



Quizlet as an Electronic Flashcard to Assist Foreign Language Vocabulary Learning

A Systematic Literature Review (2016-2021)

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ABSTRACT

The ubiquity and advancement of technology have given a positive impact on the elevation of education quality, including Foreign Language (FL) vocabulary learning. Among all types of educational technology, the literature has highlighted the merits of using Quizlet to assist the process of teaching and learning FL vocabulary. However, the extent to which the use of this particular learning media has benefits or challenges remains under-reviewed in the last decade. This paper reports on the opportunities and challenges of using Quizlet to learn foreign language vocabulary. The articles reviewed were selected from scientific journals published in 2016-2021 in the Google Scholar database. PRISMA diagram was employed to obtain the relevant articles. The results of the analysis of twenty articles revealed that Quizlet could be a useful means for assisting the students' vocabulary learning process, resulting in a better learning outcome. This was supported by the interesting features suitable for accomplishing various learning activities. The existence of Quizlet could be a good alternative for streamlining students' language learning process outside of classroom learning. However, it was noted that the loss of internet connection was the main challenge. This paper ends with a recommendation for future research to explore the use of Quizlet in a more comprehensive manner in the foreign language learning and teaching context.

Keywords: *E-learning, Language, Language learning, Learning media, Quizlet.*

1. INTRODUCTION

Technological advancement has benefited almost all human sectors including the education sector. Nowadays, students are getting more embraced with technology to learn new things, not exception foreign language learning. For example, Tri and Nguyen (2015) mentioned that ICT tools have been used as the learning media for teachers and students to achieve the intended goals. In Indonesia, the majority of today's generation still use smartphones which are limited to personal interest entertainment, such as playing games, listening to music, chatting, playing social media, and so forth. However, many are also found using smartphones or cell phones as a learning medium. This is due to the use of learning applications based on Android or iOS (iPhone Operating System), which are easy to operate and flexible.

Electronic flashcards can be one of the technology-based learning media particularly to learn foreign language vocabulary. It can be found on many platforms,

such as applications or e-mail websites, one of the website-based platforms that use e-flashcard media is Quizlet. Quizlet is an online learning tool developed by a high school student in California named Andrew Sutherland. Application is generally used for foreign language learning, but its functions are not limited to other subjects. Quizlet was designed in 2005 but was later released to the public in January 2007 in the form of a website. Next in August 2012, Quizlet was launched in the form of a mobile application for iOS (iPhone Operating System). The following year was followed by the Quizlet application for Android in August 2013.

The use of flashcards as a learning medium is deemed beneficial, especially in vocabulary learning (Fadhilawati, Ulum & Rachmawati, 2022; Nashir & Laili, 2018; Platzer, 2020). Flashcards are small cards that contain images or text that remind or direct students to something related to the picture a vocabulary. In schools, flashcards may still not frequently be used by teachers because using them requires skills in creating a

pleasant learning atmosphere using picture-word cards. In teaching vocabulary, one should use interesting media to keep students interested in our lessons and review lessons independently outside the classroom (Fadhilawati et al., 2022). However, due to technological advances, there are several websites and applications based on flashcards to meet learning needs so that teachers do not struggle to take the time to make manual flashcards, the technology is called e-flashcards. E-flashcard is a technology-based learning media that contains images with animation that aims to provide information or knowledge and contains sounds that can help improve student understanding (Noge, 2019). Learning Media E-Flashcard contains a set of digital cards, where each card will display an explanation of each material discussed by calling or selecting the desired card. One of the websites and applications based on E-Flashcard is Quizlet.

Quizlet (<http://www.quizlet.com/>) is an online flashcard creation and learning site which can be used on computers and smartphones. There is a feature that allows users to listen to the pronunciation of any word or record audio to play with the word anything (Wright, 2016). The Quizlet application can be downloaded and installed on the device mobile so that students can enjoy interactive information presented audio-visually. Quizlet can also be used even in situations offline so that students can access it anytime and anywhere without being connected to the internet (Mannahali, Azizah & Hasmawati, 2021).

