RESEARCH PAPER

Blogging in EFL: a Writing Project using ICT

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Abstract

Blogging has become very popular in different educational fields, including second language teaching. This article arises from the need to research the impact that the implementation of blogging has on the acquisition of certain language competences. The main objective of the study was to research the impact of the use of blogging on the development of writing skills in the foreign language (L2). Students, divided into four groups, were asked to write a number of descriptive essays in which they could reflect both on the theoretical and practical contents seen in class. Using statistical tools such as Coh-Metrix to establish the errors that Spanish engineering undergraduates make when writing in English, the metrics of their texts were compared to the metrics resulting from a set of reference texts. Findings revealed that the use of blogging was positive in the four different groups. The high correlation between the grades awarded to students' essays by the teachers and those given by the Coh-Metrix tool showed its effectiveness in the study of the linguistic and discursive indices of the English texts produced by students.

Keywords

Blogging; writing skills; Information and Communications Technologies (ICT); English as a Foreign Language (EFL)

1. Introduction

This study aimed to discover the impact that the implementation of blogging has in the acquisition of certain language competences, such as writing. To carry out the study we tested how introducing blogging activities in the classroom could impact the students'

writing skills in English as L2. A series of writing activities leading to the production of written compositions in English was set for students. Coh-Metrix, a piece of software that measures the linguistic and discursive representations of texts, was the main tool used to achieve this goal. According to McClure (1991), Spaniards use more nouns (WRDNOUN) and more lexical overgeneralisations when writing in English (hyperonyms: WRDHYPn, WRDHIPv, WRDHYPnv), while Connor (1984) observes a much more frequent use of causal connectives (CNCaus) and additives (CNCAdd) when compared to native users of English. Silva (1993) reached the same conclusion as Reid (1988) regarding the length of sentences in English produced by Spaniards as well as the use of more pronouns. Subsequent studies using Coh-Metrix (Crossley et al., 2007; Crossley et al., 2007; Crossley and McNamara, 2008; McCarthy et al., 2007) reached the same conclusions as the works mentioned above. Therefore, in this study, texts (descriptive essays) written by Spanish students were analysed using Coh-Metrix and their indices were then compared to a set of reference texts originally written by native users of English.

1.1. Blogging

Blogs, or weblogs, have been referred to as web-based spaces for writing, where all the writing and editing is managed through a web browser and is immediately made public on the Internet (Godwin-Jones, 2003), or as online diaries (Cobanoglu, 2006). Whatever the definition, blogging is a widely used ICT application in language teaching for increasing reading and writing competences (Dizon & Thanyawatpokin, 2018). Since the beginning of the century, a good number of local, usually small-scale studies have been conducted to test the integration of blogs in the teaching and learning process in the foreign language classroom (Arslan & Şahin-Kızıl, 2010; Campbell, 2003, 2004; Fithriani et al., 2020; Montaner, 2017; Pinkman, 2005; Ward, 2004; Zhang, 2009). These analyses focus on foreign language training and the beneficial use of blogs to increase competence acquisition. Campbell (2004) describes the use of a free, hosted weblog with a 1.9 million-member-strong community of users to facilitate authentic communication in the EFL classroom.

Arslan and Şahin-Kızıl's (2010) quasi-experimental study involved fifty English intermediate students at a Turkish university. The control group received in-class process-oriented writing instruction and the experimental group carried out their writings using blogging software. Analysis of both types of writings led the author to conclude that "writing instruction might have resulted in a greater improvement in students' writing performance" (p.183). Fithriani et al's (2020) qualitative study involved thirty Indonesian undergraduates using an online blogging platform in a Creative Writing course. Analysis of questionnaires and semi-structured interviews revealed that students found Blogger to be effective in promoting their writing fluency and "their awareness of writing for audience" (p.87). In the same vein, Pinkman's (2005) qualitative study researched the usefulness of using blogs in the foreign language classroom. Findings suggested that learners regarded the use of blogs as positive. Additionally, they acknowledged having more motivation and interest to use English because they could interact with classmates and teachers and get feedback from them. Zhang (2009) focused on reflective learning and suggested improving English writing by making students record their experiences on weblogs. The study's conclusion stated that "weblog environments can promote reflective activities in learners since they lengthen the distance between learners and the content to be learned" (p. 71). However, Zhang also pointed out that the use of weblogs does not need to be limited to journaling, since they can be used to implement a variety of pedagogical methods in the teaching of English as a foreign language.

Aljumah (2012) found that students preferred writing blogs to writing on paper when he tested blogging to improve academic writing. Students also declared themselves to be more creative, self-confident, and have a more positive attitude when writing blogs. Nevertheless, the study also highlighted some disadvantages of the use of blogging, such as the lack of feedback and correction, passive behaviour, distraction, time-spent, and computer problems (p. 111). Aydin (2012) presented a very thorough review of the literature on the use of blogs. Factors such as effects on the awareness of the target culture, interaction and communication or basic language skills were considered. The paper gave practical recommendations for teachers and stressed the need for more

research. Focusing on the reading comprehension skill and writing motivation, respectively, works by Yakut & Aydin (2017) and Özdemir and Aydin (2017) found that the use of blogs on their own did not guarantee a better performance in reading comprehension and did not increase motivation.

