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THE USE OF QUIZLET TO ENHANCE L2 VOCABULARY ACQUISITION

EL USO DE QUIZLET PARA MEJORAR LA ADQUISICIÓN DE VOCABULARIO DE LA L2

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Abstract

This study aims to improve the teaching-learning process of foreign language through Quizlet – a popular digital tool for language learning. In particular, we explore the following aspects of Quizlet use among Spanish undergraduate students learning English: the effectiveness of vocabulary retention, its impact on students' motivation and autonomous learning. The results and conclusions obtained through a questionnaire with 30 respondents point to the success of Quizlet which has contributed in a very positive way to the learning of the vocabulary seen in the course, has helped to make the course more enjoyable, fun, and attractive, thus, improving students' motivation, and has helped students to have a more active and autonomous role in their learning. According to the survey, 90% of participants indicate a desire to use this educational tool in other courses of the degree, and 97% consider that technology-enhanced language learning is the direction that teaching should take. **Key Words:** Quizlet, CALL, MALL, English as a Foreign Language, vocabulary acquisition.

Resumen

Este estudio pretende mejorar el proceso de enseñanza-aprendizaje de lenguas extranjeras a través de Quizlet, una herramienta digital muy popular para el aprendizaje de idiomas. En particular, se exploran los siguientes aspectos del uso de Quizlet entre estudiantes universitarios españoles que aprenden inglés: la efectividad de la retención de vocabulario, su impacto en la motivación de los estudiantes y en el aprendizaje autónomo. Los resultados y conclusiones obtenidos a través de un cuestionario con 30 participantes apuntan al éxito de Quizlet que ha contribuido de forma muy positiva al aprendizaje del vocabulario visto durante el curso, ha ayudado a que este sea más ameno, divertido y atractivo, mejorando así la motivación de los alumnos, y ha ayudado a los alumnos a tener un papel más activo y autónomo en su aprendizaje. Según la encuesta, el 90% de los participantes manifiestan su deseo de utilizar esta herramienta educativa en otras asignaturas de la carrera, y el 97% considera que el aprendizaje de idiomas potenciado por la tecnología es el rumbo que debe tomar la enseñanza.

Palabras clave: Quizlet, CALL, MALL, inglés como lengua extranjera, adquisición de vocabulario.

1. INTRODUCTION

Today the teaching-learning process of foreign languages (and other disciplines) is subject to constant updating in order to adapt to the rapidly changing society. The presence of technology in a classroom has altered and expanded the field of EFL teaching and learning. More and more teachers search for alternatives to the traditional approaches by employing different online and mobile applications in a variety of ways aiming at making the learning more effective and also more enjoyable and autonomous.

However, the high presence of online tools available often makes it difficult for teachers to choose the most appropriate one for their learners. Not only does the growing presence of online platforms and mobile applications complicate the decision, but also the lack of scientific studies proving the effectiveness of these tools contributes to it. Thus, in the recent years, a growing number of authors dedicate themselves to studying the effectiveness of the different tools, such as Duolingo (see, e.g., Ajisoko, 2020; Karjo & Andreani, 2018), Memrise (Nuralisah & Kareviati, 2020), Anki (Khoshsima & Khosravi, 2021), among many others.

This study focuses on Quizlet, another very popular online educational platform (also available as a mobile application) that allows users (both teachers and learners) to create wordlists and their corresponding definitions or translations, and automatically generates interactive and dynamic self-study activities based on these wordlists. To date, several studies have investigated the potential benefits of using Quizlet for language acquisition, with a special interest in vocabulary development, for example with Japanese learners of EFL (e.g., Barr, 2016; Dizon, 2016), Indonesian (e.g., Setiawan & Wiedarti, 2020), Austrian (e.g., Platzer, 2020), Taiwanese (e.g., Chien, 2015), Thai (e.g., Waluyo & Bucol, 2021), Ukrainian (e.g., Chaikovska & Zbaravska, 2020; Novikova, 2019) or Vietnamese students (e.g., Nguyen et al., 2022). The present study seeks to analyze the effect of Quizlet on the vocabulary acquisition of Spanish EFL learners. In particular, it focuses on undergraduate C1 learners of the English language who are studying *Translating and Interpreting: English* at the University of Alicante. To date, a very limited number of researchers have studied the use of Quizlet on the Spanish learners of EFL, and none of them, to my knowledge, have focused on undergraduates with high proficiency in English. This paper aims to partially fill this gap and prove the effective use of Quizlet among this particular group of learners.

