneficios del AICLE en lenguas distintas del inglés, así como junto al inglés, este estudio pretende determinar si existe una relación entre estos tres factores en alumnos españoles que estudian simultáneamente dos lenguas extranjeras en un contexto AICLE plurilingüe. Los resultados indican claras diferencias entre las relaciones observadas dependiendo de la lengua de que se trate, con correlaciones más claras en inglés en comparación con el francés. Las conclusiones ofrecen importantes implicaciones para los interesados en el AICLE en contextos plurilingües, en particular los que implican la enseñanza de otras lenguas extranjeras.

Palabras clave: *disponibilidad léxica; nivel de lengua; motivación; AICLE plurilingüe*

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1. INTRODUCCIÓN

Over the past decade, Content and Language Integrated Learning (CLIL) has become increasingly popular in Spain. This surge in interest can largely be attributed to the European Commission's recommendation that "everyone should be able to communicate in two European languages in addition to their mother tongue" (Lasagabaster & López Beloqui, 2015: 42). CLIL was seen as a clear solution to issues in foreign language (FL) deficits, and a way to achieve this so called 1+2 principle. However, despite the clear objective of promoting plurilingualism, the reality in both teaching and consequently research has been an undeniable focus on English as opposed to Languages Other than English (LOTEs) (Cenoz et al., 2014; Dörnyei & Al-Hoorie, 2017). This has led to numerous calls by researchers to conduct more critical, empirical research across LOTEs, to better understand the strengths and weaknesses of CLIL, regardless of the language (Dalton-Puffer et al., 2010; Cenoz et al., 2014), and particularly in trilingual CLIL (Merino & Lasagabaster, 2018).

Within this context, there are three factors which are both interrelated and of extreme importance: language level, language learning motivation, and lexical availability (LA). Firstly, as noted above, language level is essential given that one of the key reasons for adopting CLIL is to improve FL ability. As highlighted by Goris et al. (2019), most research into CLIL has produced quite positive results, generally finding that students enrolled in CLIL have higher language levels than those in conventional FL classes. However, given that the majority of CLIL research has focused on English, it remains to be seen whether comparable findings would come from research into LOTEs, particularly when analysed alongside other factors such as motivation or LA.

Secondly, motivation is now well understood to be an essential factor in language learning and has been suggested to be of even more importance in CLIL than non-CLIL settings (Navarro Pablo & García Jiménez, 2018). The reasoning behind this is that learners may compensate for their lower language learning motivation with higher levels of motivation towards the CLIL subject (Heras & Lasagabaster, 2015). However, it has been noted that there is likely a fundamental difference between learners' motivation towards English as opposed to other FLs, because English is increasingly viewed as a basic educational skill, vital to professional development (Dörnyei & Ushioda, 2013). CLIL motivation research must thus evidently compare motivation towards English with other languages, to confirm whether the purported benefits hold true for LOTEs.

Finally, taking CLIL classes has been suggested to have a positive effect on students' acquisition of content-related vocabulary (Heras & Lasagabaster, 2015). However, in some areas of vocabulary, notably LA, this has largely been assumed to be the case rather than empirically tested. In fact, the scarce LA research carried out in a CLIL context has tested lexical domains which have little or nothing to do with the vocabulary which students are exposed to in their content classes. In addition, while there have been suggestions that students at a more advanced level tend to produce a higher number of words (Milton, 2013), LA has often been measured without considering the language level of the participants. As a result, Canga Alonso (2017) has called for studies which focus on prompts related to the students' CLIL subjects and measure language proficiency to verify the influence on lexical retrieval. To this effect, the present study aims to investigate whether there is a relationship between language level, motivation, and LA in English and French as FLs in a Spanish CLIL context, and to determine whether there are differences depending on the language at hand.

2. RESEARCH ON LANGUAGE LEVEL, LEXICAL AVAILABILITY AND MOTIVATION IN DIFFERENT TARGET LANGUAGES

2.1. *Language Level and Lexical Availability*

As mentioned above, it has been suggested that higher-level learners can be expected to be able to produce a higher number of words. This was found by Šifrar Kalan (2014), who investigated the LA of 40 Slovenian university students learning either English or Spanish. Results revealed that the highest means across the eight prompts were found in the most advanced learners, suggesting a relationship between LA and language proficiency. Similar findings have been found for productive vocabulary in Spanish secondary CLIL learners, where statistically significant moderate correlations were found between the participants' Lex30 scores and proficiency measures (Alejo González & Piquer Píriz, 2016).

