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Note taking and Educaplay: Their Influence on Vocabulary Acquisition in English as a Foreign Language Students

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ABSTRACT The impact of innovation and communication technologies in the classroom is frequently discussed, but the contrast of some commonly used techniques that could maintain their advantage is not studied. The present study examines the impact of gender, Educaplay use, and note-taking on vocabulary improvement among students in an English as a Foreign Language (EFL) classroom. A sample of 39 undergraduate students participated in pre-test and post-test assessments to measure vocabulary progress. Multiple linear regression analyses were conducted to explore the predictive relationship between the aforementioned variables and vocabulary improvement. Results revealed that, contrary to expectations, only note-taking demonstrated a significant positive effect ($\beta = 0.338$, $p < 0.01$) on vocabulary improvement, while gender ($\beta = 0.021$, $p > 0.05$) and Educaplay use ($\beta = 0.036$, $p > 0.05$) did not show statistically significant associations. Adjusted R^2 values indicated that the model including note-taking had greater explanatory power ($R^2 = 0.564$) compared to the model without this variable ($R^2 = 0.486$). These findings underscore the pivotal role of note-taking as a valuable strategy for improving vocabulary in an EFL context, suggesting implications for instructional practices and pedagogical approaches in language learning.

KEYWORDS note-taking, educaplay, vocabulary, TEFL

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Toma de apuntes y educaplay: su influencia en la adquisición de vocabulario en estudiantes de inglés como lengua extranjera

ABSTRACT Con frecuencia se habla del impacto de las tecnologías de la innovación y la comunicación en el aula, pero no se estudia el contraste de algunas técnicas de uso común que podrían mantener su ventaja. El presente estudio examina el impacto del género, el uso de Educaplay y la toma de apuntes en la mejora del vocabulario entre los estudiantes de un aula de inglés como lengua extranjera (EFL). Una muestra de 39 estudiantes universitarios participó en evaluaciones previas y posteriores para medir el progreso del vocabulario. Se realizaron análisis de regresión lineal múltiple para explorar la relación predictiva entre las variables mencionadas y la mejora del vocabulario. Los resultados revelaron que, contrariamente a lo esperado, solo la toma de notas demostró un efecto positivo significativo ($\beta = 0,338$, $p < 0,01$) en la mejora del vocabulario, mientras que el género ($\beta = 0,021$, $p > 0,05$) y el uso de Educaplay ($\beta = 0,036$, $p > 0,05$) no mostraron asociaciones estadísticamente significativas. Los valores R^2 ajustados indicaron que el modelo que incluía la toma de apuntes tenía mayor poder explicativo ($R^2 = 0,564$) en comparación con el modelo sin esta variable ($R^2 = 0,486$). Estos resultados subrayan el papel fundamental de la toma de notas como una valiosa estrategia para mejorar el vocabulario en un contexto de EFL, lo que sugiere implicaciones para las prácticas de instrucción y los enfoques pedagógicos en el aprendizaje de idiomas.

PALABRAS CLAVE Toma de notas, educaplay, vocabulario, TEFL.

INTRODUCTION

The ancient period encompassed many cultures that, despite their differences, had common learning characteristics. Humanism as an educational model was one of the characteristics of these groups. The first teachers taught the letters of the alphabet to very limited groups (Salazar, 2022). Later during modernity, John Amos Comenius (1592-1670) appeared and suggested that a better way to learn is to understand, retain, and practice. This type of learning made students become participants and have experiences recreating content. According to Corvo Sánchez (2004), language learning, in its beginnings, was memorized through the copying of words, phrases and metric tables that were later complemented with oral teaching, thus emphasizing the importance of taking notes for learning a new language.

Nowadays, note-taking is a study technique that improves attention and retention. For Harrouz & Messaibi (2016) note taking is a very important skill that is underestimated. It is a skill that everyone at some point uses, to record important and useful information as part of the organization of daily life. Note taking is a way to avoid forgetting things with as few words as possible. Almaagbh (2020) states that, note-taking competence is an effective strategy that all university students should adopt, especially those who are learning a new language. In fact, there are techniques developed for note-taking; for example, the Cornell method. This method divides a card into three sections; the right column for writing down ideas (keywords), the left column for questions and the third part which is at the bottom of the card for summarizing and evaluating (Alzu'bi, 2019). Another method used is SOAR which involves selecting information, organizing it into a chart, then associating it with new information and lastly regulating it with a summary or questions to ensure understanding (Chen & Chien, 2020). However, in most cases, note-taking is a free activity performed by students according to their interests or their metacognition. For Phan (2020) metacognition is a successful strategy for self-learning, mainly for students who are learning a new language. In his research, the intervention of metacognitive note-taking skills showed interesting and positive results in students' reading skills and in their academic learning. Therefore, the use of note-taking is an effective and innovated tool for learners to cognitively remember concepts and recall knowledge.