2. LITERATURE REVIEW

2.1. CALL and MALL

The use of technology in education, and especially in language classes, is far from new. In the beginning, and not so long ago, it included the blackboard, the chalk, and the book, just to mention a few. Later came the so-called "new technologies" such as television, VCR (videocassette recorder), and computers. The embrace of audiolingual theory in the 1950s gave way to the widespread use of language laboratories in educational settings (Salaberry, 2001). Influenced by behaviorism, the laboratory was gradually surpassed in the 1960s by drill-based computer-assisted teaching, which in turn, was replaced decades later by a more intelligent, interactive, and multimedia computer-assisted language learning (CALL) (Chinnery, 2006, p. 9). More recently a new way of learning emerged – mobile-assisted language learning (MALL), expanding educational boundaries through the use of handheld mobile devices. According to Kukulska-Hulme and Shields (2008) MALL "differs from CALL in its use of personal, portable devices that enable new ways of learning, emphasizing continuity or spontaneity of access across different contexts of use" (p. 273). As Chinnery (2006) notes "technologies continue to evolve, [and] so does their propensity to shrink in size" (p. 9). Thus, Zhao (2005) provides examples of

technological devices that are used for language teaching and learning apart from computers: "PDAs, multimedia cellular phones, MP3 players, DVD players, and digital dictionaries" (p. 447). Other more recent technological devices that hold the capacity for language learning include iPads or tablets and especially smartphones, now social staples. The rise of the latter affords learners limitless opportunities, as noted by Godwin-Jones (2011): "clearly having such powerful devices available anytime, anyplace provides tremendous opportunities for educational use" (p. 3).

The effectiveness of CALL and MALL in language learning has been widely supported both theoretically and empirically. For example, learners' positive attitudes towards CALL were explored by Al-Jarf (2007) and Altiner (2011), while an updated literature review on CALL can be found in Chen et al. (2021) or Lim and Aryadoust (2021). In the case of MALL, we could mention studies on particular applications such as Yudhiantara and Saehu (2017) who analyzed students' use of the English Monolingual Dictionary (EMD) application, or Ajisoko (2020) who focused on Duolingo, or literature reviews such as Duman et al., (2015), Cakmak (2019), Arvanitis and Krystalli (2021) who comprehensively reviewed MALL-related research.

Regarding L2 vocabulary acquisition in a computer-assisted environment, it has also attracted a great deal of attention, taking into account that mastery of vocabulary is essential in the process of any language learning. Some researchers (e.g., Ma, 2007, 2013; Ma & Kelly, 2006) have even proposed the concept of "computer assisted vocabulary learning" (CAVL) to be developed into a distinctive sub-domain of CALL. A number of studies have been carried out to investigate efficiency in vocabulary learning. As a result, there are different methods to learn vocabulary by using technology. One prominent computer-based practice to learn vocabulary is through the use of digital flashcards (Basoglu & Akdemir, 2010; Oberg, 2011). Another popular method in the literature is vocabulary learning through the use of annotations (AbuSeileek, 2008; Abraham, 2008; Chun & Plass, 1997; Yun, 2011). Related to the latter, Ajabshir and Sadeghi (2019) note that in L2 vocabulary acquisition computer-mediated annotations or glosses, such as L1 translations, L2 definitions, exemplifications, visuals, or a combination of them, "have the potentiality of assisting learners in an adaptive, autonomous, and individualized context" (p. 71). Finally, multimedia is also used to teach and learn vocabulary (Kayaoglu et al., 2011; Schmitt, 2000).

The efficiency of technology in vocabulary gains has been widely proven (e.g., Chiu, 2013; Mirzaei et al., 2016; Tsai, 2019; Wang, 2016). Noteworthy is the study by Chiu (2013), who employed metaanalysis to investigate findings from different studies on the effectiveness of L2 vocabulary instruction and found that overall computer-assisted language learning in L2 vocabulary was proved to have positive effects. The author also enumerated four important moderators of vocabulary learning in CALL: "treatment duration, educational level of participants, game-based learning and the instruction of the teacher" (Chiu, 2013, p. 54). The first finding was that learners who received CALL learning over a shorter period of time (less than a month) had better results than those who were exposed to CALL treatment for longer periods (more than a month), which may be justified by the fact that students are initially more engaged in the uses of new technologies and may feel bored afterward. Secondly, CALL proved to be more beneficial for students at high educational levels (e.g., high school or university level) compared with elementary levels. Third, the analysis shows that vocabulary learning via CALL without games performed better than with the aid of games. Finally, autonomous student-centered learning yielded better results than teacher-led instruction.