However, research by Samper Hernández (2014) on Spanish learners revealed that, when it comes to LA, other factors may play an important role: while more advanced participants generally produced more words than their lower-level peers, this was not so in prompts such as *The City* or *Games and Entertainment*, where lower-level learners either outperformed more advanced ones or no difference was observed. In addition, this researcher highlighted that factors such as the type of instruction or the input received in class should also be considered. This has been corroborated in recent research by Geoghegan (2023), which found that in a CLIL context, even learners who have lower levels of proficiency and who produce fewer words in most lexical domains can outperform their peers in prompts related to the content they have studied in their CLIL classes. Thus, the relationship between language level and LA in CLIL may vary depending on the prompt at hand.

2.2. *Language Level and Language Learning Motivation*

Although language learning motivation has been widely researched, it has been somewhat neglected in CLIL contexts, largely due to a focus on other factors like language competence and content acquisition (Lasabagaster, 2011). Nonetheless, based on the limited research carried out, it has repeatedly been suggested that CLIL is a teaching approach which fosters language learning motivation (Ruiz de Zarobe, 2011; Attard-Montalto & Walter, 2021). Lasagabaster (2011), for example, explored the English language proficiency and motivation of 191 Spanish CLIL ($n = 164$) and non-CLIL ($n = 27$) adolescents, and found a statistically significant correlation between motivation and overall English language attainment. Navarro Pablo and García Jiménez (2018) also investigated the relationship between language attainment and motivation of CLIL and non-CLIL Spanish students in 6th and 10th grade. Findings again revealed a statistically significant effect of motivational variables on the subtests of the language proficiency tests. However, while the above research has focused on English, it is unclear whether similar results would be found for LOTEs. This is because language proficiency may play a particularly important role in the case of LOTEs, given suggestions that LOTE learners usually reach higher language levels due to highly specific and personalised reasons (Dörnyei & Al-Hoorie, 2017). In addition, the limited research directly comparing different FLs in CLIL has largely found that learners have higher language levels and report higher levels of motivation towards English as opposed to LOTEs (e.g., De Smet et al., 2018, 2019; Geoghegan, 2024). Given these clear differences regarding the FL, it remains to be seen whether the relationship between language proficiency and motivation is the same for LOTEs and English.

2.3. *Lexical Availability and Language Learning Motivation*

One issue in previous motivation research is the fact that intended effort has been used as a measure, rather than adopting more explicit ones of motivation (Dörnyei, 2001). This was addressed by Sandu and Oxbrow (2021), who proposed using the objective variable of LA to explore motivated L2 behaviour. The idea is that when students are more motivated, they tend to make a greater effort and consequently perform better in tasks such as those measuring LA. Results by these researchers with university learners, however, reveal that LA may only be related to particular aspects of motivation: while components of the L2 Motivational Self System (L2MSS) such as *Ideal L2 Self* and *L2 Learning Experience* correlated with a wider LA, there was marginal relevance of *The "Ought to" Self* (Sandu & Oxbrow, 2021).

Regarding CLIL in secondary education, there have been several studies addressing the relationship between motivation and vocabulary in English over the past decade, while research investigating the relationship between these factors in French, even in the typical FL classroom, is notably scarce. In terms of English, Fernández Fontecha (2010, 2015) has investigated vocabulary alongside motivation in both EFL and CLIL contexts. In terms of receptive vocabulary, findings revealed a positive correlation between male students' intrinsic motivation and receptive vocabulary in 7th grade (Fernández Fontecha, 2015). As for motivation and LA, there was a statistically significant correlation between the two in 8th grade (Fernández Fontecha, 2010). Receptive vocabulary and motivation were also analysed by Arribas (2016) in 10th-grade CLIL and non-CLIL students, with results finding that, regardless of the teaching context, there were positive correlations between motivation and vocabulary. In terms of French, de la Maya Retamar (2016) innovatively addressed the vocabulary of L2 French learners in Spain, investigating both receptive and productive vocabulary, as well as the LA of Spanish students in 8th and 9th grade ($n = 81$) and analysing these factors alongside motivation. Findings indicated that while motivation correlated with productive vocabulary, there was no relationship with receptive vocabulary or LA.

The two studies above investigating LA and motivation, despite the similar background of the participants (8th/9th grade Spanish learners of English and French), indicate very different results depending on the language at hand: while a relationship was found for English, no difference was observed for French. More research is evidently needed to determine whether these differences are indeed dependent on the language in question. In addition, it is suggested that researchers investigate this issue not across different groups of students, but in the same cohort of learners taking both FLs simultaneously. Furthermore, given the influence of CLIL on these factors, as outlined above, it is suggested that this research be carried out in a CLIL context, to further provide evidence of the role of this teaching context.