In a vocational training context, Montaner (2017) showed how blogging could be beneficial for reading and vocabulary skills in ESP students, though not in the writing competence. In a later study, however, Montaner (2019) was able to demonstrate quantitatively and qualitatively that the use of blogging in an ESP course that implemented Project-Based Learning (PBL) contributed to enhancing the writing skills of most of the 23 participants in the study. Additionally, these students acknowledged that the use of blogging enhanced their motivation to learn English. Kleanthous & Cardoso (2016) found that the interactive use of blogs in the ESP classroom had a positive impact on students' writings and on speaking and reading skills as well.

In addition to the aforementioned studies, Montaner Villalba and Montalbán (2021) conducted a study on the enhancement of the use of phraseological units in the translation and composition of English texts for Specific Purposes through blogging in a Flipped Classroom environment. From that experience, it is clear that blogging is a valid instrument for the development and consolidation of translation skills and the composition of texts in English for Specific Purposes.

This brief review gives a glimpse of the varied studies carried out on the use of blogs when teaching English as a foreign language and English for specific purposes. Not all the literature consulted showed clear improvement in skills due to blogging, but all agreed on the positive impact on the students' learning process. It seems warranted, therefore, to explore the effectiveness of the use of blogging to improve the writing skills of ESP undergraduates and to establish whether this teaching methodology can increase students' engagement in the English language classroom.

2. Objectives and Methodology

2.1 Objectives and Research Questions

The aim of the current investigation was to study the use of blogging to improve students' writing skills. One important objective was for students to be able to produce written texts in which they could acquire and reflect on various grammatical aspects and ESP vocabulary they had learnt during the course. Another important goal of the present study was to establish whether students embraced the use of blogs in a positive or negative manner. To obtain students' responses in relation to this, they had to complete an online survey at the end of the term. The following research questions were formulated:

RQ1: Do students perceive blogging as a useful tool to improve writing skills in the English language class?

RQ2: Do students' writing skills improve with the use of blogging?

2.2 Setting and participants

The present study was carried out during the 2020/2021 academic year. The students targeted were taking the first year of a Bachelor's Degree in Industrial Organization Engineering while also being trained as military pilots for the Spanish Air Force. This training takes place at the Defense University Center in San Javier, Murcia, which is attached to the Technical University of Cartagena. The study was implemented in English I, an upper-intermediate English language module where students are not only taught general English language but introduced to aeronautical and military English as well. The curriculum of the degree also incorporates technological and business English. As English I is considered an English for Specific Purposes (ESP) course, its main objective is to prepare students to read and comprehend their own field materials in English without any or at least little difficulty (Ahmadi and Bajelani, 2012). The group was made up of 64 students, who were divided into four groups following the guidelines for language courses

provided by the Centre's academic administration. All the four groups were taught the same English content following the same methodology:

Group	No. of students
Alpha 1	19 students
Alpha 2	19 students
Bravo 1	13 students
Bravo 2	13 students

2.3 Activities involved

Several sequenced activities were implemented in the study. They were aimed at developing writing competence in English through descriptive essays. The materials were uploaded to the Virtual Classroom and consisted of:

- Audio recordings related to the process of writing descriptive essays.

- Videos related to the process of writing descriptive essays.

- Specialised texts on the aeronautical and military fields.

- Links to websites where students can get information on writing descriptive essays.

- Exercises associated with the didactic materials (composition of descriptive essays, grammar exercises, online exercises on the use of language, oral skills, etc. Review exercises were also introduced using Kahoot quizzes to go over the main contents).

- Five writing tasks (descriptive essays a0, a1, a2, a3 and a4) that were marked and used for the research to observe students' progress. These essays were uploaded to a blog created by the students themselves.

- An initial and final questionnaire to assess whether students perceive blogging as a useful tool to improve writing skills (see Annex 1 for details).

Furthermore, Cambridge English Write & Improve (https://writeandimprove.com/) was presented to the students at the beginning of the course. Although it was not used for the research, this software helped students improve their subsequent outputs and monitor their progress. Write & Improve "is a free service for English learners who want to practice their written expression in English." Essays were produced by students (a0, a1, a2, a3 and a4), who could review them using the tool and according to a B2 level of the Common European Framework of Reference for Languages (the level to be achieved in the course as stated in the course guide). Write & Improve checks spelling, vocabulary, and grammar and offers suggestions on how to improve written expression. Students were told to use it at home after they had finished their descriptive essays to obtain feedback. They were allowed to use the tool as many times as they deemed appropriate.

Figure 1 shows the feedback students obtained at the word level. That helped them to identify incorrectly used words, forgotten words such as articles and prepositions, and unclear words.

Figure 1

Feedback at the word level.

Word-level feedback

When Write & Improve finds a problem in your writing, a symbol next to the word that is affected is shown. There are four different types of symbols:

! **Incorrect word?** Is this word correct?

▲ **Did you forget something before this word?**

➡ **Did you forget something after this word?**

☆ **Suspicious word.** Something doesn't look right about this word.

You can find more information about the error by clicking on the symbol.

Figure 2 shows the feedback students got at the sentence level. Sentences are highlighted with three different colours to let students know when they wrote a good sentence, when it could be improved, or when it had some problems.

Figure 2

Feedback at the sentence level.

Sentence-level feedback

The colour of the sentences shows Write & Improve's opinion of the quality of each sentence. Sentences with a white background are sentences that Write & Improve considers good, whereas sentences with a solid coloured background have areas that could be improved. The crossed lighter-coloured background shows that the sentence is better but could still be improved.

This seems to be a good sentence.

This sentence could maybe be improved.