Other research also linked CALL's and/or MALL's favorable benefits to students' positive attitudes and motivation (e.g., Adara & Haqiyah, 2021). Additionally, authors found students to be active autonomous learners with technology, giving them more control over their learning (e.g., Howlett & Zainee, 2019; Pham et al., 2021). Finally, some studies intended to compare the effectiveness of CALL and MALL; for example, Katemba (2019) studied the difference in vocabulary learning between students who were taught through CALL and those taught through MALL and found both were effective methods for teaching vocabulary.

There are, however, authors that oppose technology-driven pedagogy, as for example Salaberry (2001), who claims that, despite its revolutionary character, no modern technology (e.g., television, radio, or the personal computer) has provided the same pedagogical benefits as conventional second language training, or Beatty (2013) who cautions that "teachers should be careful about spending time and money in untested technologies" (p. 72). Others (e.g., Chinnery, 2006, p. 9) warn that the incorporation of computers or smartphones *per se* does not necessarily mean better vocabulary acquisition, and remind us that technologies are instructional tools and not instructors and the effectiveness of such tools in language teaching/learning requires a thoughtful application.

Nowadays, technology is an integral part of students' daily lives and is widely used across the world. Numerous researchers have shown that technology can be effective in the teaching-learning process. Despite the great amount of literature available on the topic, more studies are needed to arrive at a more robust picture of the role of technology in language instruction, for instance focusing on the different tools that exist such as Quizlet—the object of study here. As Gimeno-Sanz (2016) pointed out "as long as technology continues to evolve and new gadgets appear on the market, there will always be a place for CALL developers and authors to find the optimum way of pedagogically exploiting those for-ever emerging technological developments" (p. 1109).

2.2. Quizlet in EFL classroom

To date, several studies have investigated the benefits of using Quizlet in the teaching-learning process of foreign languages. Taking into account that Quizlet is a relatively new tool, many of these studies are very recent and still limited in number. For example, Quizlet has been proven to influence positively students' motivation towards learning foreign languages. It is a well-known fact that students' motivation is essential in the learning process (Masgoret & Gardner, 2003), as it gets the learner involved in the learning activity, making it more enjoyable. Thus, Setiawan and Wiedarti (2020) found that by using Quizlet, students felt more enthusiastic, did not get bored easily, and as a result showed high interest towards learning through this tool. Similarly, Anjaniputra and Salsabila (2018) have proved that Quizlet provided a new and enjoyable way of language learning for students, compared to the traditional and old-fashioned way of memorizing new words.

Some researchers have also examined how Quizlet fosters students' autonomy. Besides motivation, active learning is required from students. Quizlet seems to engage students and make them protagonists of their learning. Authors agree that the design of Quizlet is appropriate for autonomous learners (Sanosi,

2018). According to Korlu and Mede (2018), Quizlet makes learners more self-governing in the learning process. Anjaniputra and Salsabila (2018) proved that Quizlet fosters not only learners' autonomy, but also persistence, focus, attention, as well as engagement. Also, Bueno-Alastuey and Nemeth (2020) found that Quizlet yields cooperation among students when creating their own study sets and making them active participants in their learning. Nevertheless, as Cunningham (2017) adds, only with proper instruction can learners become autonomous users who can fully utilize this platform for their language learning objectives. Instructors must assist students in defining these objectives and matching them with appropriate resources and training in order to attain their objectives. Contrary to these studies, Kalecky (2016) found that Quizlet had no positive effect on students' autonomy in the context of a low-performing school. Even though students enjoyed using Quizlet in the classroom, it did not motivate them to study more frequently in their spare time and to create their own sets, and they preferred teacher-created sets because they were more consistent and accurate. This goes in line with the observation by Chiu (2013) mentioned earlier in section 2.1 who found that CALL proved to be more beneficial for students at high educational levels compared with elementary levels.