On the other hand, Information and communication technologies have taken a big importance during the last decades. Some studies have proved that some technological applications are transforming education with new and effective strategies that have supported learners to improve their English language vocabulary and linguistics. There are many studies that suggest the use of web platforms to improve the students' language skills and abilities and one of the most popular platforms during the covid pandemic was Educaplay.

Educaplay is a free collaborative tool which is available to everyone and allows users to perform entertaining and playful activities to have an interaction between the teacher and the student. This program can be used in three different languages: Spanish, French and English. The platform can be applied to all educational levels, has a wide variety of games to create according to the needs, as well as a repository of games made by other users (Páez-Quinde et al., 2022). What happens if we compare the effectiveness of the traditional note-taken to this new technology? In the following paragraphs we are going to show how each one has proven their individual effectiveness.

NOTE-TAKING

Several techniques have been developed in EFL classrooms to teach and learn vocabulary and most of them are innovative and effective methodologies. However, techniques that are

considered traditional or outdated maintain their importance regardless of the implementation of new technologies that aim to replace them, as is the case with note-taking. The note-taking strategy in classrooms has helped learners in the acquisition of a second language. Bendehane and Bouaziz (2016) in their study mention that the use of note-taking is the core of foreign language learning and its influence as an effective strategy to learn vocabulary is positive.

There have been several previous studies proving that taking notes is an effective strategy in the teaching and learning English as a foreign language. To address this issue in more depth, a survey of the Scopus database has been conducted and it has been found that in all cases there are advantages rather than disadvantages. Alzu'bi (2019) and (Chen and Chien (2020) stated that using the Cornell method and SOAR method, students improved their writing composition and reading comprehension skills better than students who learnt through conventional methods. On the other hand, many researchers such as Al-Ghazo (2023), Almaagbh (2020), Siegel (2016), and Tsai-Fu and Wu (2010) indicate that the use of note-taking strategy, affects learner's academic performance positively for learning a new language, not just in a specific skill but in general. A summary of these findings is presented in Table 1.

These research studies collectively support the note-taking strategy for the development of English as a second language, and that it also fosters the development of the four skills of listening, reading, writing and speaking as well as the retention of vocabulary essential to understanding and learning a foreign language (see Table 1).

After exploring the effectiveness of note-taking to enhance skills in learning English as a foreign language, substantial support for this method has been uncovered. Now, bridging to Educaplay, it is revealed that this platform stands as an innovative and effective tool to further enhance vocabulary learning in the classroom. Research indicates that working with Educaplay to make classroom learning more interactive constitutes a set of strategies that positively impact the English language teaching-learning process, offering a powerful combination to engage students and enhance their linguistic abilities.

EDUCAPLAY

Ongoing discussions surrounding innovation and communication technologies within educational settings continually highlight their potential to elevate students' motivation and engagement. The implementation of Educaplay as a pedagogical tool stands out as a method that not only encourages increased interaction between students and educators but also offers a dynamic platform conducive to effective learning experiences. Palacios's study (2023) emphasizes the unique capacity of Educaplay as an innovative and highly efficient tool specifically designed to elevate and enrich vocabulary acquisition within the learning environment. Furthermore, Hurtado's research (2022) reinforces the assertion that the integration of technological applications like Educaplay profoundly enhances the development of language and vocabulary skills during the teaching-learning process.

These assertions find substantial support in a range of studies encapsulated within Table 2. These studies, conducted across diverse educational contexts in countries like Peru, Colombia, and Ecuador, underscore the consistent positive impact of Educaplay. For instance, investigations by Pérez Salazar (2014) and Oyola Garcia (2017) highlight how Educaplay serves as an innovative and motivational tool, despite demonstrating minimal impact on academic performance. Conversely, studies by Moya Rivera (2022) and Cadena et al. (2023) showcase how the strategic use of Educaplay, often in conjunction with gamification techniques, significantly enhances English vocabulary learning and acquisition.

Table 1. Studies about the effectiveness of notetaking to improve EFL students' skills