There are some problems in this sentence.

Figure 3 shows score feedback. Students are given a score while they were able to see the corresponding levels to each of the scores according to CEFR.

Figure 3
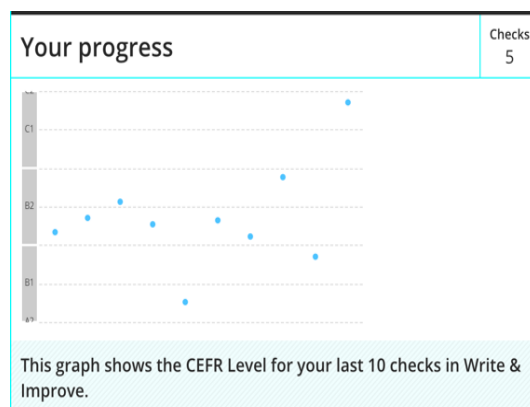
Scoring according to the CEFR.

Score feedback

CEFR Levels

Level	Explanation
C2	Mastery or proficiency
C1	Effective operational proficiency or advanced
B2	Vantage or upper intermediate
B1	Threshold or intermediate
A2	Waystage or elementary
A1	Breakthrough or beginner

Figure 4 provides information about progress. Students are able to observe their improvement in writing once they have submitted different pieces of writing to the software.

Figure 4

Student progress.

2.4 Tools and methodology

As stated in the introduction, in order to test if the students' writing skills improved with the use of blogging, we employed Coh-Metrix as the main tool to analyse the results of the work. It facilitated the comparison of the essays produced by the students to texts written by native users of English. According to its website, Coh-Metrix (2017) is "a computer tool that produces indices of the linguistic and discursive representations of a text" and these values "are used in very different ways to investigate the cohesion of the explicit text and the coherence of the mental representation of the same". Cohesion is understood here as "the characteristics of an explicit text that play a role in helping the reader to mentally connect ideas in the text" (Graesser et al., 2011). By coherence we mean "the interaction between linguistic representations and representations of knowledge" (Coh-Metrix, 2017). When the focus is on the text, coherence matches the characteristics of the text that can contribute to the coherence of the mental representation. Table 1 offers a detailed explanation of Coh-Metrix indices.

Table 1

Coh-Metrix indices.

Coh-Metrix indices
1. Narrativity. This measures whether specific vocabulary in the text is recognised
2. Readability. This measures whether the text can be easily read due to the simplicity of its language
3. Referential cohesion. This measures whether there has been a systematic message in the text, or the same message has been repeated throughout the text
4. Deep cohesion. This measures whether the text contains causal and intentional connectives to highlight causal and logical relationships in the text
5. Concreteness. This factor measures whether rigorous technical language has been used

After the analysis of students' essays using Coh-Metrix, their indices were then compared to a set of reference texts originally written by native users of English. We used graphs where the values obtained by the students in each of the indices are shown through bars and a continuous line shows the probable maximum. To calculate the probable maximum, the sum of the mean of the values of the indices of the original texts was taken and the standard deviation of such indices was added (as differences in absolute value).

At the same time, in order to evaluate the descriptive essays in English, the two following measures were used: Z (Reid, 1988), a statistical test which evaluates the mistakes that Spaniards make when writing in English, and an analysis with Coh-Metrix to study readability. In this test, the density function Z (or Z test) is the primitive function (the integral function, calculating the area of the normal distribution). Since all distribution functions enclose an area equal to 1, their primitives calculate probabilities. The normal distribution (or "Gaussian bell") is the function that the central limit theorem attributes to all random samples of finite mean and variance when the size becomes significant. This means that we have used different tools to analyse the quality of the essays.

Indices of Coh-Metrix were compared to the marks obtained by the students in their essays (marks proposed by the teacher). Moreover, essays were written with a span of two months with the aim of having enough time to observe progress in the students' writing competence. If marks obtained in the final essays were better than marks obtained in the rest of the essays, students' progress could be demonstrated. Therefore, the mean of the marks from a2, a3 and a4 should be better than the mean of a0, a1, a2, a3 and a4. Additionally, a peer evaluation was conducted to observe whether the students improved their writing skills. Using Google Forms, each student evaluated another student in the same group anonymously once all the five essays were completed. The same indices as in Coh-Metrix were used, i.e. narrativity, readability, referential cohesion, deep cohesion, and concreteness. They all refer to the proper understanding of a text at different levels. A psychometric scale of 1-5 was used, where 1 is the lowest appreciation and 5 the highest.

To analyse the second research question (What is students' perception in relation to the use of blogging in the English class?) we used an initial and final questionnaire.

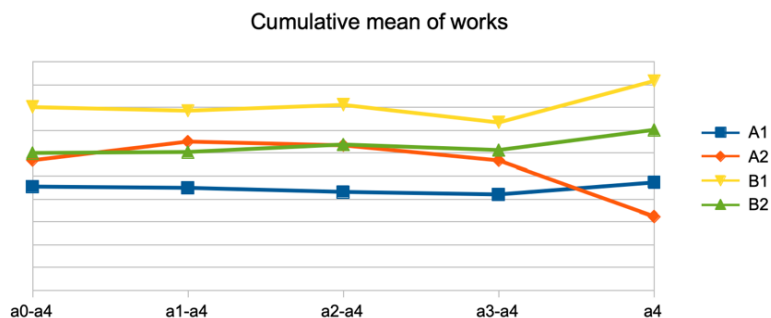The tools described above were used following these phases:

1. Initial questionnaire on the use of blogging in academic settings.

2. Development of theoretical-practical contents of the course, including five writing tasks (essay a0, a1, a2, a3 and a4) that will be marked to observe students' progress in writing. These tasks were used in the research.

