

EFL Written Competence through Blogging within the CLIL approach: Product Writing Analysis

Competencia Escrita en inglés mediante el Blogging en el enfoque AICLE: Análisis de la Escritura como Producto

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Abstract

This paper aims to verify whether blogging helps to improve the quality of EFL written competence within Content and Language Integrated Learning. We conducted an experiment with learners studying geography using English in the 3rd year of secondary education during the academic year 2017-2018. One group of 11 students participated in the treatment group through blogging, while a second group of 11 learners completed the experiment within the control group using Google Docs. In the case of the treatment group, learners completed 5 different written tasks through blogging and, regarding the control group, students completed 5 tasks via Google Docs. Regarding the treatment group, an interactive digital written task is also analysed. The outcomes showed that there was a relevant difference between the treatment group and the control group. This confirms the research hypothesis, which is that the treatment group would achieve better outcomes than the control group.

Key words: English, Content and Language Integrated Learning, Blogging, Written Competence, Written Product Analysis

Resumen

El objetivo de este trabajo consiste en verificar si el blogging mejora la competencia escrita en inglés mediante el Aprendizaje Integrado de Contenidos y Lenguas Extranjeras. Se realizó una investigación empírica con alumnos de tercer curso de educación secundaria

que estudiaron geografía en inglés durante el curso académico 2017-2018. Un grupo de 11 alumnos participaron en modalidad experimental mediante el blogging. Un segundo grupo de 11 alumnos participaron en modalidad control mediante Google Docs. Tanto los alumnos del grupo experimental como del grupo control realizaron 5 tareas de expresión escrita mediante el blogging y a través de Google Docs. También se analizaron resultados de una actividad escrita digital interactiva realizada por alumnos del grupo experimental. Los resultados mostraron que hubo una diferencia relevante entre el grupo experimental y el grupo control. Esto corrobora la pregunta de investigación, según la cual el grupo experimental consigue mejores resultados que el grupo control.

Palabras clave: Inglés, Aprendizaje Integrado de Contenidos y Lenguas Extranjeras, Blogging, Competencia Escrita, Escritura como Producto

1. INTRODUCTION

This research emerged due to the need to improve the quality of the English written competence of a group of English as a Foreign Language (EFL) learners, in their 3rd year of secondary education within the plurilingual programme which is offered by the Education Department of Valencian Region. This research aims to verify whether EFL written production within the area of geography improves through blogging using Word Press (<http://www.wordpress.com>). This research is a response to the lack of publications (Montaner-Villalba 54 and 95) related to blogging when teaching EFL within the CLIL approach in secondary education in Spain.

1.1. Blogging and Foreign Language Learning

Regarding the literature related to blogging within teaching and learning foreign languages, a considerable number of significant papers (Arslan & Sahin-Kizil 185; Sun, 329, among others) have been published.

As for the literature related to blogging, empirical research has been increasing notably within the first two decades of the 21st century. Here, we give a brief review of the latest literature which focuses on blogging in a concise manner, paying special attention to written competence. Gunduz (440) researched the higher students' perception regarding the use of blogging with the aid of the interaction process, through which students had to read posts from their colleagues in order to comment on them. From the corresponding entries in the blogs as well as a questionnaire at the end of the experiment, the outcomes

showed that the use of blogging offers learners the chance to exchange feedback and enhancing critical thinking. Regarding this interaction process while blogging, Montaner-Villalba (125) indicates that, from the results obtained in his quantitative analysis through ANOVA model of repeated measures, learners from the treatment group notably improved the marks for their interaction tasks at the end of the experiment if we compare these with the first term, when the outcomes were not satisfactory.

Moreover, it should be noted that recently, some empirical research on blogging in English for specific purposes has been published within the educational context of vocational training. While, on the one hand, Montaner-Villalba (240) analyzed quantitative data with the aim of verifying whether learners improved their ESP (English for Specific Purposes) written competence within the field of English related to design and furniture, Montaner-Villalba (99) explored blogging in the same educational context through a qualitative study. In both studies, the outcomes were satisfactory implying, thus, a notable improvement regarding ESP written competence through blogging.

Lastly, since this current research is contextualized within compulsory secondary education, it is adequate to write a concise literature review on blogging within the field of English learning at this level. Paschalidou (379) researched how A-level learners in a school in Greece perceived blogging as an interaction tool, where the outcomes are not satisfactory in comparison with other empirical research (Akdağ & Özkan, 94; Evangelidi, 288; Montaner-Villalba, 195) where the results were satisfactory emerging, thus, significant learning from the participating students.

1.2. Content and Language Integrated Learning and ICT

Since this paper is focused on quantitative research related to the use of ICT within the CLIL approach in a non-university setting, a brief overview of literature related to ICT within the CLIL approach is given. It should be highlighted that, in general terms, the work by Maggi et al. (215) aims to demonstrate how to utilize the Web 2.0 tools in various contexts of learning foreign languages within the CLIL approach.

Regarding empirical research, the latest papers by Hernández-Nanclares & Jimenez-Muñoz (268) and Finardi, Silveira, Lima & Mendes (492) are noteworthy; both being papers within the tertiary educational setting. Hernández-Nanclares & Jimenez-Muñoz (268) explored social networks and microblogging within a blended learning context so as to verify whether learners improved their level of English within the CLIL approach. The outcomes here showed that a holistic method in which various pedagogical approaches

are combined with ICT and face-to-face educational practices, can not only remedy but also maximize learning opportunities for the students.