2.3. Quizlet and vocabulary acquisition

The vast majority of studies on Quizlet so far have focused on the effect of Quizlet on vocabulary acquisition (see e.g., Anjaniputra & Salsabila, 2018; Barr, 2016; Bueno-Alastuey & Nemeth, 2020; Chaikovska & Zbaravska, 2020; Chien, 2015; Dizon, 2016; Dreyer, 2014; Nguyen et al., 2022; Platzer, 2020; Sanosi, 2018). Thus, there are studies on the benefits of Quizlet on vocabulary acquisition at tertiary level (e.g., Anjaniputra & Salsabila, 2018; Dizon, 2016; Nguyen et al., 2022; Platzer, 2020) and secondary level (e.g., Cinar & Ari, 2019), on low-proficiency (e.g., Sanosi, 2018) and high-proficiency students (e.g., Bueno-Alastuey & Nemeth, 2020). There are also studies from different countries, as mentioned in the introduction, which focus on students learning not only English but also other foreign languages, for instance, Russian (e.g., Ismailova & Bondareva, 2018) or Chinese (e.g., Lam et al., 2018). Therefore, many focus on vocabulary acquisition and very few scholars have devoted themselves to investigating the effect of Quizlet on other skills: for example, James (2016) examined how Quizlet (and other tools) affected teaching academic writing and Yuliyanto and Fitriyati (2019) studied how Quizlet boosts students' interest in learning grammar.

Regarding the use of Quizlet by Spanish learners of EFL, the number of studies is especially limited. For instance, Montaner-Villalba (2019) examined A2 learners of English at a state secondary school in Valencia and concluded that they improved significantly their level of EFL vocabulary thanks to Quizlet. Bueno-Alastuey and Nemeth (2020) analyzed and compared how student-created Quizlet flashcards and podcasts affect vocabulary retention among adult students enrolled in a face-to-face C1 course at an Official Language School and found both methods were effective techniques for vocabulary acquisition. Bellés-Fortuño and Martínez-Hernández (2019) focused on the acquisition of specialized vocabulary among undergraduate Psychology students with Quizlet, Wordcloud, and Socrative. As a result, there is a clear need for further research on the topic. This paper intends to contribute by focusing exclusively on Quizlet among high proficiency undergraduate Spanish students of EFL.

3. METHODOLOGY

3.1. The aim of the study

This study mainly aims to check the effectiveness of Quizlet when learning L2 vocabulary by analyzing Spanish undergraduate EFL students' perceptions of this tool. It also intends to find if Quizlet can improve students' motivation and autonomy when learning foreign languages. Finally, it analyses the students' perceptions of Quizlet as a tool, i.e., its features, activities, etc.

3.2. Participants and the context

This research was carried out among 30 first-year students of the course called Language B1: English, who were studying the Degree in Translation and Interpreting (English-Spanish) at the University of Alicante (Spain) in the academic year 2021/22. Although initially the number of the sample was significantly higher – 72 students were enrolled in the course, only 30 participated in the questionnaire at the end of this learning experience. The learners had an upper-intermediate level of English (B2), aiming to achieve an advanced level of English (C1) during the course. Regarding the age, it was a group of teenagers around 20 years old very much accustomed to new technologies and the use of laptops and smartphones.

3.3. Design and procedure

The first step was creating the study sets on Quizlet. In total 5 study sets with 205 flashcards were created for this research corresponding to units 1-5 from the coursebook – Headway Advanced – used during the course (see Table 1). The next step consisted in creating "a class" on Quizlet in which the study sets were shared with students. Students were sent a link to the class "Lengua B1: Inglés" so they could join it and have access to the study sets. A total of 56 students out of 72 enrolled in the course, joined the class on Quizlet. Once the students joined the class, access to the prepared sets was open.

Study set's name	n° of flashcards	Link
Headway Advanced (Vocabulary Unit 1) English-Spanish	50	https://quizlet.com/es/630214209/headway-advanced- vocabulary-unit-1-english-spanish-flash-cards/
Headway Advanced (Vocabulary Unit 2) English-Spanish	51	https://quizlet.com/es/631727529/headway-advanced- vocabulary-unit-2-english-spanish-flash-cards/
Headway Advanced (Vocabulary Unit 3) English-Spanish	63	https://quizlet.com/es/636262674/headway-advanced- vocabulary-unit-3-english-spanish-flash-cards/
Headway Advanced (Vocabulary Unit 4) English-Spanish	16	https://quizlet.com/es/640413687/headway-advanced- vocabulary-unit-4-english-spanish-flash-cards/
Headway Advanced (Vocabulary Unit 5) English-Spanish	25	https://quizlet.com/es/647514566/headway-advanced- vocabulary-unit-5-english-spanish-flash-cards/
Total	205	

Table 1. Study sets used in this research.