3. METHODOLOGY

The present study aims to investigate whether, in a CLIL context, there is a relationship between language level, language learning motivation and LA in two commonly studied FLs (English and French) in a Spanish context, and to determine whether there are differences depending on the language at hand. The following sections outline the study's research questions (RQs) and design, as well as information concerning the participants, the instruments and procedures used, and the data analysis.

3.1. *Research approach and design*

The study aimed to address the following RQs:

1) RQ1: Is there a relationship between Spanish students' language level and motivation, and LA in English and in French in a CLIL context?
2) RQ2: Are there differences between the results in each of the two target languages?

To address these RQs, a total of two data collections were carried out, separated by one full year, with the aim of collecting both cross-sectional and longitudinal data (Figure 1).

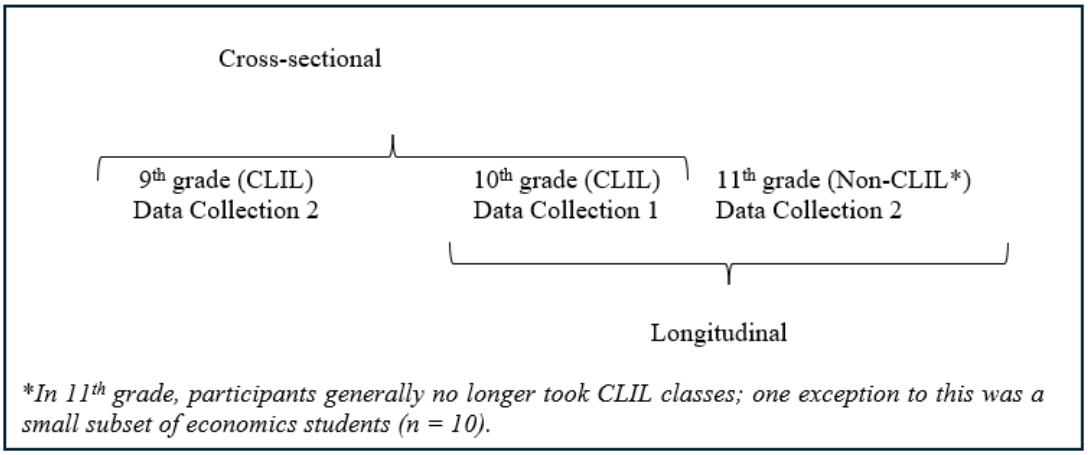

Figure 1: ***Study Design***
All Figures and Tables are the author's own work

As illustrated, the design of the study allowed for a cross-sectional analysis, comparing the students in 9th grade with those in 10th grade who had had an extra year enrolled in CLIL, and a longitudinal analysis comparing the same 10th grade students in the first data collection when they took CLIL classes and in 11th grade when they were, in general, no longer taking CLIL classes.

In total, twelve data collection sessions took place: six in English and six in French. In each language, collections were carried out in each of the three grades and in two schools, one for boys and one for girls. Before each data collection took place, the directors of each school and each individual participant signed consent forms outlining the purpose of the study and details regarding the data collection, treatment, and confidentiality.

3.2. *Participants*

A total of 91 Spanish native speakers from compulsory secondary education (9th and 10th grade) and high school (11th grade) took part in the study. The students came from two semi-private sister schools, one for boys and one for girls. Of particular interest in these schools is the emphasis placed on plurilingual education: content and language classes are offered throughout primary education and obligatory secondary education (i.e., ages 3 to 16) in the students' native language, Spanish, as well as two FLs: English and French. The project guidelines stipulate that each language is to be used as a vehicular language, taking up a third of the school day. In practice, however, it should be noted that from grade to grade there are changes in how many

and which subjects are taken in each language; in particular, there is at times an evident focus on English as opposed to French. For both FLs, students use B2 level textbooks in 9th and 10th grade and C1 level textbooks in 11th grade, and they are expected to have reached a B2 or C1 level by the time they finish school. They also have the possibility of taking an additional fourth language, Latin or Greek.

As shown in Table 1, of the 91 participants, 42 were in 9th grade, 41 were in 10th grade and 40 were in 11th grade. While 10th- and 11th-grade learners were largely the same ($n = 39$), 17 students participated in only one data collection: nine in 10th grade and eight in 11th grade. This was generally due to absences or because, as 10th grade is the final year of compulsory secondary education, there is a transition to high school in 11th grade. Thus, several students no longer attended the school in 11th grade, while others enrolled at this point. In addition, some boys participated in the tests for only one language: in 9th grade, while all boys took the tests in French, three did not participate in the English tests; in 11th grade, French was no longer a compulsory subject, and so four students who no longer studied French did not participate in the French tests[1].

