

University Students' Attitudes towards the Application of Quizizz in Learning English as a Foreign Language

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Abstract—Many educational technology-based tools have been employed in language classrooms worldwide. The application of Computer Assisted Language Learning (CALL) and Mobile Assisted Language Learning (MALL) platforms has been implemented in most higher education institutions. Quizizz has emerged and is applied by many language instructors since many research results indicated the effectiveness of using it in language learning. This study aims to investigate university students' attitudes towards the use of Quizizz in their English language learning. The employment of both quantitative and qualitative methods was to identify the university students' attitudes and satisfaction as well as the correlation between them. The study was carried out with the participation of 116 university students through a questionnaire and a semi-structured interview. The results showed that students had positive attitudes towards the application of Quizizz in learning English ($M=3.989$, $SD=.592$). The level of satisfaction perceived by students was also high ($M=4.078$, $SD=.760$). There was a strong correlation between students' attitudes and satisfaction, in which students' behavior was more considerable than affective and cognitive components. Although students preferred Quizizz because it could enhance their motivation and engagement, and memory, some issues were raised for Quizizz developers and teachers to upgrade and address the errors in Quizizz games. Deriving from the findings of this study it is recommended that Quizizz is a useful tool for English language learning and teaching.

Keywords—application, attitudes, correlation, Quizizz, foreign language learning

1 Introduction

Technological advancement has benefited learners in all aspects and technological tools and applications assist learners to study more effectively. Therefore, the integration of technology in language learning is essential in the fourth industrial revolution (known as Industry 4.0) [1], [2]. Moreover, Computer Assisted Language Learning (CALL) materials have been made interactive, effective, and available for language learners [3–5]. Furthermore, the Mobile Assisted Language Learning (MALL) approach has been employed in many language classrooms since MALL enhances linguistic

learning using mobile devices such as smartphones, tablets, tools, or applications to serve learners through the Internet [6–8]. The application of technology-enhanced learning approaches has been highly appreciated by language educators and instructors. For instance, many students use Google Translate to support their learning in language translation [34]. In fact, through CALL and MALL tools and applications, the innovation of gamification or game-based platforms has been revolutionized in language classrooms because of their effectiveness and efficiency in the language learning and teaching [9–11]. Gamification is considered as an emerging approach in order to motivate learners' self-regulated learning and engagement [12–13] because sometimes students' interaction was not very high when they study online [14]. Specifically, the benefits of gamification have not been deniable since a number of game-based tools and applications were invented, i.e. Kahoot!, Socrative, Quizlet, Quizizz. There are several comparisons among these gamified applications for their effectiveness and efficient assessment of language learning [15–17]. Each tool has its distinctive features to support language learning and teaching. For instance, Kahoot! enhances learners' grammar while Quizlet improves learners' vocabulary [18], [19].

The application of Quizizz has been utilized in language classrooms as researchers indicated that it is effective in many language learning and teaching contexts [17], [20–26] because it could help increase students' interest [27]. Moreover, the relationship between students' positive attitudes and their learning outcomes was apparent [28]. However, few studies examined learners' attitudes towards the use of Quizizz in their language learning. Hence, this study is timely to examine the impact of Quizizz application on language learning from language learners' attitudes.

Based on the theoretical framework of attitudes, also known as ABC Model of Attitudes by Ostrom [29], three components of social and psychological attitudes were employed as the theoretical basis for the questionnaire, namely *affective*, *behavioral* and *cognitive* (ABC) components. Specifically, the affective component is described as learners' feelings, emotions, and psychological states of an individual to an activity [30] while the behavioral component is characterized as learners' responses or reactions to an event [31]. The cognitive component refers to higher thinking order and skills proposed by Bloom [32], which was then revised by Anderson and Krathwohl [33] and hierarchically ordered as *remember*, *understand*, *apply*, *analyze*, *evaluate* and *create*. In other words, the cognitive component is presented as learners' knowledge and skills gained from an activity or a task. Several studies indicated that the ABC model has been significant in learners' attitudes, especially in language learning. The relationships among these components of attitudes were tight, so it could be significant for both psychological and pedagogical approaches [35–37].