The research lasted for 7 weeks, from November the 5th to December the 17th of 2021 with one twohour session per week, in total 7 sessions, plus the autonomous learning of each student. During the first session, Quizlet was introduced and activities were explained. Students registered on the platform, some of them downloaded the application and started to get accustomed to Quizlet. During the following 5 sessions, mainly "Live" activity was carried out, both in groups and individually. Students studied the vocabulary autonomously before each class while in class the aim was to revise it by means of gamification and collaboration, as this activity consists in competing in teams or individually. In the last session, an online questionnaire was administered to students. It was also shared in Moodle so that those students who were absent that day could respond.

ovember 5 th of 2021	Introduction to Quizlet
ovember 12 th of 2021	Unit 1
	ome i
ovember 19th of 2021	Unit 2
ovember 26 th of 2021	Unit 3
ecember 3 rd of 2021	Unit 4
ecember 10 th of 2021	Unit 5
	Assessment of Quizlet
	ecember 17 th of 2021

Table 2. Schedule of the research.

3.4. Data collection tools

The quantitative data were collected from a 17-item online <u>questionnaire</u>. The items were based on a 5point Likert scale ranging from strongly disagree (1) to strongly agree (5), multiple-choice questions, and a few open questions. The survey was administered via Google Forms. Students were informed that their participation was voluntary and that completion of the questionnaire or lack would not affect their grades. They were also told the results would remain anonymous. The data were then analyzed. Microsoft Excel was used to calculate the means obtained from Likert-scale questions.

4. FINDINGS AND DISCUSSION

First, it should be noted the majority of students in this study did not know what Quizlet was before the experiment: 63.3% compared to 36.7% who were familiar with the tool. This is surprising, especially taking into account that in some countries such as the United States, Quizlet is very popular among learners as 2 out of 3 high school students use Quizlet (https://quizlet.com/mission). Considering that the participants in this study were freshmen, who have just finished high school, this appears to suggest that Quizlet is not well-known among this group of learners in Spain. When asked if they knew other similar tools, some of them mentioned Kahoot, Duolingo, Quizizz, or Anki, the rest left the question blank. This is also noteworthy as, despite the great number of tools available for language learning, it seems that a few learners actually make use of them, suggesting not only the lack of initiative by the

learners but also the apparent lack of interest by the high-school teachers towards the introduction of new technologies in the teaching process. However, it should be noted that once engaged, learners seemed to actively use the tool: 33.3% claim to have done all the activities proposed through Quizlet, 43.3% – almost all, while only 23.3% did some of the activities. This suggests that at that age students may not be autonomous enough and may need a boost from (language) instructors in order to use the new technologies for learning.

Regarding the research questions of this study, the results suggest that the learners had very positive views toward the use of Quizlet in the EFL classroom. Table 3 below illustrates some of these results. As can be observed all items scored above 4 out of 5, which is quite significant. Thus, the item "Quizlet helped to improve my English vocabulary" got the second highest score (M=4.6), together with the item "Quizlet helped me to have a more active role in my learning". Similarly, items "I found Quizlet useful for my autonomous learning" and "Quizlet made the subject more enjoyable, fun, and attractive" scored 4.5 points, very close to the previous two items. These results are in congruence with other studies (e.g., Anjaniputra & Salsabila, 2018; Barr, 2016; Bueno-Alastuey & Nemeth, 2020; Chien, 2015; Dizon, 2016; Nguyen et al., 2022; Platzer, 2020; Setiawan & Wiedarti, 2020) showing that the use of the Quizlet application in Technology Assisted Language Learning has a positive impact in improving students' vocabulary acquisition while also fostering students' autonomy and motivation.