As for Flipped Classroom through CLIL, research by Finardi et al. (473-493) and Capone et al. (6579- 6582) is significant. Finardi et al. (473-493) aimed to develop an educational proposal consisting of an English course as an Additional Language (EAL) within a blended learning context, where the CLIL approach is adopted through Flipped Classroom with the use of Massive Online Open Courses (MOOCs). In this paper, the outcomes demonstrated that the CLIL Inverted approach is successful in mitigating various aspects such as lack of time to teach curricular contents, lack of motivation from learners, absence of accessing online education through MOOCs, and so on. Capone et al. (6579- 6582) explored the use of Flipped Classroom through CLIL within the area of quantum mechanics in secondary education in Italy, obtaining satisfactory results since this experiment showed that there was a notable improvement from students learning complex subjects, such as quantum mechanics.

Although extensive empirical research has been published within the university setting, some research has also been developed in secondary education (Capone et al., 6582). In this vein, Odonne (110) focused on the use of YouTube videos so as to enhance the learning of scientific subjects through the English language within the project-based learning approach in secondary education. Montaner-Villalba (63), through qualitative research, analyzed blogging within the CLIL approach to determine whether EFL learners improved their EFL written competence in the area of geography. The outcomes showed that there was a notable improvement in written competence at the end of the research. One of the latest empiric research on ICT within the CLIL approach is the work by Hernández Martínez (20) who explored the potential of e-Twinning to enhance telecollaboration in CLIL contexts. The author, in her research, proved the efficiency of telecollaboration on both student's language as well as their content acquisition.

1.3. Written Production within the CLIL approach

Since this paper aims to analyse written production within the CLIL approach with the aid of the ICT, we will offer next a concise state-of-the-art on written production within the CLIL approach with a special focus on non-university context in line of this current research. As for this issue, Roquet & Pérez-Vidal (495) investigated the differential effects of both formal instruction as well as CLIL on EFL written production within the context of Secondary Education. The authors, in their mixed research, assessed various variables,

such as complexity, accuracy, organization, grammar and vocabulary. The authors proved that, although there was improvement in both formal instruction and CLIL, the outcomes were only significant in the domain of accuracy.

Even though wide empirical research on EFL written production has been made at Higher Education within the CLIL approach or, rather, English as a Medium Instruction (Arnbjörnsdóttir & Prinz, 172), some research has also taken place in Secondary Education (Gené-Gil, Juan-Garau, Salazar Noguera 161; 303). While, on the one hand, Gené-Gil, Juan-Garau & Salazar Noguera (161) aimed to offer outcomes on the practice of EFL written competence, bearing in mind various variables, such as complexity, accuracy and fluency in writing proving that secondary CLIL learners performed much better than non-CLIL learners of English through formal instruction, on the other, Gené-Gil, Juan-Garau & Salazar Noguera (303), presenting longitudinal findings on the development of same variables, mentioned above, showed that non-CLIL students obtained better results in lexical complexity than their CLIL partners suggesting, thus, the effectiveness of the CLIL approach within the field of language learning.

Latest publications on written competence within the CLIL approach include authors such as Lahuerta Martínez (184; 132) and Chumbay & Quito Ochoa (90). Lahuerta Martínez (184) aimed to compare the outcomes between one CLIL group of students and a non-CLIL group proving, from the findings obtained, that CLIL learners fulfilled better than non-CLIL learners, while Lahuerta Martínez (132) focused on analyzing written language accuracy with a special focus on both grade as well as gender. Regarding the grade, results revealed that accuracy evolved significantly in the CLIL instruction context whereas in the non-CLIL group only lexico-grammatical errors descended significantly. Last, Chumbay & Quito Ochoa (90), in their mixed- and quasi-experimental research, showed that the learners from the CLIL-group improved their level of the language and content acquisition in comparison to the non-CLIL group of learners.

The current study addresses the following research questions: Do students in the 3rd year of compulsory secondary education improve their EFL written competence? Do these students improve their EFL written competence within the CLIL approach? Do they outperform their level of EFL writing skill within the CLIL approach with the aid of the ICT and, to be more specific, through blogging? Do the Treatment group students achieve better outcomes during this empiric research than the Control group learners?

2. METHODOLOGY

The chosen method for this work was action-research, since the author of this paper fulfilled the double role as both researcher and teacher at the time the research took place.

2.1. Context and Sample

The school where this research took place is a state compulsory secondary school located in a municipality of Valencia, Spain; being the Catalan language students' mother tongue. This school has some educational programmes, such as the inclusion of the CLIL approach at various levels of secondary education. The centre offers various active educational methodologies (Task-Based Learning, Cooperative Learning approach and Service Learning). Moreover, several European programmes (KA1, Erasmus+) are delivered in this school every year. This school became popular one decade ago and it is still due to the implementation of Content and Language Integrated Learning, creating an interest in learning English through non-linguistic areas such as biology in the 1st year of secondary education, maths in the 2nd year and geography in the 3rd year.