Table 1: ***Participants***

Grade	Total
9th	42
10th	41
11th	40

As shown in Table 2, 9th-grade students took two science subjects, Physical Education, and Technology in English, and Geography and History in French. 10th-grade students took either Economics or a science subject (Physics and Chemistry for boys and Biology for girls) and Physical Education in English, and Geography and History through French. In 11th grade, students generally no longer took CLIL classes; however, male students taking Economics did so through English. Variations in CLIL classes in each school were due to teacher availability.

Table 2: ***CLIL classes taken in each grade***

Grade	English	French
9th	Physics & Chemistry Biology Physical Education Technology	Geography & History
10th	Physics & Chemistry / Biology / Economics Physical Education	Geography & History
11th	Economics ($n = 10$)	-

[1] *Note*: 39 students are the same in 10th and 11th grade, 9 took part only in 10th grade, and 8 only in 11th grade.

3.3. *Instruments and procedures*

There were three main instruments in the study which assessed language level, LA, and participants' motivation towards their FLs. Each instrument had two versions: one in English and one in French.

3.3.1. *The Language Level C-tests*

Firstly, to assess the language level of participants in each language, C-tests were used. These are text-completion tests whereby "proficiency can be measured via the rate of successful restorations of the missing message elements" (Grujić & Danilović, 2024: 2). These tests have been extensively used to assess language proficiency (Daller et al., 2003), given the abundant research supporting their capacity to tap macro-level skills and processing (McManus, 2011).

Difficile mesure du recul des glaces

En climatologie, les bonnes nouvelles peuvent ne pas s'avérer si bonnes qu'elles en ont l'air. Ainsi de celles apportées par les travaux franco-canadiens publiés dimanche 17 janvier dans la revue Nature Geoscience, qui revoient à la baisse les estimations précédentes de la fonte moyenne des glaciers de l'Alaska depuis un demi-siècle.

Figure 2*:* ***Sample C-test***

The C-tests used to assess English and French were adopted from Daller and Phelan (2006) and McManus (2011), respectively. Each included four texts taken from online news websites or published newspaper articles, with a total of 80 gaps (20 gaps per text in the English version and 19-21 gaps per text in the French version) In both C-tests, from the second sentence onwards, the second half of each second word was deleted and replaced with a blank space. Figure 2 provides an example which , and which was used by the researcher to explain the task.

3.3.2. *The Lexical Availability Tests*

To analyse LA, a standard paper-and-pencil LA test (LAT) was used for each language: participants were presented with five prompts, each on a different page with numbered lines, and were given two minutes to write down any words that came to mind.

The selected prompts, the same for each language, included two general prompts and three prompts to tap into the students' content-related vocabulary in each language (Table 3).

*Table 3***: *Lexical Availability Task Prompts***

English	**French**
Animals	Les animaux
Food and drink	La nourriture et les boissons
Sport and physical activities	L'environnement et le climat
Environment and climate	Le sport et les activités physiques
Economy and money	L'économie et l'argent

The two general prompts, *Animals* and *Food & Drink*, concerned vocabulary which would not typically arise in content classes and so were used as control prompts. These two specifically were selected as they had been used to assess the LA of Spanish adolescents (Canga Alonso, 2017) and findings showed they were particularly productive (i.e., students produced many words in these domains).

The content-related prompts concerned vocabulary used in the students' CLIL classes: *Sport & Physical Activity* (Physical Education) and *Economy & Money* (Economics) in English, and *Environment & Climate* (Geography and History) in French. Although the prompts were tailored to the cohort of students and their CLIL classes, comparable prompts had been used in previous studies, such as *Sports and Hobbies* (Agustín Llach & Fernández Fontecha, 2014) and *The Environment* and *The Economy* (Neilson Parada, 2016).

Prompts were chosen to determine whether students who studied a topic through a particular TL would retrieve more words in that language than the other. Two were chosen for English given that students received more content classes in this language; one by all students (*Sport & Physical Activity*) and one by a subgroup of students (*Economy & Money*). The latter allowed us to compare students who differed only in their linguistic exposure in this specific class.