Item	Mean score
Quizlet is easy to use.	4.7
I liked the possibility that Quizlet offers to participate in challenges.	4.7
Quizlet helped to improve my English vocabulary.	4.6
Quizlet helped me to have a more active role in my learning.	4.6
I found Quizlet useful for my autonomous learning.	4.5
Quizlet made the subject more enjoyable, fun, and attractive.	4.5
I found the possibility to track my progress useful.	4.2

Table 3. Students' opinion of Quizlet

The items that scored the highest were "Quizlet is easy to use" and "I liked the possibility that Quizlet offers to participate in challenges" both with 4.7 points out of 5. This suggests two relevant ideas: 1) that the simple and clear design of such tools is essential for engaging learners, and 2) the gamification element is very much liked by the learners and should not be underestimated.

With regard to the activities, the one that scored the highest (M=4.7) was the in-class activity called Live (see Table 4), which involved competing, either in groups or individually, highlighting once again the relevance of gamification in the learning process. Although it is difficult to say that this activity alone improved students' knowledge of English, what is clearer is that it made classes more fun and enjoyable, thus, improving their motivation. When asked whether they preferred group challenges or individual competitions, 53.3% replied they preferred the former, 17.7% favored the latter, and 30%

liked both. Respondents also highly appreciated the simplicity of doing the challenges by joining with a PIN or QR code.

Activity	Mean score
Learn	4.3
Write	3.9
Spell	3.6
Test	4.2
Match	4
Gravity	3.4
Live	4.7

Table 4. Students' opinion of the activities on Quizlet

Among individual activities (those intended for self-study) Learn (M=4.3) and Test (M=4.2) received the best scores from students. Write and Spell were favored less by the respondents with the respective means of 3.9 and 3.6 points. Surprisingly the games – Match and Gravity – did not score as high as expected with 4 points the former and 3.4 the latter. The explanation for this might be the one provided by Chiu (2013, p. 54) – that vocabulary acquisition has traditionally been exam-oriented and drill-driven, making learning vocabulary through games inefficient. As mentioned before, Chiu (2013, p. 54) found that vocabulary learning via CALL without games performed better than with the aid of games. Finally, Flashcards has not been assessed as it is not an actual activity requiring no cognitive effort from learners, but it consists in listing students the terms they are supposed to learn and their translations to Spanish (in this case).

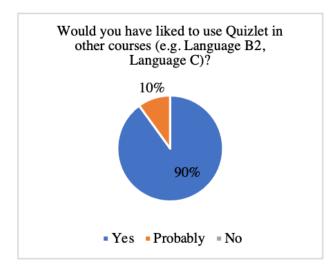


Figure 1. Use of Quizlet in other courses

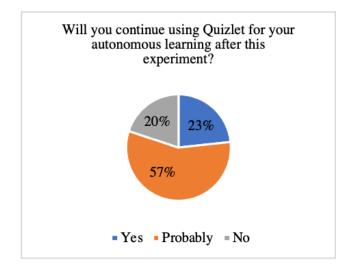


Figure 2. Future use of Quizlet

To conclude, the learners in the study indicated that they would have liked to use Quizlet in other language courses in the degree, such as Language B2 o Language C (see Figure 4). 23% of them replied they will continue using Quizlet in the future for their autonomous learning, 57% were not sure, and 20% said no (see Figure 5). Yet, when asked about the general satisfaction with this tool, the majority were highly satisfied (M=4.4 out of 5) and agreed (96.7%) that the introduction of new technologies in the teaching-learning process is the direction we should take.

5. CONCLUSION

This study has shown that the use of technology, in particular the digital tool called Quizlet, was highly favored by the Spanish undergraduate learners of EFL. Participants in his study felt that by using Quizlet their vocabulary knowledge improved, they felt more motivated and more autonomous learners. Quizlet made them feel responsible for their own learning and has proved to foster interaction and participation allowing learning to be carried out in an entertaining and attractive way. All the activities on Quizlet were viewed very positively by the respondents, although the one that scored the highest was Live (M=4.7 out of 5), which consists in competing either in groups or individually, suggesting that gamification plays a special role in the teaching-learning process. The one that scored the lowest was the game Gravity (M=3.4), suggesting that students prefer more traditional drill-driven activities, such as Match (M=4.), Test (M=4.2), or Learn (M=4.3).

In general students were highly satisfied with the tool (M=4.4) and indicated (1) they would like to use it in other subjects of the degree, (2) will continue using it for their autonomous learning, (3) that the introduction of such tools in the teaching-learning process is the direction we should take. Without a doubt, we are facing a very useful tool for teaching EFL.

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