Source	Objetive	Country	Participants	Method	Results	Conclusions
(Alzu'bi, 2019)	Discover the impact of suggested Cornell note- Taking training model on improving writing composition skills.	Jordan	58 university students	Experimental	Pre-test: Experimental 38,57 Control 39,50 Post-test: Experimental 44,80 Control 42,11	Students who learnt composition by using the suggested Cornell method performed considerably better than did students who learnt through conventional method.
(Chen, Chih-Ming & Chien,Lu-Chia, 2020)	The effects of sharing SOAR study notes in a computer-assisted language learning environment on English reading comprehension and English reading anxiety.	China	39 high school students	quasi-experimental	Pre-test: Experimental 19.47 Control 17.36 Post- test: Experimental 71.00 Control 47.41	Sharing SOAR method notes contributed to promoting English reading comprehension in comparison with not sharing SOAR method notes.
(Al-Ghazo, 2023)	The main aim of this study is to investigate the impact of note-taking strategy on EFL learners' listening comprehension.	Jordan	80 university students	Experimental	Pre-test Experimental 68.53 Control 71.75 Post- test Experimental 87.72 Control 72,32	Use note-taking strategy affects learners' listening performance positively.
(Almaagbh, 2020)	The impact of strategic notetaking on English as Foreign Language (EFL) learners' academic performance among university students in Jordan.	Jordan	384 university students	Descriptive study	(Beta= .449; t= 18.714; P<0.05).	Students' strategic notetaking approach impact significantly their academic performance at the university level.
(Marunovich et al., 2021)	The porpuse of this study is to examine the strategy of employing mind-mapping techniques to improve students' vocabulary learning and retention.	Russia	26 university students	Experimental	Post-test: Experimental Group 76.273 Control group not exceed 69.514	Mind mapping as a learning technique has a positive significant effect on enlarging engineering students' vocabulary.

(Siegel, 2016)	To investigate whether a step-by-step pedagogic cycle for taking notes could help learners.	Japan	87 university students	Quasi-experimental	Pre-test 11 Post-test 21	Responses to the questionnaire indicated that learners found value in the focus on the various stages of note-taking.
(Tsai-Fu & Wu, 2010)	To investigate the effects of (a) note-taking instruction (using the Cornell note-taking method) and (b) note-taking language (English vs. Chinese) on Taiwanese college students' English listening comprehension for two types of texts, specifically, short conversations and long lectures.	China	108 freshman English majors in an institute		Experimental group Control group	This study reveals the value and importance of explicit, sustained note-taking instruction. It also suggests ESL students' native language (Chinese) becomes less competitive to capture information delivered in English.
(Bendehane & Bouaziz, 2016)	To know English as a foreign language teachers' and students' points of view about the effect of note-taking on vocabulary learning.		38 teachers and 120 Master students	descriptive		EFL teachers as well as students have positive attitudes towards the effect of note-taking on vocabulary learning.

These varied research endeavors collectively support the notion that Educaplay emerges as a versatile and impactful educational resource, fostering active and engaging learning environments while substantially contributing to students' linguistic development and overall academic progress (see Table 2).

None of the studies related to the notetaking presented above have to do with Latin American countries. In databases such as Google Scholar, studies have been found that also show that there are advantages of this strategy. One of them is (Harrouz & Messaibi, 2016b), who in his study mentions that one of the problems faced by EFL students is the rapid disappearance of the content they listen to. For Siegel (2016), there is an important role played by note-taking in second language learners; however, there has been no instruction to develop this skill. Empirical evidence could guide teachers to insist on this practice with students to achieve much more effective classes than they are used to. Students are more engaged in class when the teacher brings notes or support material because it saves them a lot of effort during class. However, having the freedom to do note-taking according to what the students consider important or not helps considerably in second language development, especially in vocabulary retention. To sum up, learners take notes in order to remember and retain what was said during the lecture. Therefore, there is neither conclusive nor sufficient empirical evidence within Latin American countries, thus the present study is an attempt to contribute such evidence in our context.

Table 2. Studies about the EDUCAPLAY strategies to improve EFL students' skills.

Source	Objetive	Country	Participants	Method	Results	Conclusions
(Pérez, 2014)	To explain how the pedagogical use of the "Educaplay" platform influences the development of English language comprehension and text production skills.	Perú	30 high school students	Quasi-experimental	AVERAGE Pre-test -Experimental group 13.325 SD 3.3256 -Control group 15.975 SD 2.0741 Posttest -Experimental group 14.15 SD 4.016 -Control group 14.78 SD 3.12384	EDUCAPLAY is an innovative and motivating tool for students. However, the increase in academic performance was minimal.
(Oyola Garcia, 2017)	To determine the influence of the use of the EDUCAPLAY platform in the development of English language skills.	Perú	60 high school students.	Quasi-experimental design	AVERAGE Pre-test -Control group 7.07 SD1.87 -Experimental group 7,00 SD 1.47 Posttest -Control group 6.43 SD 2.14 -Experimental group 11,46 SD1.88	The EDUCAPLAY platform significantly influences English language skills.
(Hurtado, 2022)	Analyze the use of applications for learning English vocabulary.	Ecuador	27 elementary school students	Quasi-experimental design.	AVERAGE Pretest 7.04 Pv 0.024 Post-test 14.148 Pv0.00	The use of technological applications effectively influences the teaching-learning process of English vocabulary.
(Palacios, 2023)	Improve English vocabulary learning through the use of Educaplay and gamification as a pedagogical strategy.	Colombia	18 high school students	Qualitative - quantitative (descriptive)	Pre-test 51.5%. Post-test 79.1%.	Educaplay is an innovative and effective tool to improve English vocabulary learning.