3.3.3. *The Motivation Questionnaires*

The motivation questionnaires, written in Spanish, sought to investigate the students' motivation in each FL. Each questionnaire had two parts. The first section included eight questions addressing personal information such as age, sex, nationality and language learning background, while the second section consisted of motivation factors questionnaires (MFQs), with 55 questions in the English version and 51 questions in the French version. The MFQs followed a five-level Likert scale format, with five choices for each item ranging from *strongly disagree* to *strongly agree*, and were based on Ryan's (2008) work investigating the L2MSS, which had been replicated and administered extensively in numerous contexts. The MFQ had a total of nine categories, including multi-item scales (Dörnyei & Csizér, 2012) of between four to fourteen items:

1) Ideal L2 Self (5)
2) The "Ought to" Self (7)
3) Language Anxiety (5)
4) Interest in FLs (6)
5) L2 Self Confidence (4)
6) Instrumentality: Prevention (5)
7) Instrumentality: Promotion (6)
8) Attitude towards Learning (8-14)
9) Intended Learning Effort (5)

The Spanish version of the questionnaire was modelled on Brady (2015), which had gone through several steps to ensure validity: (1) translation, (2) revision by two Spanish translators and three Spanish colleagues to check for potential errors, (3) back-translation by a native English speaker, and (4) piloting to check participants' interpretation of translated items. For a detailed description of the MFQ, see Geoghegan (2024).

3.4. *Data treatment*

For data preparation, the C-tests were marked, accepting only the exact solutions as found in the source texts (Daller et al., 2003). One point was awarded for each correct word (80 points total). The results were used to measure the participants' language level. Secondly, as in Jiménez Catalán and Fernández Fontecha (2019), the participants' lemmatised responses in the LATs were typed into Excel files to calculate the totals, means, standard deviations, and maximum/minimum values of LA. Finally, for the questionnaire, numerical values were allocated to the 5 choices on the Likert scale and negatively worded items were re-coded and reversed before the analysis (Dörnyei, 2003).

To analyse the data, Pearson correlations were used to determine whether there was a relationship between the C-test and LAT. As the questionnaire included ordinal data, Spearman correlations were used to determine whether there was a relationship between the C-test and the MFQ and between the LAT and the MFQ. In each case, this was done for each grade, first for English and then for French.

4. RESULTS AND DISCUSSION

The proposed RQs aimed to address whether there was a relationship between the participants' language level, their responses in the MFQ, and their responses in the LAT. This was addressed both in English and in French, and the results were then compared.

4.1. *Language Level, Lexical Availability and Language Learning Motivation in English*

In terms of English language level and motivation, the findings revealed significant moderate positive correlations between the C-Test and the MFQ in 10th grade ($r(39) = .37$, $p = .015$) and 11th grade ($r(38) = .35$, $p = .025$), but not in 9th grade ($r(37) = .24$, $p = .126$). Thus, while older students who performed well on the C-test tended to report higher motivation towards English, the same relationship was not found among the younger, 9th grade students.

Regarding language level and LA, results showed that in all three grades there were statistically significant high positive correlations between the C-Test and the overall LAT, as well as most individual prompts (Table 4). Statistically significant moderate positive correlations were found between the C-test and the prompts *Animals*, *Food and Drink* and *Sport and Physical Activities* in 9th grade, *Environment and Climate* and *Economy and Money* in 10th grade, and *Sport and Physical Activities* in 11th grade.

Finally, in terms of LA and motivation, results revealed statistically significant positive correlations between the LAT and the MFQ in 9th grade ($r(37) = .37$, $p = .018$), 10th grade ($r(39) = .43$, $p = .005$), and 11th grade ($r(38) = .42$, $p = .007$). This suggests that for participants in all grades, there is a relationship between the total number of words produced in English and their English motivation: the students who produce a higher number of words also reported higher motivation.

Regarding the individual categories, statistically significant correlations were found in six out of the nine categories in one or more grades (Table 5).

Table 4: ***Correlations between language level and LA in English***

	Language Level C-test		
	9th Grade	**10th Grade**	**11th Grade**
Animals	.459**	.707**	.655**
Food and Drink	.447**	.630**	.651**
Sport and Physical Activities	.480**	.601**	.408*
Environment and Climate	.536**	.483**	.604**
Economy and Money	.557**	.399*	.660**
Overall LAT	.628**	.701**	.680**

** Correlation is significant at the 0.05 level (2-tailed).*

*** Correlation is significant at the 0.01 level (2-tailed).*

Table 5: ***Correlations between LA and Motivation in English***

	Lexical Availability		
	9th Grade	**10th Grade**	**11th Grade**
Ideal L2 Self	.21	.39*	.37*
The "Ought to" Self	-.23	- .29	-.19
Language Anxiety	.19	.31*	.25
Interest in FLs	.25	.39*	.33*
L2 Self Confidence	.32*	.38*	.45**
Instrumentality: Prevention	.40*	.39*	.31*
Instrumentality: Promotion	.20	.04	.11
Attitude towards Learning	.02	.28	.13
Intended Learning Effort	.36*	.28	.39*
Overall Motivation	.37*	.43**	.42**