22 students (11 female and 9 male learners) participated in this experiment. These participants, aged between 14 and 15 years old approximately, were studying in the 3rd year of compulsory secondary education at the time of the experiment. They were chosen in a random manner from two different CLIL classes which the 3rd year Secondary Education were composed. The results of the initial written test, which took place before beginning this research, proved that these students had a B1 level of English according to the Common European Framework of Reference for Languages (2001). This experiment took place in the academic year 2017-2018. Since they were enrolled within the CLIL approach at the time of the experiment, these learners studied geography through the English language. A total of 11 students participated in the treatment group (henceforth, the T group), and 11 learners participated in the control group (henceforth, the C group). The learners who participated in the T group did their written tasks through blogging, whereas the participants in the C group completed their corresponding tasks through the online tool *Google Docs*. As these students were teenagers, written permission was required from their parents so that the students could participate in the experiment.

Regarding the teachers participating in this experiment, there were two: firstly, the EFL teacher who was the researcher and, thus, the author of this paper and, secondly, the teacher who is an expert in the non-linguistic area of geography, whose collaboration was key in this experiment.

2.2. CLIL Implementation

This section will focus on how the CLIL approach was utilized in both the treatment group and the control group. This experiment approaches CLIL as a teaching practice which was integrated into the geography teaching curriculum through blogging for six teaching hours per week for a complete school year (2017-2018) and implemented with 3rd year students at compulsory secondary education at a state school in the province of Valencia (Spain). Its philosophy lies in the “4Cs” CLIL Framework (Coyle 545), *Content*, *Communication*, *Cognition* and *Culture*. The 4Cs framework starts with *Content*; that is the subject matter which focuses on the interrelationship between content (subject matter), communication (language), cognition (thinking) and culture (awareness of self and “otherness”) in order to build on the synergies of integrating learning (content and cognition) and language learning (communication and cultures). In this current experiment, *content* was the subject, geography, *communication* was related to geographical language, which learners would use to communicate during the project, *cognition* referred to the thinking skills and *culture* concerns the cultural focus in this current experiment; for instance, whether learners were encouraged to create written texts such as writing a report about a lake, summarizing the process of urbanization from the pre-industrial to the current city, and describing specific illustrations through specialized vocabulary.

We considered adequate that learners would do their corresponding writing tasks using the English language within the CLIL approach in order to compare outcomes between the treatment group and the control group learners since the final purpose of this current research was to verify, at the end of this research, whether there was significant learning with both groups or if, on the contrary, there were relevant differences between both groups, regarding the tools used by learners at this experiment.

In the first term, learners were required to do, firstly, their pre-test, or initial writing task before commencing the experiment to check what their initial level was regarding EFL written competence in general terms. Secondly, they had to complete their first written task, which was to write a report about the Lagos Lagoon. Next, the treatment group was asked to interact through blogging in the “comment” section of the corresponding blogs. In the second term, learners had to summarize the process of urbanization from the pre-industrial to the current city and, after the second interactive blogging task, learners were asked to describe specific illustrations through specialized vocabulary in order to finish with the third and last interactive task by the treatment group.

2.3. Research Tools

To obtain the quantitative results of this longitudinal research, we collected data from 5 written tasks from the T-group through blogging, and from the C-group through Google Docs. Since blogging implies online interaction, learners from the T-group were required to complete an interactive digital written task which involved exchanging comments among them while blogging on the platform. Therefore, there were a total of 11 written tasks throughout the whole experiment. These EFL written activities were developed at various moments during the experiment, coinciding with the different assessment sessions throughout the academic year 2017-2018.

The initial test took place during the second week of September 2017; that is, at the start of the academic year. The first task by both the T group and the C group was done between the third week of September and the first week of December; that is, in the first term of the academic year 2017-2018. The second EFL task took place between the second week of December in the year 2017 and the second week of March in 2018 and, thus, in the period corresponding to the second term. The third task was done in the third term of the academic year 2017-2018; in other words, between the fourth week of March and the second week of May in the year 2018. The post-test was done in the second half of May in the year 2018. Lastly, the interactive online written, blogging task done by the T-group learners was developed at the end of the experiment.

The quantitative outcomes of this research were obtained through the diverse written tasks through blogging in the case of the T group and via Google Docs for the C group, with the main purpose of verifying whether learners improved their level as well as their quality of written competence in the English language through its use in the area of geography and, thus, according to the CLIL approach.

2.4. Variables

In this research, since this paper focuses on comparing EFL written competence within the CLIL approach, we shall distinguish within the final product (Shehadeh, 293) the following variables, which will be analyzed in the section related to the outcomes: (1) Content, (2) Organization, (3) Grammar, (4) Vocabulary and (5) Spelling. Regarding the content, students were required to create digital texts about different themes related to the non-linguistic area of geography. As for the organization variable, both cohesion and coherence had to be taken into consideration. Students were asked to use adequate grammar and vocabulary. Lastly, regarding spelling, learners were asked to check that they had not

made mistakes while blogging. This is relevant since spelling is part of vocabulary learning.