(Moya Rivera, 2022)	Apply gamification techniques for the acquisition of English vocabulary.	Ecuador	25 high school students	Descriptive-exploratory	AVERAGE Pre-test 5.9/10 SD 1.69 Posttest 7,6/10 OUT OF 1.10	Gamification techniques improve the acquisition of new vocabulary in English.
(Cadena et al., 2023)	To develop skills and abilities in the mastery of the English language with the application of music as multimedia content implemented in Virtual Learning Environments through a pedagogical strategy (Educaplay).	Ecuador	144 high school students	Experimental	Pre-test 25,25% Post- test 77,25%	The didactic strategy with the use of the Educaplay tool significantly influences the learning of English.

Conversely, Latin America boasts a substantial body of empirical evidence concerning the utilization of web platforms, with particular emphasis on Educaplay. Extensive data analysis underscores the pronounced advantages of employing this platform to markedly enhance vocabulary retention in a second language. As such, the primary objective of this research is to validate the innovative efficacy of the Educaplay platform in augmenting vocabulary learning and the sustained retention of new words.

Overall, the purpose of the present research is to expand previous studies on note-taking and Educaplay platform strategies which have been proved as effective methods to improve different skills in the English language acquisition. No one of the above studies have compared the input of these variables explaining the language acquisition, especially new vocabulary. Therefore, the most important problem that this study faces is the relationship of these variables. Do they have a significant contribution explaining vocabulary acquisition? Do they have a similar contribution when they work together? In this way, this study pretends to offer empirical evidence of the application of note-taking and Educaplay within an Ecuadorian context, and their influence on the learning of English as a foreign language; particularly on vocabulary. To this effect, this study aims to determine the effect of note-taking and Educaplay strategies on vocabulary learning in an English as a foreign language class.

MATERIALS AND METHODS

The research design adopted in this study is pre-experimental with pre and post-test in a single group. This study serves to contrast changes after an event or intervention (Cabrera-Tenecela, 2023). Therefore, the research aims to see the effect of note-taking on the retention and improvement of vocabulary acquisition in learning English as a foreign language. A total of 39 students from the University of Cuenca participated in this study, 23 students in a 1-3 pm class and 16 students in a 6-8 pm class. All participants belong to a

course that prepares them to have the A2 according to the Common European Framework of Reference for Languages.

The researcher applied two vocabulary comprehension tests (pre-test and post-test). These tests lasted about 20 minutes each and consisted of 10 questions, five multiple-choice questions and five fill-in-the-blank questions. The tests measure the ability to recognize and understand English words through a context. The tests were administered to students during their regular class hours.

For the validity of the instrument, an expert in the use and teaching of the English language, a professor at the language institute of the University of Cuenca, was consulted. The expert made some observations, suggestions and corrections that were included for the reliability of the instrument. Once the expert validity of the test was completed, copies were made to be applied in the classroom.

Before the intervention, an ethical consent form was prepared, in which the students are informed of the process they are going to undergo during the research and agree to be part of it by signing a confidentiality and anonymity agreement that protects their privacy. The researcher divided a class session into five steps. During the first 20 minutes, the pre-test was administered. The students could not use any notes or electronic devices to help them with the comprehension of the text. This was followed by the presentation of the class, the new vocabulary, during which the students could take notes, ask questions or use any device to improve their comprehension; this process lasted 20 minutes. Subsequently, for 40 minutes practice of the vocabulary learned is given. Here the students were divided as follows: half of them developed a set of games based on the new vocabulary through a worksheet. On the contrary, the other half developed the same activity through an electronic device on the Educaplay web platform. In the following 20 minutes, a game called Charades was applied as a distractor prior to the post-test. Finally, the post-test was applied for about 20 minutes. The test consisted of 10 questions, five of multiple choice, and five of text completion, with the same level of difficulty as the pre-test. In addition, a note-taking survey was administered during the post-test. The survey consisted of 6 questions with a 5-point rating scale, 5 points being the highest rating and 1 the lowest rating.

The result analysis was conducted using the free software Jamovi (Şahin & Aybek, 2020; The jamovi project, 2023). A multiple linear regression was performed to assess the relationship between the predictor variables (gender, Educaplay, note-taking) and the outcome variable (vocabulary improvement). The regression model was set up to examine how each independent variable contributed to predicting vocabulary improvement. The significance level used was 0.05. Additionally, a raincloud plot was performed in JASP (JASP - A Fresh Way to Do Statistics, 2023) to illustrate the changes between the initial and final situation.

RESULTS

A pre-test and a post-test were administered on 10 points. The results show a significant increase in most of the students' scores as can be seen in Figure 1. On average, the students had 4.54 points (SD 0.28) initially and, at the end of the intervention, they reached 7.80 points (SD 0.26) with a delta passing the three points (Δ 3.26) this difference is considered significant [$t(38df) = -8.66$; $p < 0.05$; Cohen's $d = -1.39$] with a large effect size. The figure also shows that those who initially had lower grades tend to increase more because they have greater possibilities of moving up in their evaluation. It is to be expected, therefore, that those who obtained a higher-grade increase less because they reach the

ceiling than those who obtained a low grade initially and who could climb more positions at the top (see Figure 1).