** Correlation is significant at the 0.05 level (2-tailed).*

*** Correlation is significant at the 0.01 level (2-tailed).*

As shown above, there was a statistically significant moderate positive correlation between LA and *Language Anxiety* only in 10th grade ($r(39) = .31$, $p = .042$), with results indicating that students in this grade who had lower language anxiety retrieved more tokens in the English LAT. In both 10th and 11th grades, there were statistically significant moderate positive correlations between LA and the *Ideal L2 Self* (10th grade: $r(39) = .39$, $p = .010$; 11th grade: $r(38) = .37$, $p = .018$) and between the LA and *Interest in FLs* (10th grade: $r(39) = .39$, $p = .010$; 11th grade: $r(38) = .33$, $p = .037$). This suggests that the participants in these grades who produced a higher number of tokens tended to indicate that they were better able to visualise themselves as the L2 user they wished to be and that they had greater interest in learning English. In 9th and 11th grades, a statistically significant moderate correlation was found between LA and *Intended Learning Effort* (9th grade: $r(37) = .36$, $p = .023$); 11th grade: $r(38) = .39$, $p = .012$). This suggests that students who produced a higher number of words also tended to indicate that they made more of an effort in learning English. Finally, in all three grades, statistically

significant moderate positive correlations were found between LA and *L2 Self Confidence* (9th grade: $r(37) = .32$, $p = .047$; 10th grade: $r(39) = .38$, $p = .014$; 11th grade: $r(38) = .45$, $p = .003$), and between LA and *Instrumentality: Prevention* (9th grade: $r(37) = .40$, $p = .010$; 10th grade: $r(39) = .39$, $p = .010$; 11th grade: $r(38) = .31$, $p = .045$). This implies that, at all levels, students who produced a higher number of words also tended to say they were more confident with the language and saw not learning English as preventing their future success.

It should be noted that there were no statistically significant correlations found between LA and the other three categories under analysis: The *"Ought to" Self, Instrumentality: Promotion* or *Attitude towards Learning*. This suggests that there was no relationship between the number of words retrieved by participants in English and how motivated they were by external sources, how they saw English promoting their future success, or their attitude towards the language.

4.2. *Language Level, Lexical Availability, and Motivation in French*

In terms of language level and motivation in French, the results firstly showed that that there were no statistically significant correlations between the C-Test and the MFQ in French in any of the three grades: 9th grade ($r(39) = .26$, $p = .097$), 10th grade ($r(39) = .22$, $p = .166$), or 11th grade ($r(34) = -.06$, $p = .718$). This implies that, contrary to the case of English, participants who reported higher motivation towards learning French did not necessarily perform better on the C-test in French, nor did those who reported lower levels of motivation receive a lower score.

Regarding language level and LA, as was the case for English, results showed that in all three grades there were statistically significant high positive correlations between the C-Test and the overall LAT and the prompts *Animals* (9th grade), *Food and Drink* (9th and 10th grade), *Environment and Climate* (all grades), and *Economy and Money* (9th and 11th grade) (Table 6). In all other cases, statistically significant moderate positive correlations were found between the C-test and the prompts, except for the prompt *Sport and Physical Activities*, where no relationship was found in 9th or 11th grade.

Table 6: ***Correlations between language level and LA in French***

	Language Level C-test		
	9th Grade	**10th Grade**	**11th Grade**
Animals	.471**	.512**	.434**
Food and Drink	.514**	.601**	.441**
Sport and Physical Activities	.233	.469**	.289
Environment and Climate	.682**	.570**	.586**
Economy and Money	.598**	.488**	.624**
Overall LAT	.682**	.660**	.603**

** Correlation is significant at the 0.05 level (2-tailed).*

*** Correlation is significant at the 0.01 level (2-tailed).*

Finally, in terms of LA and motivation, a statistically significant moderate correlation was found only in 10th grade ($r(39) = .33$, $p = .031$), whereas no such result was found in 9th grade ($r(39) = .24$, $p = .124$) or 11th grade ($r(34) = .11$, $p = .491$). This implies that while participants in 10th grade who retrieved a higher number of words in French also tended to report higher levels of motivation, this was not the case in 9th or 11th grade.