3. Analysis of the quality of the essays using Coh-Metrix.

4. Peer evaluation of the texts by the students.

5. Comparison of the results of Coh-Metrix with the students' marks in the essays.

6. Post-course questionnaire (same questions as in the initial questionnaire).

3. Results and discussion

We will now discuss the results of the study. Figure 5 shows an overview of the students' progress. Essays a0, a1, a2, a3 are compared to the last one (a4). Each colour corresponds to a particular group of students: A1 refers to Alpha 1; A2 refers to Alpha 2; B1 refers to Bravo 1, and B2 refers to Bravo 2.

Figure 5

Students' progress. Cumulative mean of works (essays produced by students).

Cumulative mean of works

Progress over the two months is shown in the means of essay marks. All groups except A2 demonstrated a slight improvement in the final writing task. Yet, it can be observed that improvement takes place in all of the groups and in most students over time.

We assigned a weight to every task and thus created a weighted average to be compared to the unweighted average as control. This facilitated a comparison of the means of all works with a mean giving more emphasis to the final works in a progressive way. Table 2 and Figures 6-9 show this.

Table 2

Weights assigned to each of the writing compositions.

Writing Task	Weight
a0	1 / 15
a1	2 / 15
a2	3 / 15
a3	4 / 15
a4	5 / 15

In figures 6-9, the bars are the marks achieved by each student separately. The blue bars correspond to the average obtained in each task while the orange bar corresponds to the weighted average, which is slightly higher for most students.
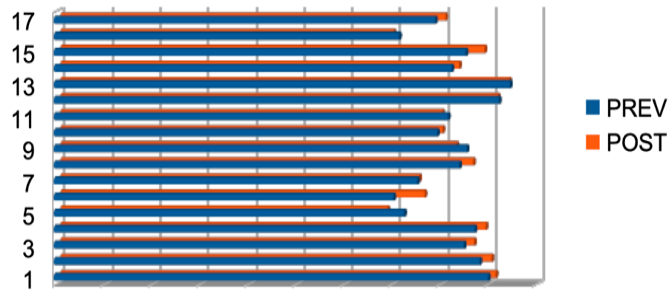
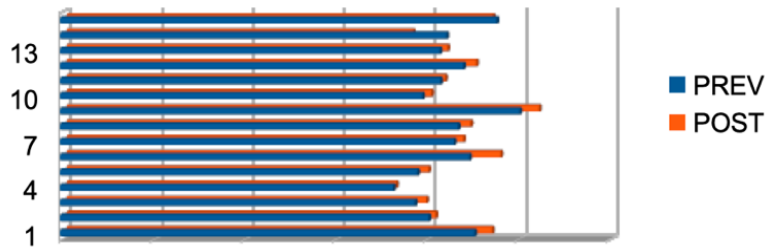**Figure 6**

Grades in A1.

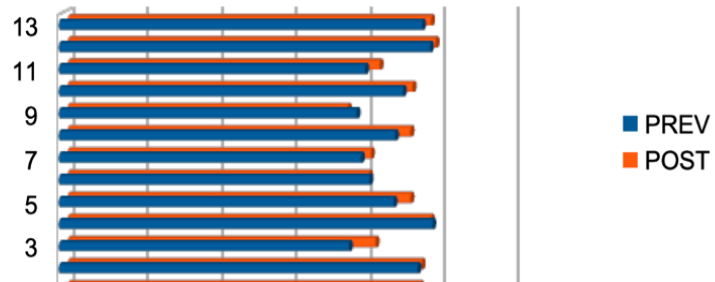**Figure 7**

Grades in A2.

Figure 8

Grades in B1.

Figure 9

Grades in B2.

Table 3

Percentages of students whose weighted average is higher than the average.

A1	52.94%
A2	73.33%
B1	61.54 %
B2	61.54 %

From the Figures and Tables above, it can be observed that most students benefited from the methodology followed throughout the course (i.e. using blogging in a university context to facilitate the achievement of optimal results in writing texts). Marks for different texts have improved over time. It is also observed that although students from Alpha 2 did not obtain the same results in the final task, these being lower than other the groups' results, it is in this task that more students from Alpha 2 saw their abilities improve (see Figures 5 and 7 and Table 3. The peer evaluations (in Figure 10) carried out by Alpha 2 also show that there is more thoroughness among students when evaluating each other, if we compare these to the results obtained for the rest of the groups.

Figure 10

Students' peer evaluations.

Finally, when the evaluations carried out by the teacher are compared to the evaluations performed by Coh-Metrix, we observed that there is a high correlation in both results. In Figures 11-14 we observe this correlation between marks proposed by the teacher and those obtained by Coh-Metrix.