Upon dissecting the outcomes for the group engaged with Educaplay activities specifically, a substantial increase is evident in the majority of instances as depicted in Figure 2. The students initially scored an average of 4.80 points (with a standard deviation of 1.90) and, following the intervention, the average score rose to 7.70 points (with a standard deviation of 1.45). This improvement is deemed significant [$t(38df) = -5.12$; $p < 0.05$; Cohen's $d = -1.45$], denoting a large effect size (see Figure 2).

Breaking down these results for the group that engaged with note-taking activities, a marked increase is noticeable in the majority of cases as shown in Figure 3. Initially, the students scored 4.26 points on average (with a standard deviation of 1.62) and, by the end of the intervention, the average score increased to 7.89 points (with a standard deviation of 1.85). This difference is considered significant [$t(38df) = -7.39$; $p < 0.05$; Cohen's $d = -1.70$], indicating a large effect size.

To explain this situation, the difference between the post-test and the pre-test was obtained. With this new variable we proceeded to perform a linear regression based on the four variables analyzed. The first two are placed in a model that involves the pre-test grade and the gender of the students because the one reflects the level they were at prior to the experiment and the gender condition of each student. The third and fourth variables involve the two events that were worked with during the experiment, the third variable is the use of Educaplay and the fourth is the taking of notes of the new words during the teacher's explanation and the use of these notes throughout the class work. Therefore, these are two hierarchical models. Before performing the linear regression model, the assumption of normality was verified, which was fully met (Shapiro Wilk 0.979; $p=0.662$), and it was observed that there is no collinearity in any of the four independent variables. Nor was autocorrelation verified (Durbin-Watson = 1.72, $p=0.368$; autocorrelation=0.140).

Table 3 shows the results of the two models mentioned above. The first model shows that the students' vocabulary level is the best predictor of the post-test.

According to this result, those students who had higher scores were not able to increase as much as those who obtained low scores, who increased notoriously; in this sense, the standardized coefficient is negative (-0.716) and significant. Gender is not a predictor of the model. The R^2 (corrected) was 0.486.

In the second model, in addition to the first two variables mentioned above, the use of Educaplay has a low contribution (0.036) but is not significant. However, when controlling the results of the notes variable, a positive contribution to the increase in the score increase was observed (0.338); this is a significant contribution in the second model. Within this model, the initial vocabulary level still plays the most important role, however, class note-taking also plays a significant role in explaining the results. The R^2 (corrected) in this case reached a value of 0.564 points.

When comparing model 1 with model 2, a delta value of 0.097 was observed, i.e., note-taking almost contributed 10% to the explanation of the increase in vocabulary score, which is a significant difference as judged by the ANOVA test (see Table 3).

* $p < 0.05$; ** $p < 0.01$; y *** $p < 0.001$

In summary, while the students' initial vocabulary level remains the strongest predictor of their post-test scores, the practice of note-taking during class sessions emerged as a significant factor contributing to score improvements. The study highlights the importance of note-taking as a supportive strategy in enhancing vocabulary acquisition, particularly for students aiming to augment their language proficiency, even after controlling for other variables such as initial vocabulary levels and gender.

Table 3. Multiple linear regression of new vocabulary acquisition explained

Predictor	Model 1	Model 2
Pre-test	-0.716***	-0.614***
Gender	0.001	0.021
Educaplay		0.036
Note taking		0.338**
R ² (corregido)	0,486	0,564
F	19,0***	13,3***
ΔR ²		0,097
M2 v, 1 F (2 y 34gl)		4,22*

Nota. En los modelos se presentan los valores estandarizados.

Figure 1. Total Vocabulary Acquisition Pre- and Post-Test Point Cloud and Box-and-Whisker Chart.

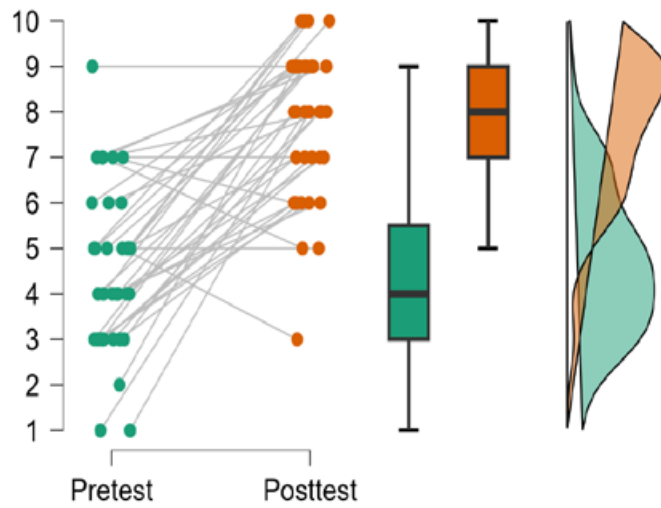


Figure 2. Point Cloud and Box-and-Whisker Plot for Vocabulary Acquisition in the EDUCAPLAY Group Before and After the Pre-Test.