2.5. Marking Procedures

Since this experiment was rated by the teacher-researcher, the marking procedure is described. To evaluate the EFL written competence within the CLIL approach and, particularly, the five variables mentioned above, the marks were initially recorded in Microsoft Excel in order to, later, calculate the Anova model. Marks were given, individually, to learners for each variable. Then, the mean of each variable was calculated to obtain the total mean of each digital task, so that we could discuss and analyze how the different outcomes evolved throughout the whole experiment from the graphics obtained. These variables were graded using traditional marking from the Spanish education system, and only by the teacher-researcher since he was the expert in EFL. Therefore, inter-rater reliability could not be calculated. Grade, A varies between 9 and 10, grade B is between 7 and 8, grade C is 6, grade D is 5 and, finally, less than 5 is a fail, which means that learners will not pass either their different subjects within the official curriculum or the different variables of this current experiment.

The rubric used in this research corresponds to the five variables mentioned above. According to these variables related to the final product regarding written competence, the elements of the rubric graded were: (1) Presentation and Text Adequacy, that is, the Content variable which was analysed at this research; (2) Cohesion and Coherence or Organization variable of this research; (3) Grammar competence which is directly related to the Grammar variable of this research; (4) Lexis richness, which is referred to the Vocabulary variable and, lastly, (5) Orthography that is obviously linked to the Spelling variable of this current research.

2.6. Data Analysis

Regarding the collection of quantitative data; first, the ANOVA model regarding the various variables from both the T-group and the C-group was calculated so as to, later, use the Bonferroni (45) correction with the purpose of calculating how the various means from both the treatment and the control group evolved during the experiment, taking into consideration the above-mentioned variables. This analysis was implemented throughout the whole experiment in both the T group and the C group. The outcomes of this analysis are presented in this paper through figures.

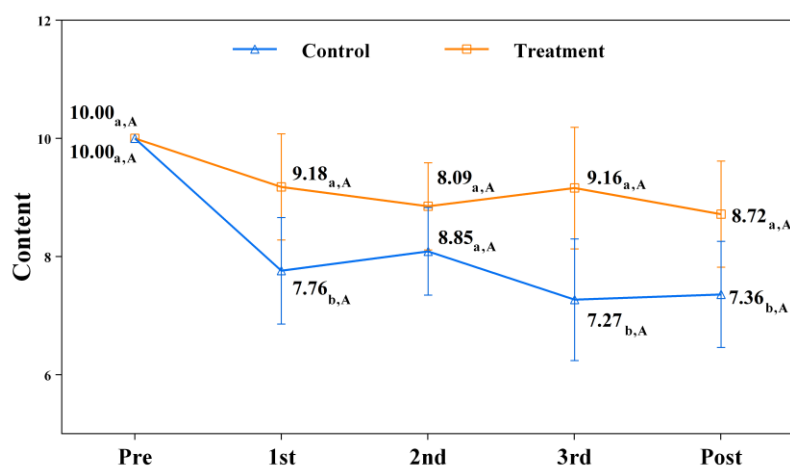
3. OUTCOMES

In this section, the quantitative outcomes of the diverse EFL written tasks are analyzed. The data collection was done through the different written tasks within the CLIL approach through WordPress (T-group learners), and via Google Docs (C-group learners). For a better understanding, we considered it appropriate to describe the outcomes of this experiment in four main sections: (1) Structure of the text that is related to the variables *content* and *organization*; (2) Language use composed of the variables *grammar* and *vocabulary*; (3) Spelling variable and, (4) Interaction digital written task only completed by the Treatment group learners.

3.1. Structure of the Text

Next, both the *content* and *organization* variables are analysed, with the purpose of answering the question about whether students from both groups improved their marks regarding these variables. In graph 3.1.a, we can observe the outcomes of the *content* variable, throughout the whole experiment with both the C-group and the T-group.

Figure 3.1.a. Evolution of the marks for the T group and the C group in the *content* variable



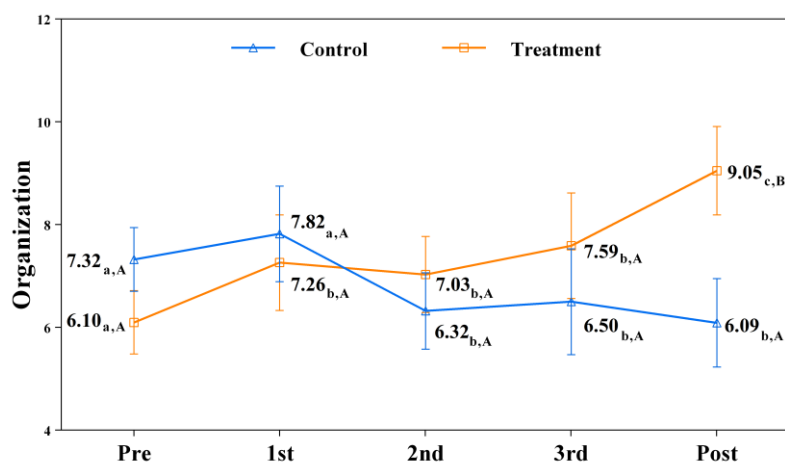
Regarding *content*, for C-group learners, the mark in the pre-test is 10. In the first term, the mark decreases notably to 7.76. In the second term, the mark increases notably to 8.85. In the third term, the mark decreases to 7.27 implying a significant difference between the first and the third term. In the post-test, the mark for *content* increases slightly and, therefore, there is no relevant difference. It must be highlighted that between the pre-test and the post-test there is a relevant difference which suggests that, for C-group learners,

there was worsening, at the end of the experiment, in the quality of content since themes were combined.