Figure 11

Comparison of students' grades made by the teacher vs. those performed by Coh-Metrix. Group A1.
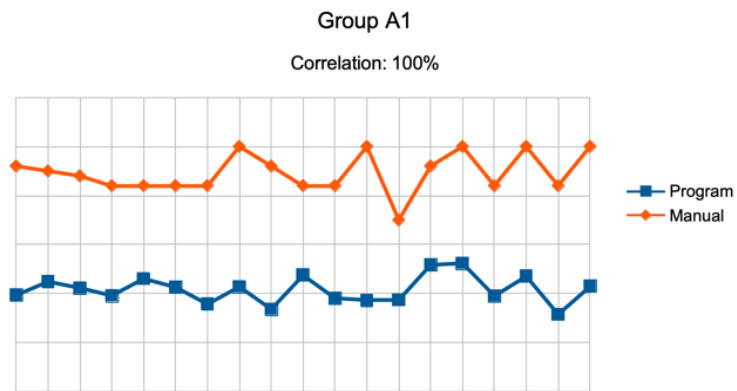

Figure 12

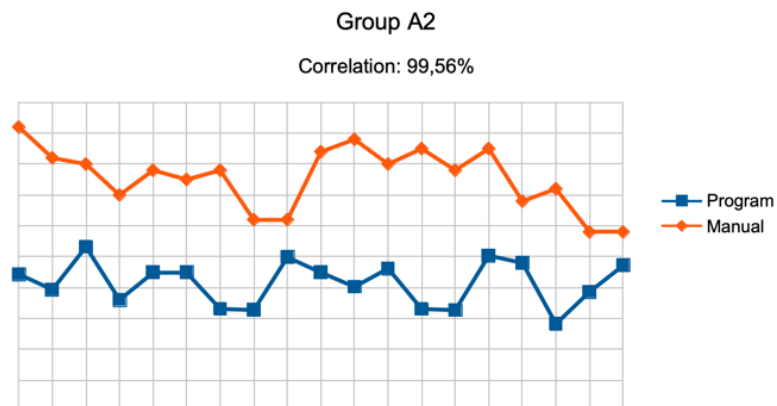*Comparison of students' grades made by the teacher vs. those performed by Coh-Metrix. Group A2.*

Figure 13

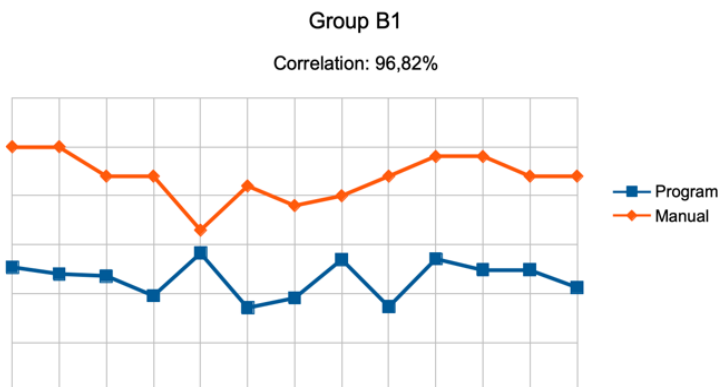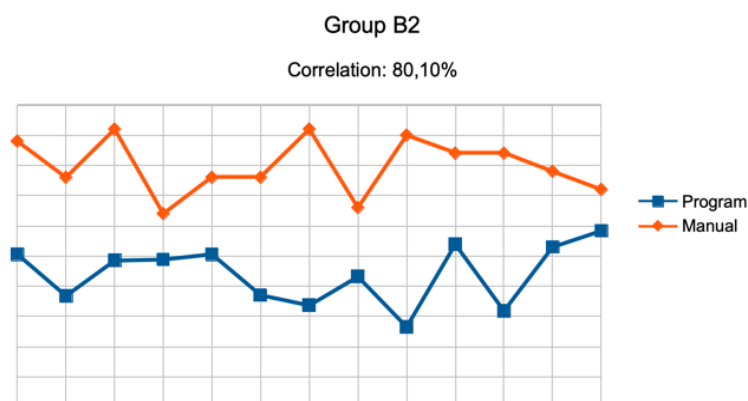*Students' grades by the teacher vs those by Coh-Metrix. Group B1.*

Figure 14

Students' grades by the teacher vs those by Coh-Metrix. Group B2.

To determine correlation, the mean of the automatic results of the software and the teacher's assessments were calculated, and the automatic values were amplified based on this ratio. The Chi test was then carried out, the result is likely to be closer to 100% where the highest similarity exists between each item from two samples.

The initial and final questionnaires completed by students on their perception of the use of blogging in academic settings showed the following answers:

Initial diagnosis

Focusing on the results of the initial evaluation, and more specifically on the definition and use of blogging, 90% of the students answered as follows:

- I have never worked this way.

- Creating blog posts that report on it.

- Writing among all the people who have access to the blog and different examples of written production.

The question, what is blogging for you? obtained the following results proportionally:

- A useful information tool.

- A website where one person posts content and others can comment on it.

- The way we have, thanks to the Internet, of presenting our writing to the world.

- No idea.

The students were asked if they knew of examples of blogging. The results can be seen in Figure 15 below. Referring to the definition of blogging, the students were asked if they knew of ways to improve their writing skills in English through blogging; 90% of the students answered as follows:

- A useful and dynamic alternative way to learn English and post texts and experiences.

- Interacting using the Internet.

- A teaching tool.

- It is a way of learning, making use of technology.

- A way to improve writing in English in a cooperative way where each student sees the comments of the others.