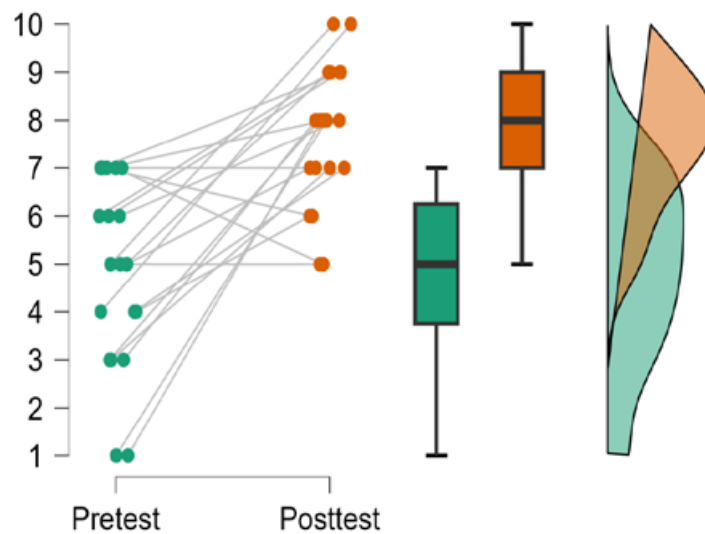
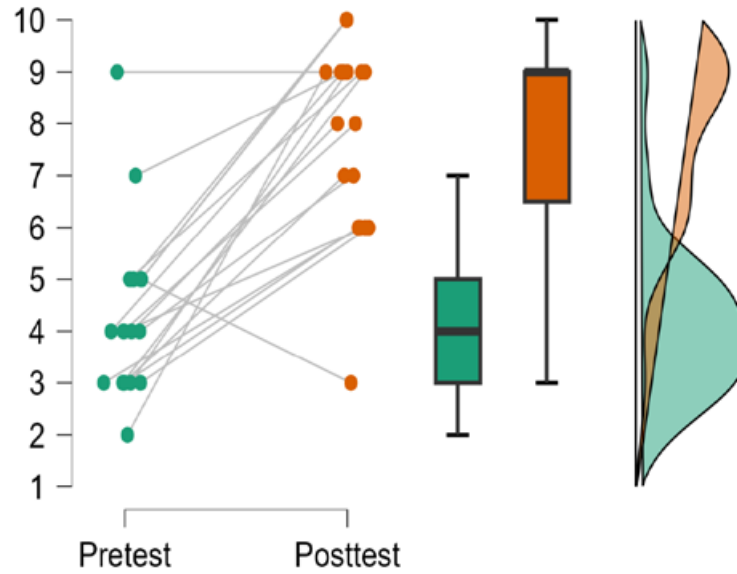


Figure 3. Point Cloud and Box-and-Whisker Plot for Vocabulary Acquisition in the Note-Taking Group Before and After the Pre-Test.



DISCUSSION

According to the findings of this study, the effect of note-taking on vocabulary learning in an EFL classroom is significant. Note-taking can be considered an effective tool for learning new vocabulary. Therefore, the hypothesis that note-taking significantly improves the retention of new words (vocabulary) compared to those students who do not take notes is confirmed.

The result of this study also reveals that the initial vocabulary level is the variable that generates the highest explanation, since those students who obtained a low score tend to increase more because they are more likely to move up in the post-test. It is to be expected, therefore, that those who obtained a higher score increase less because they reach the top limit than those who initially obtained a low score. On the other hand, gender did not contribute any significance, which coincides with most studies. Nevertheless, the Educaplay variable in the present study, although it has a positive contribution, is not significant within the model, which does not ratify what most researchers maintain (Oyola Garcia, 2017; (Palacios, 2023); (Cadena et al., 2023)). On the contrary, what Pérez (2014) maintains in his study is ratified. Educaplay is an innovative and motivating tool for students; however, it does not have a high level of significance in academic performance in our study. Consequently, the variable that shows a high level of significance, apart from the pre-test, is the note-taking variable. This research shows that note-taking, as traditional as it may be, is still an effective learning strategy for vocabulary acquisition and retention. At least in the present case, it can be noted that note-taking has had a much greater impact than the use of the web platform.