Regarding the T-group learners, the mark for the pre-test is 10. In the first term the mark decreases slightly to 9.18. The mark for the second term falls again to 8.09. In the third term, the mark for *content* rises to 9.16. The mark for the post-test decreases to 8.72. There were no relevant differences during the experiment. Neither were there significant differences between the C-group and the T-group learners within the same time frame from the perspective of Bonferroni correction.

In graph 3.1.b below, we can observe the outcomes of the *organization* throughout the whole empiric research in both groups.

Graph 3.1.b. Evolution of the marks for the T group and the C group in the *organization* variable



Regarding *organization*, for the C-group learners, the mark for the pre-test is 7.32. This mark rises to 7.82 in the first term implying that there is not a relevant difference between the pre-test and the first term. In the second term, the mark for this variable decreases notably in comparison with the first term, suggesting that there is a significant difference of 1.5. The mark for the third term increases slightly to 6.50. The mark for the post-test decreases to 6.09 implying that there was no significant difference between the second term and the post-test. We can, therefore, state that there was a significant difference in statistical terms between the pre-test and the post-test; the outcomes of the post-test being the worst.

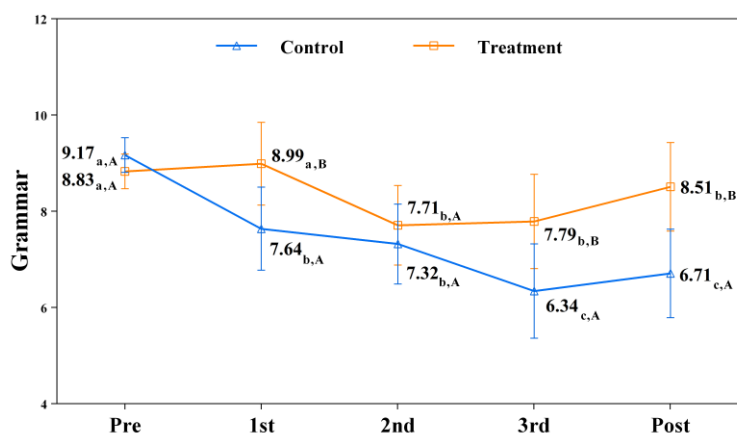
As for the T-group, the mark for *organization* in the pre-test is 6.10. In the first term, the mark rises to 7.26. The mark for the second term slightly decreases to 7.03. A similar

situation occurs in the third term, when the mark slightly increases to 7.59. In the post-test the mark notably increases, which means that there is a significant difference between the pre-test and the post-test. When comparing both the C-group and the T-group, it can be seen that there is a significant difference of 2.96 in the mark of the post-test; the outcomes being higher for the T-group learners. Therefore, it can be confirmed that, regarding this variable, the results were as we initially expected.

3.2. Language Use

Next, the variables *grammar* and *vocabulary* are analysed with the aim of answering the question about whether the students from both groups improved their marks regarding these two variables. In graph 3.2.a, we can observe the outcomes from *grammar* throughout the whole experiment in both the C-group and the T-group.

Graph 3.2.a. Evolution of the marks for the T group and the C group in the *grammar* variable



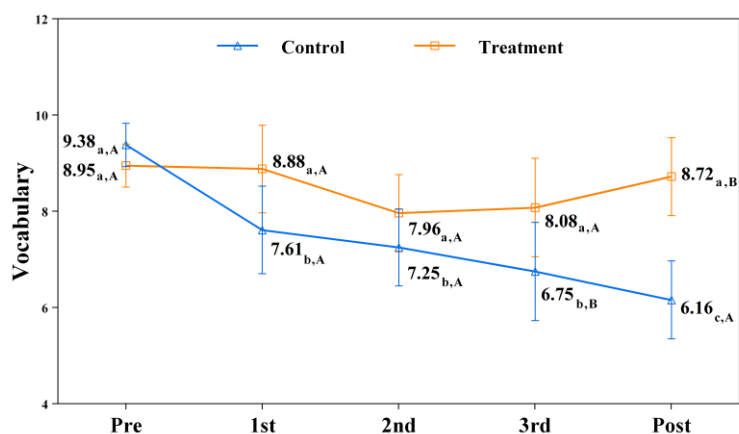
As for the *grammar* variable, in the C-group the mark for the pre-test is 9.17. The mark decreases significantly to 7.64 in the first term. In the second term, there is a slight decrease to 7.32. The mark for the third term falls to 6.34. The mark for the post-test increases slightly, almost reaching a good mark. There is a significant difference between the marks for the pre-test and the post-test, implying that this variable in the C-group did not improve.

As for the T-group, the mark for the pre-test is 8.83. The mark rises slightly to 8.99 in the first term. In the second term, the mark for *grammar* decreases notably to 7.71. The mark for the third term rises slightly to 7.79. The mark for the post-test of this variable

increases again to 8.51. There were no relevant differences between the third term and the post-test. When comparing both groups, we can clearly observe that, while there were no significant differences between the two groups in the pre-test, there was a significant difference between the C-group and the T-group in the post-test. The mark for the T-group is higher than the C-group, as was initially expected. This indicates that the T-group learners have a higher level of English regarding the use of grammar than the C-group learners.