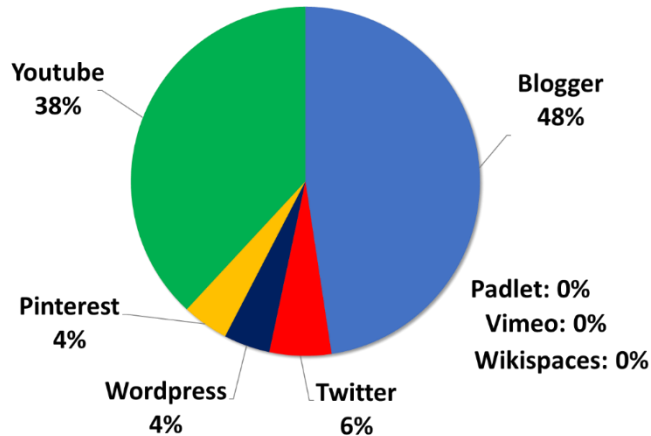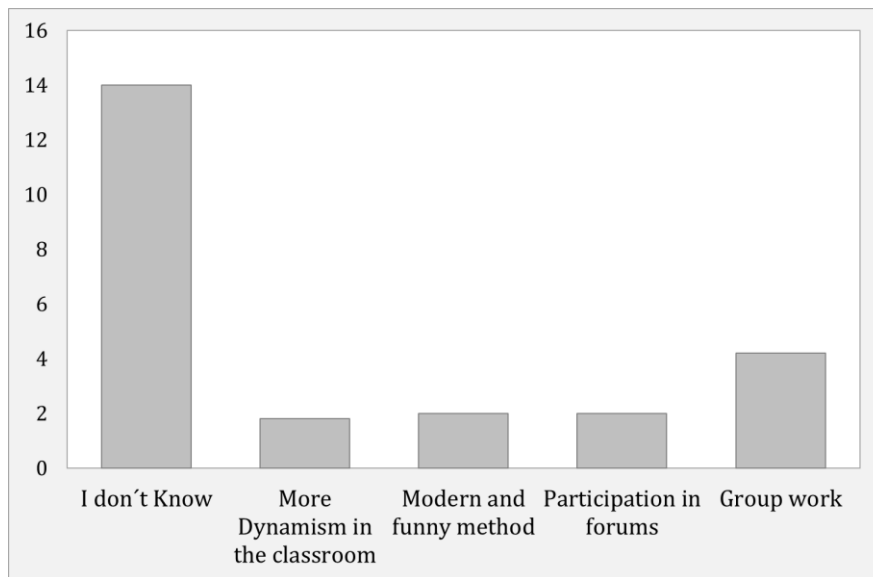**Figure 15**

Blogging Survey Example.

Figure 16

Survey results: Advantages of Blogging.

Final diagnosis

Once the study was finished, the students made this diagnosis. Considering the first aspect (ways of working through blogging), 95% of the students commented mostly:

- Through an analysis of the texts uploaded to Blogger

- Sharing our texts and thus seeing the different ways that different people write the same text.
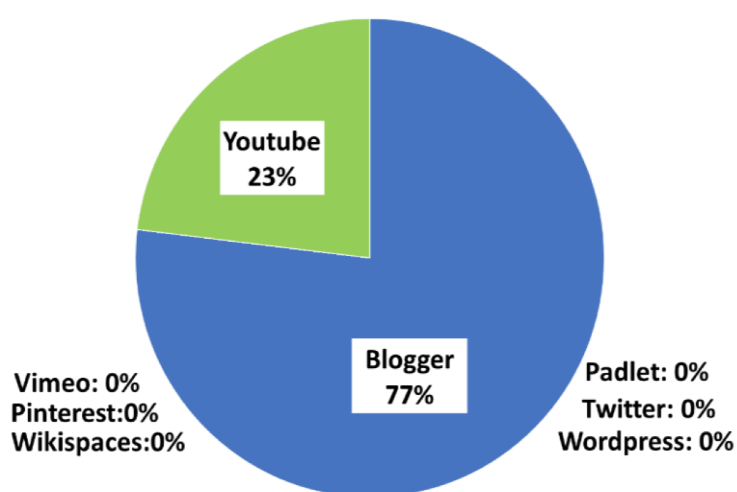
- Creating a blog

The question about the definition of blogging showed the following majority responses from the students:

- A way of sharing my practices with other people and thus sharing my knowledge and being able to discover that of others.

- A way of interacting with society and sharing academic knowledge online.

- A useful tool to compare translations, learn from mistakes, and see colleagues' daily work.

It is interesting to review the answers of blogging examples below:

Figure 17

Blogging examples.

For the question about the advantages of blogging in the classroom, students considered:

- Speed and usefulness, as well as the accessibility to all the practice.

- The originality, the effort to update the blog.

- Learning the use of technologies.

- The correct collection and organisation of the course work.

- Freedom of expression and creativity.

When considering disadvantages, a few students mentioned some drawbacks in the use of blogging in the questionnaires, such as Internet access problems, and the fact that it could be tedious to have to update.

4. Conclusion

The present work investigates whether the students of the Bachelor's Degree in Industrial Organization Engineering, at the Defence University Centre in San Javier, Murcia, attached to the Technical University of Cartagena, improved their writing skills through the use of blogging. The study also aimed at capturing student perceptions in relation to the use of blogging in English class. The results presented above regarding the different phases of the developed project, are favourable to the initial hypothesis that the use of

blogging is certainly a valid instrument for the development and consolidation of the composition of texts in English, in line with previous studies mentioned.