Previous research has investigated the use of Quizlet in the foreign language vocabulary learning process across countries such as Indonesia (Apriliani, 2021; Christanti, 2018), Malaysia (YanJu, Mohamed & Mei, 2017), and Thailand (Sangtupim & Mongkolhutti, 2019) and levels of education from primary (Romdani & Andriyani, 2019), secondary (Lam, Wang & Zhao, 2018; Özer & Koçoğlu, 2017), and tertiary levels (Barr, 2016; Duarte, 2019; Hong & Du, 2021; Platzer, 2020; Waluyo & Bucol, 2021). The results generally revealed that Quizlet has the main function to develop linguistic intelligence and enrich their vocabulary banks as well as enhance their vocabulary mastery. Such positive learning outcomes are justified by some of the previous studies that found Quizlet as an easy-to-operate learning tool with some interactive features so that the students can quickly absorb the materials or new vocabularies being learned. The use of Quizlet as one of the app-based learning media is, hence, interesting to study, especially for the millennial generation who are almost never far away with smartphones in their hands.

Although the use of Quizlet in foreign language learning has been studied in the last five years, papers particularly reviewing the milestone of research in this field are still scant. One relevant review paper was ever written by Romdani and Andriyani (2021). However,

such literature study was merely focused on Indonesian students. To fill the gap, the present study aims to review relevant studies, concerned with the use of Quizlet in foreign language learning, particularly for assisting foreign language vocabulary teaching and learning. The following research questions drive the present study.

- What are the trends that emerged from the analysis results of previous studies regarding the use of Quizlet in foreign language vocabulary learning?
- What are the advantages of using Quizlet in assisting foreign language vocabulary learning?
- What are the challenges of using Quizlet in assisting foreign language vocabulary learning?

2. METHOD

2.1. Design

This review paper employed a qualitative approach, using a systematic review method (Xiao & Watson, 2017). It aligns with the research objective, which delineates the merits and challenges of using Quizlet to enhance foreign language vocabulary teaching and learning, as identified in the selected previous studies.

2.2. Article Selection Process

The researchers decided to use the PRISMA diagram (PRISMA, 2015) to conduct the article selection process (see Figure 1). To search for related articles, the researchers used keywords in bilingual, namely English and Indonesian. The keywords include language learning, language learning, e-flashcard, and Quizlet. The use of English keywords aims to cover a wider range and obtain articles that may be written by international and Indonesian researchers and published in international journals or journals in English.

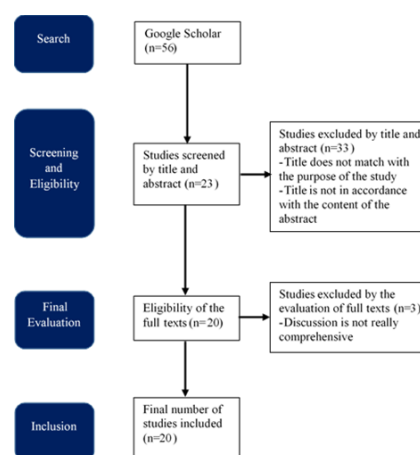


Figure 1 Article selection process using the PRISMA diagram.

The researchers further narrowed down the publication period in the last six years (2016-2021). These criteria were carried out in the hope that the content of the article is still relevant and recent. Based on the article search results, 46 articles were found in one database, namely Google Scholar.

After carrying out the article reading process, 33 articles were excluded because of two main reasons. First, the title did not match the research objectives. Second, the title was not in accordance with the content of the abstract. Thus, 23 articles proceeded to the eligibility analysis of the full texts. The analysis results eliminated three articles because the discussion was not comprehensive enough. Hence, only 20 articles were included in the main analysis stage.

2.3. Data Analysis Process

The analysis of the article was carried out in three stages. The first stage was reading an article and understanding the content of the article. The second stage was extracting the readings and summarizing them in a tabular form according to the agreed terms and categories with the featuring number of studies. In the third stage, the researchers analyzed the similarities and differences in each article's content and concluded the findings in the form of categories that can directly address the research questions.