In graph 3.2.b, we can see the results from *vocabulary* throughout the whole experiment in both groups.

Graph 3.2.b. Evolution of the marks for the T group and the C group in the *vocabulary* variable



As for *vocabulary* in the C-group, the mark for the pre-test is 9.38. The mark for the first term descends notably to 7.61. The mark for the second term decreases to 7.25, implying that there is not a significant difference. The mark for the third term descends slightly to 6.75. The mark for the post-test decreases slightly to 6.16. Regarding the pre-test, there was a significant difference of 3.22, meaning that the mark for the *vocabulary* in the post-test decreased.

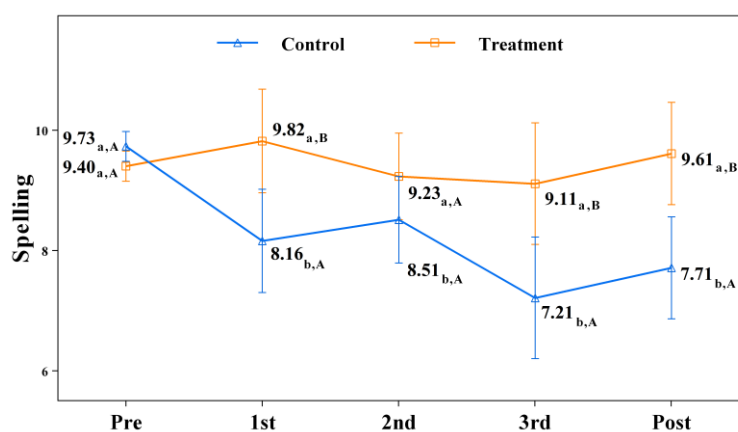
Regarding the T-group, the mark for the pre-test is 8.95. The mark for the first term decreases slightly to 8.88. In the second term, the mark for this variable descends slightly to 7.96. The mark for the third term increases slightly to 8.08. The mark for the post-test rises to 8.72. Therefore, there were no significant differences during the experiment regarding *vocabulary* for the T-group learners. When comparing both groups, we must highlight that there was significant difference between both groups during the various

academic terms of this current research, that is, taking into consideration the factor *time* throughout the whole research. Moreover, we could see significant differences, at the post-test, between the T-group and the C-group. The mark from the T-group was notably higher. This proves again that the outcomes were fulfilled, as was initially expected. Similarly, this happened with *grammar*, as explained above.

3.3. Spelling

The *spelling* variable is analyzed with the purpose of verifying whether learners from both groups improved their corresponding marks having finished the experiment.

Graph 3.3. Evolution of the marks for the T group and the C group in the *spelling* variable



Regarding *spelling*, the mark groups for the pre-test for C-group learners is 9.73. The mark for the first term decreases significantly to 8.16. The mark for the second term increases slightly to 8.51. The mark for the third term decreases slightly to 7.21. The mark from the post-test rises slightly to 7.71. When comparing the pre-test with the post-test, there was a significant difference; the mark for the post-test being notably worse.

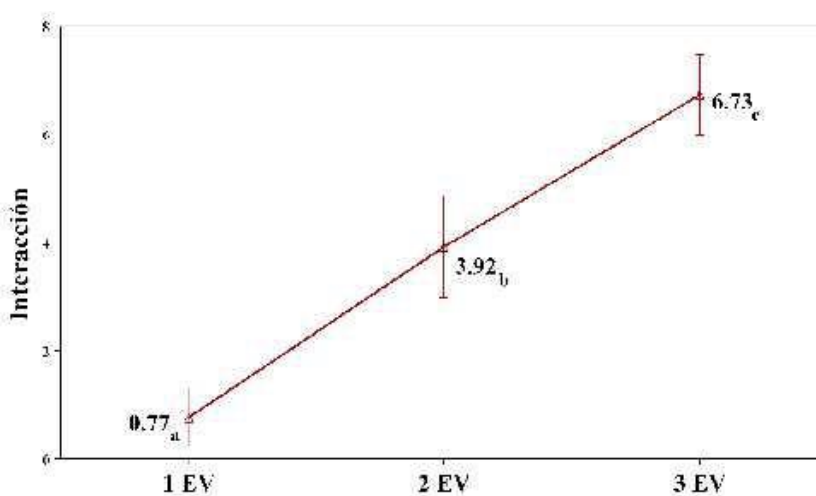
Regarding T-group learners, the mark for the pre-test is 9.40. The mark for the first term increases slightly to 9.82. The mark for the second term decreases slightly to 9.23. The mark for the third term descends slightly to 9.11. The mark for the post-test increases to 9.61. As we can observe in this graph, there were no significant differences regarding this variable for T-group learners. Similarly, neither were there significant differences in the marks for the C-group during the experiment. However, during the experiment, the marks

from T-group learners were significantly higher than C-group learners whereas, for the pre-test, we did not observe significant differences in marks.