It has been observed that in order to demonstrate our objective we had to evaluate the papers chronologically and assign them a grade, compare the results with the evaluations made by Coh-Metrix, and contrast all of this with a peer evaluation carried out by the students using the same indices as Coh-Metrix, as well as the initial and final evaluations on the use of blogging in academic settings. By observing a high correlation in the evaluations by computer tools and those of the teacher, we consider the results to be credible. Finally, based on the results obtained in this study, the research hypothesis posed initially as to whether the use of blogging in a university context can result in the achievement of optimal results in writing texts in English can be confirmed, as well as the positive student perceptions on the use of blogging in English class. Furthermore, the questionnaires demonstrate that there is a consolidation in the knowledge and use of blogging, from an initial situation in which 90% of the students showed scarce knowledge on this matter to one where they had gained extensive knowledge by the end of the course.

Our findings are thus in line with other similar studies that stress the positive role of blogging in the teaching of a language (Arslan and Şahin-Kızıl, 2010; Cheng et al., 2019; Fulton, 2012; Fithriani, 2020). A future line of research might reinforce this analysis with a longer study which could consider the whole academic year. Results would probably be more representative if students were given a set of writing tasks spanning nine months instead of a term. Additionally, the students' use of blogging would certainly be more accurate and confident over a longer period and would deliver insights from a continuous use of this tool for several varied activities as well. A second part of this study will not only consider the time factor, but it will also consider a greater number of students and courses. Interesting findings can result from comparing different groups of students e.g. first-year students vs. seniors, technical-profile students vs. non-technical-profile students and their relative ability to improve writing competence.

References

Aljumah, F. H. (2012). Saudi Learner Perceptions and Attitudes towards the Use of Blogs in Teaching English Writing Course for EFL Majors at Qassim University. *English Language Teaching*, *5*(1), 100-116. https://files.eric.ed.gov/fulltext/EJ1079098.pdf

Álvarez, B. (2012). Flipping the classroom. Homework in class, lessons at home. *Education Digest, 77,* 18-21.

Arslan, R. & Şahin-Kızıl, A. (2010). How can the use of blog software facilitate the writing process of English language learners? *Computer Assisted Language Learning, 23*(3), 183-197. https://doi.org/10.1080/09588221.2010.48657

Aydin, S. (2014). The Use of Blogs in Learning English as a Foreign Language. *Mevlana International Journal of Education (MIJE), 4*(1), 244-259. https://files.eric.ed.gov/fulltext/ED545624.pdf

Campbell, A. (2003). Weblogs for use with ESL classes. *The Internet TESL Journal, 9*(2). http://iteslj.org/Techniques/Campbell-Weblogs.html

Cambell, A. (2004). Using LiveJournal for Authentic Communication in EFL Classes. *The Internet TESL Journal, 10*(9). http://iteslj.org/Techniques/Campbell-LiveJournal/

Cheng, L., Ritzhaupt, A.D. & Antonenko, P. (2019). Effects of the flipped classroom instructional strategy on students' learning outcomes: A meta-analysis. *Educational Technology Research and Development, 67*, 793-824.

Cobanoglu, C. (2006). An Analysis of Blogs as a Teaching Tool as Perceived by Hospitality Management Students. *Journal of Hospitality, Leisure, Sport and Tourism Education*, *5*(2).

https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.606.3320&rep=rep1&type=pdf

Crossley, S. A., Louwerse, M. M., McCarthy, P. M., & McNamara, D. S. (2007). A linguistic analysis of simplified and authentic texts. *Modern Language Journal, 91*(2), 15–30. https://doi.org/10.1111/j.1540-4781.2007.00507.x

Crossley, S. A., McCarthy, P. M., & McNamara, D. S. (2007). Discriminating between second language learning text-types. In D. Wilson & G. Sutcliffe (Eds.), *Proceedings of the 20th international Florida artificial intelligence research society* (pp. 205–210). AAAI Press.

Crossley, S. A., & McNamara, D. S. (2008). Assessing L2 reading texts at the intermediate level: An approximate replication of Crossley, Louwerse, McCarthy, and McNamara (2007). *Language Teaching*, *41*(3), 409–429. https://doi.org/10.1017/S0261444808005077

Dallimore, E. J., Hertenstein, J.H., & Patt, M.B. (2010). Class participation in accounting courses. *Factors that affect student comfort and learning. Issues in Accounting Education, 25,* 613-629.

Davis, N.L. (2016). Anatomy of a flipped classroom. *Journal of Teaching in Travel & Tourism, 16,* 228-232.

Fulton, K. (2012). Upside down and inside out: Flip your classroom to improve student learning. *Learning & Leading with Technology, 39,* 12-17.

Fithriani, R., Rafida, T. & Siahaan, A. (2020). Integrating Online Blogging into EFL Writin Instruction: Exploring Students' Perceptions. *Advances in Social Science, Education and Humanities Research (ASSEHR). UNNES International Conference on English Language Teaching, Literature, and Translation (ELTLT 2018), 188,* 87-90. DOI:10.2991/eltlt-18.2019.17. https://www.researchgate.net/publication/334424415_Integrating_Online_Blogging_into_EFL_Writing_Instruction_Exploring_Students'_Perceptions

Godwin-Jones, B. (2003). Blogs & Wikis: Environments for On-line Collaboration. *Language Learning & Technology, 7* (2).