3. FINDINGS AND DISCUSSION

3.1. Trends of Studies on Quizlet in Foreign Language Vocabulary Learning

Table 1 exhibits the general results of the trends of studies on the use of Quizlet in foreign language vocabulary learning. Regarding the country of research, Indonesia occurred the most, followed by Southeast Asia countries other than Indonesia (Vietnam, Malaysia, and Thailand), Asia countries other than the mentioned ones before (Japan, South Korea, China, and Turkey), and Europe (Austria). The next point was associated with the language focus of the research. English was the most frequently researched regarding the use of Quizlet in vocabulary learning, followed by Japanese, Chinese or Mandarin, Arabic, and German. However, three studies did not specifically mention the language focus.

Furthermore, most studies involved secondary or tertiary students. Only one study (Romdani & Andriyani, 2021) involved primary school students, particularly in the Indonesian context. Since Quizlet is an electronic tool mainly to learn vocabulary, the research methods were mostly involving a quantitative approach. The studies were oriented to examine its effectiveness in enhancing the students' vocabulary mastery. The preferences for involving a quantitative approach in the studies influenced the tendency to conduct experimental research

Table 1. A Summary of trends of relevant studies

| Category | Sub-category | Number of studies (n) |
|---------------------------|---------------------------------------|-----------------------|
| Country of research | Indonesia | 8 |
| | Southeast Asia (other than Indonesia) | 5 |
| | Asia (other than Southeast Asia) | 6 |
| | Europe | 1 |
| Language focus | English | 11 |
| | Other than English | 6 |
| | Not mentioned | 3 |
| Students' education level | Primary | 1 |
| | Secondary | 9 |
| | Tertiary (Higher education) | 9 |
| Research methods | Qualitative | 1 |
| | Quantitative | 7 |
| | Qualitative + Quantitative | 9 |
| Research objectives | Literature review | 3 |
| | Experimental | 5 |
| | Perception and experiences | 8 |
| | Both | 4 |
| | Classroom-based action research | 3 |

or dig into perceptions. Delving into the experiences or process of implementing action research became another objective.

3.2. Advantages of Using Quizlet in Foreign Language Vocabulary Learning

Based on the results of the reviews that have been carried out, the use of Quizlet shows a lot of influence on the learning process. Quizlet is considered effective because of sufficient implementation both helps students in memorizing vocabulary. Most of the students indicated that they want to be involved and want to participate in its implementation. Students are brave to ask questions related to the difficulties experienced (Christanti, 2018; Mannahali et al., 2021; Phuong, 2016). Not only that, one study (Hong & Du, 2021) found that using Quizlet gave an impact on the students' more active participation.

This is also proven by the existence of a significant increase in learning outcomes. Based on the results of quantitative research, students' vocabulary mastery can be improved well with the application of e-flashcards. Based on the results of quantitative research, students' vocabulary mastery can be improved well with the application of e-flashcards (Platzer, 2020). Based on the pre-test and post-test, most of the students could improve their vocabulary well (Christanti, 2018; Nasir & Laili, 2018; Noge, 2019).

Quizlet is suitable for students at various levels of education and at various levels of disciplines, not only limited to language learning. It is supported by there are

interesting features such as setting materials or teaching materials using the flashcard feature. In Quizlet accuracy, if a set contains a specific target word or language definition error then the whole set is considered inaccurate. Quizlet provides facilities that are equipped with audiovisuals. That is, the user can listen to the pronunciation of the existing word while paying attention to its pictures when flashcards are played, and the advantages of other menus. Not close to the possibility that there are many more creative and innovative ways of using Quizlet can be a means of supporting more interactive learning (Wright, 2016).

Another merit of using Quizlet is related to users' experiences. It is found to be simple and easy-to-use, and can be learned independently through various learning models and various functions provided by the free version. Quizlet provides learning media that helps students to be more independent in learning, either through laptops, personal computers, or smartphones (Barr, 2016). In addition to audio recordings, diagrams, and free images, users can use the free version to design learning tools for independent or collaborative learning using all the other features offered by Quizlet (Hobbs, 2017; Romdani, & Andriyani, 2021).