The outcome of this study then reveals that note-taking is an effective strategy for learning and retaining vocabulary. Many of the studies mentioned in the literature review (Alzu'bi, 2019); Chen and Chien,2020; Tsai-Fu and Wu, 2010) also find significantly positive results to note taking (with Cornell or with SOAR methods) in teaching and learning a new language especially in listening, reading, and writing skills. However, the results that stand out in this study is that note-taking for vocabulary learning in teaching English as a foreign language is an effective strategy. This result agrees with the study by Chanjomlong & Liangpanit (2022), where it is mentioned that note-taking should be considered as a

practical and efficient strategy for teaching and learning vocabulary (form, meaning, and usage) of a second language. The results of this study conclude that students understand and retain new vocabulary by implementing note-taking techniques no matter the method they use. Consequently, learners should implement and develop this skill to improve their language skills in and out of the classroom.

The implications of this study regarding teaching techniques relies on the use of the traditional technique, note-taking, used over the years and how this contributes to the acquisition and improvement of a new language. Since ICTs have appeared in the educational field, traditional methods have been seen as obsolete, boring and old-fashioned tools and professors have replaced some techniques for technological devices to make their lectures more innovated and attractive. Thus, based on the results of this study involve that the use of the traditional note taking technique during classes maintains its importance and significance in the learning and teaching processes, especially in the learning of new vocabulary.

CONCLUSION

The purpose of the present study was to investigate the effects of note-taking and Educaplay strategies on the vocabulary learning in an English as a foreign language class. The results of the data analysis revealed that students who use the strategy of taking notes achieved better outcomes than those who use the web platform Educaplay.

Furthermore, this study concluded that the note-taking strategy is still a valuable technique for learning a foreign language, especially for vocabulary retention so this strategy should be adapted at all academic levels of a student's life and teachers should instruct their students on how to best develop this technique.

On the other hand, the Educaplay web platform also showed an incensement in the vocabulary retention, but it was not as significantly as the note-taking strategy. Based on these results we can mention that traditional methods like note-taking can continue being an effective strategy to improve vocabulary in an English foreign language class, and that the use of ICTs can help in students' motivation but cannot replace those strategies that have been developed for years.

LIMITATIONS OF THE STUDY

Like any other research work, this study possesses certain constraints that warrant acknowledgment. First, the sample size of the research could be small. Future investigations could increase the sample to enhance the reliability of the instructional experiment. In addition, some participants did not come to class the day of the application and as a result, the sample size was reduced. Moreover, the lack of references about note-taking in promoting vocabulary learning can reflect a disadvantage for this work. Most of the studies found support for other skills like listening and reading. Additionally, the studies found reflect a context different from ours, since many of these studies were carried out on other continents.

FURTHER STUDIES

It would be beneficial to suggest some interesting ideas for future studies since note-taking is a valuable technique. A recommendation could be to apply the test after some weeks

to prove the effectiveness of the strategy in long-term retention. Further, to promote the usefulness of this technique in the English language environment, the study can be applying to different language skills as listening, reading, writing and speaking. Based on the results of this study, it would be advantageous to use different types of note-taking methods for each skill like the CORNELL and SOAR methods to help learners to develop the language efficiently, and also to apply them in different English levels.

CONTRIBUCIÓN DEL AUTOR

Yessenia Elizabeth Villacrés Ochoa: análisis formal, investigación, metodología, visualización.

ETHICAL IMPLICATIONS

The author states that there are no ethical implications

CONFLICT OF INTERESTS

The author states that there are no financial and non-financial conflicts of interests that could have influenced the current study.

REFERENCES

- Al-Ghazo, A. (2023). The Impact of Note-Taking Strategy on EFL Learners' Listening Comprehension. *Theory and Practice in Language Studies*, 13(5), Article 5. <https://doi.org/10.17507/tpsl.1305.06>
- Almaagbh, I. F. F. (2020). The Impact of Strategic Notetaking on EFL Learners' Academic Performance in Jordan. *International Journal of Higher Education*, 9(1), 249-255.
- Alzu'bi, M. A. (2019). The Influence of Suggested Cornell Note-taking Method on Improving Writing Composition Skills of Jordanian EFL Learners. *Journal of Language Teaching and Research*, 10(4), 863. <https://doi.org/10.17507/jltr.1004.26>
- Bendehane, E. Y. N. E. I., & Bouaziz, S. (2016). *Investigating EFL teachers' and students' attitudes towards the effect of note-taking on vocabulary learning*. <http://localhost:8080/xmlui/handle/123456789/3471>
- Cabrera-Tenecela, P. (2023). New organization of research designs. *South American Research Journal*, 3(1), Article 1.
- Cadena, G., Media, A., Gonzalez, K., & Peña, D. (2023). Estrategia pedagógica para el uso de la herramienta Educaplay en el aprendizaje del idioma inglés | *Uniandes Episteme. Revista de Ciencia, Tecnología e Innovación*. <https://revista.uniandes.edu.ec/ojs/index.php/EPISTEME/article/view/2968>
- Chanjomlong, J. & Liangpanit, C. (2022). The Use of Note-Taking Strategies to Develop Vocabulary Knowledge for Thai EFL Secondary School Students. *Journal of Business Administration and Languages (JBAL)*, 10(2), Article 2.
- Chen, Chih-Ming & Chien, Lu-Chia. (2020). The Effects of Sharing Selection, Organization, Association, and Regulation (SOAR) Study Note on Learners' Reading Com-