Graesser, A. C., Singer, M., & Trabasso, T. (1994). Constructing inferences during narrative text comprehension. *Psychological Review, 101*(3), 371–395. https://doi.org/10.1037/0033-295X.101.3.371

Graesser, A. C., McNamara, D. S., & Kulikowich, J. M. (2011). Coh-Metrix: Providing multilevel analyses of text characteristics. *Educational Researcher*, *40*(5), 223–234. https://doi.org/10.3102/0013189X11413260

Graesser, A., Tackett, A., MacNamara, D., McCarthy, P. & Cai, Z.. (dir.) "Coh-Metrix." *Documentation Web Tool Contact*. 16 August 2017. http://cohmetrix.com/. Accessed 21 April 2021.

Halimatus Sa'diyah, I.H. a& Cahyono, B.Y. (2019). Effect of Project-Based Learning through Blogging on EFL students' writing ability, *Journal on English as a Foreign Language, 9*(2), 199-216. https://doi.org/10.23971/jefl.v9i2.1341

Hung, H.-T. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning, 28,* 81-96.

Kintsch, W. (1998). *Comprehension: A paradigm for cognition.* Cambridge University Press.

Låg, T. & Saele, R.G. (2019). Does the flipped classroom improve student learning and satisfaction? A systematic review and meta-analysis, *AERA Open, 5*, 3.

Lee, G. & Wallace, A. (2018). Flipped learning in the English as a Foreign language classroom: Outcomes and perceptions. *TESOL Quarterly, 52*(1), 62-84.

Lo, C.K., & Hew, K.F. (2019). The impact of flipped classrooms on student achievement in engineering education: A meta-analysis of 10 years of research. *Journal of Engineering Education, 108,* 523-546.

Lunding, M., Bergviken Rensfeldt, A., Hillman T., Lantz-Andersson, A., & Peterson, L. (2018). Higher education dominance and siloed knowledge: a systematic review of flipped classroom research. *International Journal of Educational Technology in Higher Education, 15,* 20.

McCarthy, P. M., Lehenbauer, B. M., Hall, C., Duran, N. D., Fujiwara, Y., & McNamara, D. S. (2007). A Coh-Metrix analysis of discourse variation in the texts of Japanese, American, and British Scientists. *Foreign Languages for Specific Purposes, 6*, 46–77.

McClure, E. (1991). A comparison of lexical strategies in L1 and L2 written English narratives. *Pragmatics and Language Learning*, 2, 141–154.

McNamara, D., & Magliano, J. (2009). Chapter 9 Toward a Comprehensive Model of Comprehension. *Psychology of Learning and Motivation - Advances in Research and Theory*, *51*, 297-384. https://doi.org/10.1016/S0079-7421(09)51009-2

Montalbán, N. (2019). Gamificación y Aula Invertida. Una experiencia motivadora para el estudio de las unidades fraseológicas, *Paremia, 28*, 67-77.

Montaner Villalba, S. (2017). La Competencia en producción escrita del inglés técnico mediante el blogging, *Verbeia. Monográfico: Journal of English and Spanish Studies - Revista de estudios filológicos*, *1*, 84-102. https://journals.ucjc.edu/VREF/article/view/4036

Montaner Villalba, S. (2019). Competencia en producción escrita en inglés para fines específicos mediante el blogging en un entorno de aprendizaje basado en proyectos, *Revista de Lenguas para Fines Específicos*, *25*(2), 173-192. http://dx.doi.org/10.20420/rlfe.2019.387

Montaner Villalba, S. & Montalbán, N. (2021). Unidades fraseológicas en traducción de textos de Inglés para Fines Específicos mediante el Blogging en un entorno de Aula Invertida. *Estudios de Traducción, 11*.

Özdemir, E. & Aydin, S. (2017). Blogging Effect on English as a Foreign Language Writing Motivation: Blogging and Writing Motivation. *International Journal of Computer-Assisted Language Learning and Teaching, 7*(2), 40-57. doi:10.4018/IJCALLT.2017040103.

Pinkman, K. (2005) Using Blogs in the Foreign Language Classroom: Encouraging Learner Independence. *The JALT CALL Journal, 1* (1), 12-42. https://doi.org/10.29140/jaltcall.v1n1.

Reid, W. (1988) Evaluating and Intervention in Developmental Research, *Journal of Social Service Research*, *11*(1), 17-37. https://doi.org/10.1300/J079v11n01_02

Vitta, J.P., Al-Hoorie, A.H. (2020). The flipped classroom in second language learning: A meta-analysis. *Language Teaching Research,* 1-25.

Ward, J. M. (2004). Blog assisted language learning (BALL): Push button publishing for the pupils. *TEFL Web Journal, 3*(1).

Yakut, A. D. & Aydin, S. (2017). An experimental study on the effects of the use of blogs on EFL reading comprehension. *Innovation in Language Learning and Teaching, 11*(1), 1-16. https://doi.org/10.1080/17501229.2015.1006634

Zhang, D. (2009). The Application of Blog in English Writing. *Journal of Cambridge Studies, 4*(1), 64-72. https://www.repository.cam.ac.uk/bitstream/handle/1810/255674/200901-article8.pdf?sequence=1

Ethical statement

This research was carried out within the framework of anonymous ethnographic and educational data collection. Each of the persons surveyed voluntarily submitted information related to their development as teachers, as well as their personal and occupational information. Each educational institution and each teacher were given a letter in advance which explained the context and the research purposes of the questionnaire.

Appendix 1

The questionnaires sent to the students had the following questions:

- What is blogging for you?

- Do you know any ways to improve writing skills in English through blogging?

- Do you know any examples of blogging?

- Advantages of blogging.

- Disadvantages of blogging.