3.4. Interaction digital written task

Regarding *interaction*, an ANOVA model of repetitive measures was made with the purpose of evaluating how T-group learners evolved in terms of their grades throughout the interactive online written tasks while blogging. Outcomes proved that the marks for these tasks increased notably from one term to the next ($F(2,20) = 27,48, p < 0,001$). In Figure 6, the evolution of grading can be observed.

Graph 3.4. Evolution of marks in interaction



When analysing this graph according to Bonferroni's correction, we can clearly observe relevant difference throughout the experiment regarding the three interactive digital blogging written tasks. The task for the first term is graded 0.77 out of 10. This type of interactive online task when blogging is new for learners and, even though it was previously explained how to proceed, students did not participate in this first interactive digital task in the first term. Next, in the second term, the mark increased notably to 4 out of 10 existing, thus, a huge difference in statistical terms when comparing with the first term. Lastly, in the third term, the results increased again notably to a mark of 6.73, which again implies a significant difference in statistical terms in comparison with both the first as well as the second term. Therefore, the marks for this interactive digital blogging written task improve notably at the end of the experiment.

4. DISCUSSION AND CONCLUSION

In this section, by discussing the different outcomes from this research, we will give an answer to the research hypothesis as to whether EFL learners, from the T-group, in comparison with EFL learners from the C-group, can improve their EFL written competence within the CLIL approach in secondary education through blogging. To be more specific, the different variables related to writing skills conceived as a product will be justified; comparing the outcomes between the T-group and the C- group throughout the experiment. Moreover, since learners from the T-group also participated by interacting while blogging, a variable called *interaction* will also be discussed.

However, before discussing the outcomes of these variables in detail, we will proceed firstly to justify how the results, in general terms, evolved throughout the whole experiment; comparing outcomes between the T-group and the C-group. The outcomes analysed indicate that the variable *time* was significant, implying that the mark of written competence as a product was changed notably during the different terms without any kind of dependence on the group and, simultaneously, there was a significant effect of the interaction between *group* and *time*, proving that *time* was determinant in a different manner to learners depending on which group they belonged to. Regarding the T-group, the outcomes of writing skill as a product evolved positively at the end of the term, while the marks from the C-group decreased throughout the experiment, revealing a significant difference between the two groups at the end of this empiric research. This difference could be caused by the complexity of specialised vocabulary within geography for learners from the C-group while, possibly, this specialized vocabulary was not complex for learners from the T-group.

Next, we will firstly discuss the results of the *content* and *organization* variables. The outcomes of these variables demonstrate that *time* was significant, showing a relevant decrease in the *content* variable and a significant increase in the *organization* variable at the end of the experiment. As can be seen in Graph 3.1.a, the *content* varies throughout the experiment in both the C-group and the T-group, to the point of decreasing the mean of the *content* notably between the pre-test and the post-test. Although the *content* of the diverse EFL written tasks was decided by the geography teacher, not every student completed satisfactorily regarding the content of their tasks in both the C and the T-group between the pre-test and the post-test since they had combined different themes within the same written task. This occurred possibly because of the lack of understanding by

learners while participating in the experiment and, particularly, on the part of learners from the C-group, whose mark was lower than learners from the T-group.

Regarding the variable *organization*, there was a notable improvement in the T-group while, in contrast, a significant decrease in the C-group learners was observed. This significant decrease of the *organization* variable in the C-group occurred because these learners did not complete their corresponding tasks according to what was required. Moreover, we should highlight that the teacher and researcher of this work had to offer learners, at the beginning of the second term, two sessions on how to write a coherent and cohesive text to help learners become more aware of the relevance of creating a well-organized text. We believe that these training sessions helped learners from the T-groups improve their *content* at the end of the term.

Secondly, the outcomes of the *grammar* and *vocabulary* variables will be discussed. The results proved that *time* was a determinant, indicating that the marks of these variables decreased notably over the various terms, without considering the nature of either the T-group or the C-group. The C-group learners, in comparison with the T-group, did not seem to manage with the language use variables. This was possibly due to the level of complexity of English within Geography and, thus, implying a significant decrease in the outcomes from the C-group.

Moreover, the outcomes demonstrated that there was a significant effect of the interaction of *group* and *time* in both variables suggesting that *time* was a determinant according to the group. For example, we observed a slight decrease in the results of the C-group learners, which implied that there were significant differences between the first term and the rest of the terms. Additionally, the post-test marks decreased notably in comparison with the three terms. It is worth noting that the mean of the post-test in the C-group learners, and the previous variables, decreased significantly at the end of the experiment whereas the T-group learners always improved their marks in the post-test.

As can be seen, the decrease of marks in the C-group was considerable with both variables - *grammar* and *vocabulary*. This notable decrease was possibly due to the level of complexity of specific grammar structures as well as specialized vocabulary for geography. Although grammatical structures and specialized vocabulary had both been previously taught by the EFL teacher, this significant decrease may have occurred because the various EFL writing tasks in geography were complex and challenging for the C-group learners.