- prehension and Reading Anxiety. *圖書資訊學刊*, 18(2). [https://doi.org/10.6182/jlis.202012_18\(2\).001](https://doi.org/10.6182/jlis.202012_18(2).001)
- Corvo Sánchez, M. J. (2004). Historia y tradición en la enseñanza y aprendizaje de lenguas extranjeras en Europa (I): Antigüedad. *Babel – AFIAL: Aspectos de Filología Inglesa e Alemá*, 13, Article 22.
- Harrouz, B. & Messaibi, M. S. (2016a). Research project submitted to the department of Foreign Languages in partial fulfilment of the requirement for the degree of Master in English Language: Sciences of the Language.
- Harrouz, B., & Messaibi, M. S. (2016b). *Bridging the Gap Between the Target Culture Aspects and the Pedagogical Techniques for Culture Instruction*. Research project submitted to the department of Foreign Languages in partial fulfilment of the requirement for the degree of Master in English Language: Sciences of the Language.
- Hurtado, B. (2022). *Learning apps for vocabulary learning* [Bachelor Thesis, Universidad Técnica de Ambato-Facultad de Ciencias Humanas y de la Educación- Pedagogía de los Idiomas Nacionales y Extranjeros]. <https://repositorio.uta.edu.ec:8443/jspui/handle/123456789/35831>
- JASP - A Fresh Way to Do Statistics. (2023). JASP - Free and User-Friendly Statistical Software. <https://jasp-stats.org/>
- Marunevich, O., Shefieva, E., & Bessarabova, O. (2021). Mind mapping as a tool of teaching English vocabulary at transport university. *E3S Web of Conferences*, 295. <https://doi.org/10.1051/e3sconf/202129505021>
- Moya Rivera, V. E. (2022). *Aplicación de técnicas de gamificación para la adquisición del vocabulario de inglés* [Master thesis, Pontificia Universidad Católica del Ecuador]. <https://repositorio.pucesa.edu.ec/handle/123456789/3875>
- Oyola García, J. (2017). *Uso de la plataforma Educaplay en las capacidades del área de inglés en los estudiantes del 2.º año de secundaria de la I.E. “San Antonio de Jicamarca” Vitarte*. Lima, 2015. Universidad César Vallejo. <https://repositorio.ucv.edu.pe/handle/20.500.12692/8420>
- Páez-Quinde, C., Infante-Paredes, R., Chimbo-Cáceres, M., & Barragán-Mejía, E. (2022). Educaplay: Una herramienta de gamificación para el rendimiento académico en la educación virtual durante la pandemia covid-19. *Cátedra*, 5(1), Article 1. <https://doi.org/10.29166/catedra.v5i1.3391>
- Palacios, J. N. (2023). *La gamificación basada en Educaplay como estrategia pedagógica para mejorar el aprendizaje del vocabulario en inglés en los estudiantes del grado sexto en la Institución Educativa Luis Carlos Galán Sarmiento del municipio de Orocué* [Trabajo de grado, Maestría, Universidad de Cartagena]. <https://doi.org/10.57799/11227/12043>
- Pérez, N. R. (2014). *Influencia del uso de la plataforma Educaplay en el desarrollo de las capacidades de comprensión y producción de textos en el área de inglés en alumnos de 1.º año de secundaria de una institución educativa particular de Lima* [Tesis, PUCP]. <https://tesis.pucp.edu.pe/repositorio/handle/20.500.12404/5589>
- Phan, M. P. K. (2020). The Application of Metacognitive Note-taking Skills in Reading Lessons to EFL College Students. *Journal of Effective Teaching in Higher Education*, 3(1), Article 1. <https://doi.org/10.36021/jethe.v3i1.64>
- Şahin, M. & Aybek, E. (2020). Jamovi: An Easy to Use Statistical Software for the Social Scientists. *International Journal of Assessment Tools in Education*, 6(4), Article 4. <https://doi.org/10.21449/ijate.661803>
- Salazar, E. M. (2022). La educación en la antigüedad y la edad media. *HISPADIS*, 1(01), Article 01. <https://doi.org/10.59989/hispadis.v1i01.38>

- Siegel, J. (2016). A pedagogic cycle for EFL note-taking. *ELT Journal*, 70(3), 275-286. <https://doi.org/10.1093/elt/ccv073>
- The jamovi project. (2023). *Jamovi (Version 2.4.8)*. [Computer Software]. <https://www.jamovi.org/>
- Tsai-Fu, T. & Wu, Y. (2010). Effects of Note-Taking Instruction and Note-Taking Languages on College EFL Students' Listening Comprehension. *New Horizons in Education*, 58(1), 120-132.