Regarding the individual categories, it was found that there were statistically significant correlations in four out of the nine categories in one or more grades (Table 7). As shown, there was a statistically significant high positive correlation between LA and *Ideal L2 Self* ($r(39) = .52$, $p = < .001$) and between LA and *Instrumentality: Promotion* ($r(39) = .52$, $p = < .001$) only in 10th grade, indicating that students who retrieved a higher number of words also tended to say that they were better able to visualise themselves as the French language user they wished to be and saw French to be an important factor in promoting their future success.

Table 7: ***Correlations between LA and Motivation in in French***

	Lexical Availability		
	9th Grade	**10th Grade**	**11th Grade**
Ideal L2 Self	.17	.52**	.02
The "Ought to" Self	-.35*	-.42*	-.12
Language Anxiety	.25	.25	.11
Interest in FLs	.17	.21	.02
L2 Self Confidence	.50*	.43**	.28
Instrumentality: Prevention	.28	.23	.18
Instrumentality: Promotion	.26	.52*	.01
Attitude towards Learning	-.10	.27	.13
Intended Learning Effort	.00	.29	-.06
Overall Motivation	.24	.33*	.11

** Correlation is significant at the 0.05 level (2-tailed).*
** Correlation is significant at the 0.01 level (2-tailed).

In both 9th and 10th grade, statistically significant moderate negative correlations were observed between LA and *The "Ought to" Self* (9th grade: $r(39) = -.35$, $p = .024$; 10th grade: $r(39) = -.42$, $p = .006$). In addition, a statistically significant moderate positive correlation was found between LA and *L2 Self Confidence* (9th grade: $r(39) = .50$, $p = .001$; 10th grade: $r(39) = .43$, $p = .005$). These results suggest that participants who produced a higher number of tokens tended to indicate that they were less motivated by external sources, but also had higher self-confidence towards learning French.

There were no categories in which statistically significant positive or negative correlations were observed across all three grades. In addition, no relationship was found between LA and the remaining five categories: *Language Anxiety, Interest in FLs, Instrumentality: Prevention, Attitude towards Learning and Intended Learning Effort.* This suggests that there was no relationship between how many words participants produced in French and their level of anxiety towards the language, their interest towards it, the extent to which they believed not having French prevents their future success, their attitude towards the language, or the level of effort they made in learning French. Furthermore, it is important to highlight that there were no statistically significant correlations between LA and any of the motivation categories in 11th grade, implying that there tended to be no relationship between these students' motivation and their performance on the LAT.

4.3. *Discussion of the results in each target language*

The results reveal evident differences between the relationship between language level, LA and motivation in each language. In English, there were significant positive correlations between language level and motivation in 10th and 11th grade (but not 9th grade), and between language level and LA, and motivation and LA in all grades. In French, there were no statistically significant correlations between language level and motivation in any grade. In addition, while there were generally positive correlations between language level and LA, no such relationship was found for the prompt *Sport and Physical Activity* in 9th or 11th grade; and a significant moderate positive correlation was found between LA and motivation only in 10th grade. These results largely indicate that the relationship between the three factors under investigation is generally more apparent in English than in French.

Firstly, regarding language level and motivation, results for older students in English are consistent with previous research from Navarro Pablo and García Jiménez (2018), which found that learners with higher language levels also tend to report higher motivation in CLIL. However, this does not hold true for younger learners in English or any leaners in French. These results are particularly surprising when considering the students' CLIL classes: no relationship was found in 9th grade, when students were enrolled in CLIL, while a relationship was found in 11th grade, when students generally no longer took CLIL classes. This indicates that the context does not necessarily imply a relationship between these two factors. Furthermore, despite suggestions from Dörnyei and Al-Hoorie (2017) regarding the relationship between language proficiency and motivation in LOTEs, this was not found to be the case. On the contrary, no relationship was observed between language level and motivation in French.

Secondly, regarding language level and LA, results largely indicate a relationship between the two factors in both languages, albeit to a greater extent in English. Of particular interest is the fact that no correlations were observed between language level and the prompt *Sport and Physical Activity* in 9th or 11th grade. One possible reason could be the fact that PE was taken in English rather than French. In addition, data for these two groups was collected at the same time after the COVID-19 pandemic, while 10th-grade data was collected prior to this point. It could thus be the case that the disruption of in-person classes affected the students in these grades to some extent, particularly in the case of their physical education classes. More research is evidently necessary to better understand the individual factors at play.