From the obtained outcomes regarding the *grammar* and *vocabulary* variables, we can infer the following information: as for the *grammar*, in the case of the C-group, the mark decreases in a significant manner in the third term in comparison with the first term, although there is a slight improvement in the post-test. Nevertheless, the *grammar* variable does not improve positively. On the other hand, in the case of the T-group, even though there are significant differences between the second and the third term, when compared with the first term, in the post-test we can observe a significant difference when comparing the outcomes of the T-group with those from the C-group showing that the marks from the T-group are higher than those from the C-group. This significant difference regarding the *grammar* variable could be caused by the degree of complexity of specific grammar structures which are related to geography for learners from the C-group. This is interesting since the students in both the C-group and the T-group were chosen in a random manner.

Regarding the *vocabulary* variable, there is a significant difference in the C-group when comparing the first term and the post-test, where this variable decreases notably in comparison to the other terms whereas, in contrast, the mark for the T-group learners almost reaches excellent. Moreover, this mark decreases slightly throughout the year: in the post-test the mark for *grammar*, in comparison with the C-group, increases notably. There are significant differences between the T-group and the C-group. Again, the mark for the T-group is higher. These outcomes demonstrate that there are significant differences between the C-group and the T-group. Additionally, the marks for the T-group are always higher than those from the C-group. The reason for these significant differences between the two groups is found in the level of complexity, regarding the language use, for the C-group learners.

The last variable to be discussed, from the perspective of writing skills as a product, is *spelling*. The outcomes show that, for the C-group learners, there are significant differences between the first term and the post-test. The results decreased notably in the C-group. In the T-group there were no significant differences throughout the whole experiment, although we observe non-relevant differences in all the corresponding terms. The mark for the post-test of this variable is higher in the T-group than in the C-group.

There was a significant decrease in the *spelling* marks in the C-group at the end of the experiment, which was due to spelling mistakes related to verb tenses, and not because of spelling mistakes when learning new vocabulary, taking into consideration that spelling is

part of vocabulary acquisition. Moreover, the difference between both the C-group and the T-group could be due to the fact that T-group learners were more careful with spelling than C-group learners and, particularly, regarding the acquisition of new vocabulary.

From the outcomes discussed here, we can clearly state that there were significant differences between the T-group and the C-group in the various variables analysed related to written competence as a product; the results for the T-group were higher than those for the C-group. Therefore, to respond to the research question on whether blogging can improve EFL written competence within the CLIL approach and, particularly, in geography, we can affirm that there was significant learning for learners from the T-group in comparison with the outcomes from the C-group learners. These outcomes were initially expected.

Finally, the *interaction* variable will be discussed. The results shown in graph 3.4 show that there was a significant difference throughout the whole experiment; the highest mark being in the third term. The T-group learners were asked to interact and comment on the posts where their own partners within the same group had previously posted their own original written tasks. It is now clear that, at the beginning of the year in the first term, T-group learners did not know how to proceed in order to interact while blogging, even though this had been previously explained to them. It must be noted, however, that this experience was new for learners. This was the first experience of significant learning about blogging which the learners had been offered. They were not familiar with blogging as a learning tool.

In the second term, learners seemed to better understand the interactive dynamic of the blogs, which is a characteristic of the web 2.0, almost reaching a mark of 4. The teacher-researcher had to deliver either 2 or 3 sessions of 45 minutes each to explain to the learners again how to interact in their corresponding blogs by posting comments on the first digital writing interactive task done by learners in the first term. In the third term, there was a satisfactory interactive learning experience while blogging, which demonstrated that blogging helped the T-group learners improve EFL written competence within the area of geography. This research contrasts the study by Montaner-Villalba (57) where the mean of the interactive digital writing tasks while blogging were not satisfactory while Montaner-Villalba (116) proved that the findings from the interactive digital writing tasks improved at the end of the blogging experiment.

It is perhaps surprising that the teenage learners who participated in this study needed to be offered various training sessions on how to use blogging since teenagers are digital natives. They belong to Generation Z. Pérez-Escoda et al. (78) state that learners from Generation Z feel attracted by visual information as they are familiar with mobile devices. For this reason, theoretically, it should not be necessary to offer them training sessions on how to blog. The real problem could be the lack of awareness by various agents from the education community regarding the relevance of using technology in learning.

In this paper, by analyzing written production, we have offered an answer to the research question on whether blogging would help learners to improve their EFL written competence within the CLIL approach. Blogging as a tool for developing written competence as a product helped the T-group learners significantly improve their EFL written production throughout the whole research, while for the C-group learners, the quality of their EFL written production, in comparison with the T-group learners, decreased within the area of geography in secondary education, as it has been proved in the Outcomes section.

This research offered the learners the chance not only to develop their EFL written skills, but also to interact with their peers (Montaner-Villalba 117; 57) by commenting on their respective blog entries. Moreover, learners' interest and, particularly, T-group students' interest increased because blogging was a novel experience in the context of secondary education. However, it should be highlighted that, due to the lack of publications related to blogging when teaching EFL within the CLIL approach (Capone et al., 6582; Odone, 110; Montaner-Villalba, 62, 195) in secondary education within the Spanish educational system, this research offers significant value to the field of computer-assisted language learning, with a context relatively new in academic research as little has been published on this subject to date. Considering the outcomes of this study and because this research represents a small scale and, thus, the data of this study cannot be generalizable, further research is needed to shed more light on how blogging can improve not only learners' written skills, but also other linguistic skills within the CLIL approach.

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