In relation to game-based learning, the Quizlet application can be considered a game-based learning media (Romdani & Andriyani, 2021; Sari, 2019). Quizlet is an application that is free of charge, and easy to use for both students and teachers. Students will certainly be more enthusiastic about learning because Quizlet is like a game they can play even though it is a game in Quizlet that contains various questions derived from teaching materials that have been displayed in flashcards. For teachers, it will be easier to set the teaching materials through flashcards and teachers can customize any learning materials needed by students (Crandell, 2017).

By combining learning with fun social play, features of Quizlet Live in the Quizlet application can motivate students to start learning online independently as an effort to prepare games/games in Quizlet. Quizlet Live feature is a breakthrough in learning media that can increase student participation in class (Wolff, 2016).

Quizlet bridges students with visual, audio-visual, as well as kinesthetic. This is because, in the Quizlet application, there are not only pictures in the flashcards only but also provided a button for the spelling words, both in Indonesian and in other languages. Besides, that student with kinesthetic learning styles is greatly helped by Quizlet which not can only be learned in the classroom, but can be accessed and learned anytime just, and anywhere (Quizlet, 2022).

Quizlet supports multiple languages, including writing. In addition to the most frequently used and learned foreign languages such as English, Spanish, French, and German, Quizlet supports approximately 145

languages in the world. Math and phonetic symbols in science too can be attached to flashcards (Quizlet, 2022). It was justified by empirical evidence from previous research, focusing on learning foreign language vocabulary other than English such as Chinese (Lam et al., 2018), Arabic (Romdani & Andriyani, 2021), and German (Mannahali et al., 2021).

3.3. Challenges of Using Quizlet in Foreign Language Vocabulary Learning

If there are advantages, then there are disadvantages in using the Quizlet application as a learning medium, including the following points. First, it requires the internet to enter this application and certainly requires using modern technology to access the application (Quizlet, 2022). The Quizlet application is an application for smartphones, which can only be used on smartphones based on Android and iOS, and must also be connected to an internet connection. Also, the users must pay certain amounts of money if they want to get the premium features of Quizlet (Lestari, Kasim, & Parenreng, 2022).

In the research process, several challenges were found in using Quizlet as a learning medium. The students' low writing skills were identified in the previous studies since the information conveyed still contained errors. There were students who cannot convey information and purpose well. The sentences contained several errors lexically, morphologically, syntactically, and orthographically. The vocabularies used were not sufficiently varied as well (Mannahali et al., 2021). Therefore, the treatment was carried out again before administering the post-test in their study, for example.

Memorizing vocabulary for long-term memory is another challenging task for most students in school. However, by implementing appropriate applications such as Memrise and Quizlet, students' ability to memorize vocabulary is getting better (Fadhilawati et al., 2022). The success of learning to write is largely determined by how big the ability or role of the teacher in conveying material about writing. In fact, there are still many students who have difficulty conveying ideas, ideas, and thoughts in writing. This happened because of a lack of mastery of students' vocabulary. Mastery of vocabulary owned by students impacts students' skills in writing German (Mannahali et al., 2021).

Last but not least challenge identified in the previous studies is the students' motivation to use Quizlet. Students who consider such app not easy to use or useful tend to seldom use it in the learning process. Meanwhile, their counterparts tend to be able to use the app independently and frequently.

4. CONCLUSION

The present paper has reported on the review results of 20 selected studies on the use of Quizlet to assist foreign language vocabulary learning, published in 2016-2021. The results generally reveal that Quizlet has gained its importance in the last five years as an alternative learning medium to enhance vocabulary mastery in learning foreign languages. Additionally, the students can increase their active participation during the learning process. However, teachers need to anticipate several possible challenges such as loss of internet connection, less motivation and concentration rate, and less engagement due to the prolonged use of a such tool. Hence, future research is highly recommended to dig into the students' successful vocabulary learning path using Quizlet from the lens of activity theory.

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