Finally, regarding LA and motivation, previous research by Fernández Fontecha (2010) found that English learners who produce a higher number of words also tend to report higher motivation. While this is consistent with the results in this study across all grades for English, it was only the case in 10th grade for French. Again, this points to a greater relationship between the factors in English. In French, however, further research should be carried out to ascertain the influence of the different data collections. In addition, in terms of LA and individual motivation categories, several interesting observations were made depending on the language (Table 8).

Table 8: ***Summary of Non-significant Correlations in English and French***

English		**French**
Lexical Availability	The "Ought to" Self	Language Anxiety
	Instrumentality: Promotion	Instrumentality: Prevention
	Attitude towards Learning	Attitude towards Learningº Interest in FLs
		Intended Learning Effort

Regarding lack of correlation between *The "Ought to" Self* and LA in English, similar results were found by Sandu and Oxbrow (2021), who observed marginal relevance in this component as compared to the *Ideal L2 Self*. However, while the same study also revealed a correlation between LA and the *L2 Learning Experience*, of particular interest is that in the present study, *Attitude towards Learning* did not correlate with LA in either language, indicating that students reporting more positive attitudes did not necessarily produce a higher number of words. These differences could well be attributed to the different participant profiles (those in Sandu and Oxbrow's were university students) which likely had a different attitude towards learning. While there was also a lack of correlation between LA and instrumental motivation in both languages (promotion in English and prevention in French), another clear difference between the two was the lack of correlation between LA and *Language Anxiety* and *Interest in FLs* in French, but not in English. While these differences may be attributable to the language at hand (i.e., students who are less anxious towards learning English also tend to have higher LA, whereas the same is not true for French), there are numerous other factors which may explain these results. For example, they could be due to differences in CLIL instruction (which classes students are enrolled in, the vocabulary they are exposed to, and their motivations towards these classes) or age (different levels of maturity and attitudes towards learning). Such factors should evidently be taken into consideration in future research to determine the extent to which they have influenced the results.

5. CONCLUSION

The present study sought to determine whether a relationship would be observed between language level, motivation, and LA in English and French, and whether differences would be found depending on the language. Results reveal clear differences in the relationship between the three factors in each language: while results in English are generally consistent with previous research, those in French are not. While this research has taken some essential steps towards (1) better understanding the interrelated nature of the explored factors and (2) comparing English and French simultaneously in a plurilingual CLIL context, there are issues to be addressed in future research. Of particular importance is the language level of the learners in each language. Although the schools' policy indicates that students should receive a third of each school day in each language, there was a notable focus on English over French, as well as an inevitable advantage in English in terms of language level. Future studies would benefit from addressing these issues in learners with comparable language proficiencies, to reject the influence these differences may have had on the results. The participating schools also presented clear differences to those in previous research, concerning socio-economic status (semi-private schools vs. public schools) and the language of content classes (geography and history through French). Given such differences, caution should be taken when interpreting the results, as they may not be generalized to a wider population.

In terms of LA, the study took some initial steps towards relating LATs to content-related classes. Nonetheless, it appeared that some prompts (e.g., *Environment & Climate*) may not have been optimal in prompting the desired content-related vocabulary. Future research may benefit from first examining the specific content which students study (e.g., through textbook analysis), to focus on the specific areas covered in class and select prompts based on this.

Finally, regarding motivation, a clear disadvantage was only using a quantitative approach. This was adopted to target a wide range of issues, comparing motivation towards two TLs to then draw conclusions about larger L2 learning populations (Dörnyei & Csizér, 2012). The advantage over a more time-consuming qualitative approach is that analysis can be done "not just with a handful of subjects anecdotally, but with a broader sample of the population after

accounting for a variety of alternate reasons the phenomena could have occurred" (Fryer et al., 2018: 56). However, an evident disadvantage is the inherent subjectivity and reliability of self-report data. While being beyond the scope of the present study, adopting a qualitative approach would be extremely beneficial in identifying motivational behaviour across the three grade levels, as well as in clarifying the differing results in this study.

The present study has taken some initial steps towards filling a very important gap in the literature, namely, the lack of research into French alongside English in plurilingual CLIL. While preliminary, the results could be of considerable relevance to plurilingual CLIL stakeholders. They highlight that when studied alongside English, languages such as French may present a very different profile to the modern-day lingua franca. While the three interrelated factors discussed in this study are of the utmost important in CLIL, teachers of LOTEs must be made aware of the potential differences in other languages, to enable learners to fully reap the benefits that such plurilingual contexts have to offer. While English level, LA and, motivation may improve side by side, results for French highlight the need to actively foster these three factors separately, as students who do well in one may not do well in the other. To this effect, greater time should be dedicated to LOTEs, instead of the little time they currently receive compared to English.

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