Quizizz is one of the world's most engaging learning platforms owned by an Indian educational software company that is used by many educators from more than 150 countries with over 65 million active users [38]. Quizizz is available on any device and played in either live or assigned homework modes depending on users' purposes with a sharable join code. The feedback is instant and reviewed after each game, which users can share and export results for reviews. Some Quizizz features are displayed as follows:

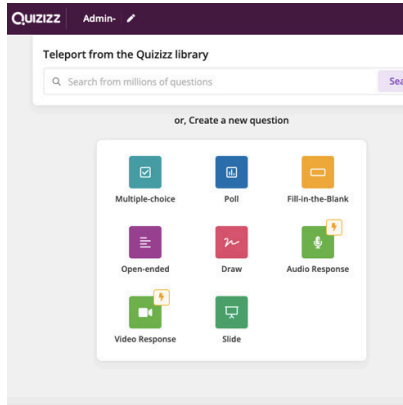


Fig. 1. Quizizz question types

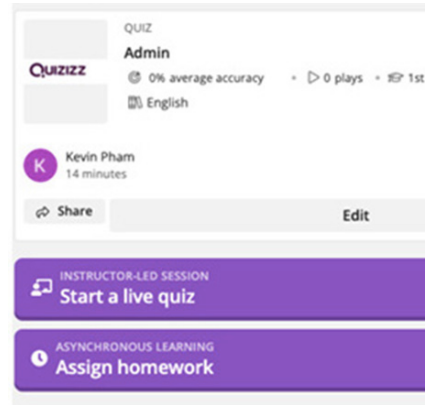


Fig. 2. Quizizz game modes



Fig. 3. Quizizz live dashboard

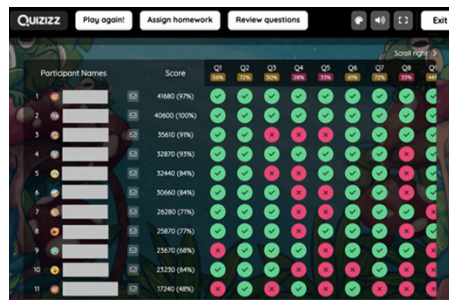


Fig. 4. Quizizz result dashboard

As seen in Figure 1, there are eight types of questions users can create, namely multiple-choice, poll, fill-in-the-blank, open-ended, draw, audio response, video response, and slide questions. Users or instructors can choose either an instructor-led session to start a live quiz or an asynchronous learning mode to assign homework (as in Figure 2). In the live quiz mode, while participants are answering the questions, there is a live dashboard to see what is going on in the game as displayed in Figure 3. Finally, instructors can view the participants' results to see which answers are correct and incorrect (see Figure 4).

Quizizz has been emerging and applied in various kinds of language classrooms which helps instructors or teachers to conduct a successful and motivating lesson. However, students' attitudes towards the use of Quizizz in language learning should be examined. Moreover, the correlation between students' attitudes and satisfaction is significant to see what type of attitude has a strong effect on their perceived satisfaction when Quizizz is used in language classrooms. Finally, several advantages and

disadvantages of Quizizz would be addressed from students' perspectives to make an adjustment and recommendations for an upgrade. Therefore, the present study envisages to seek the answers to the following questions:

1. To what extent do university students express their positive attitudes towards the application of Quizizz in learning English as a foreign language?
2. What is the correlation between university students' attitudes and their satisfaction with the application of Quizizz in learning English as a foreign language?
3. What are the benefits and drawbacks when university students use Quizizz in learning English as a foreign language?

2 Methodology

2.1 Participants

The population of the study was 116 (45.7% males and 54.3% females) at a private university in Vietnam, aged from 18 to 25 hailing from different faculties. At the time of conducting the research, Quizizz had been utilized as a supporting tool to help students learn English language frequently. Furthermore, the participants also had experience in using Quizizz for more than six months. In addition, 20 out of 116 students were randomly invited for a semi-structured interview.

2.2 Research instruments

The study employed a mix-method approach. For the quantitative method, a 24-item questionnaire with a 5-point Likert scale was delivered to the participants to collect their perceptions on the application of Quizizz, described as 1 for “strongly disagree” and 5 for “strongly agree”. The questionnaire was designed and based on the ABC Model of Attitudes by Ostrom (1969), in which three components of attitudes – *affective* (items 1–8), *behavioral* (items 9–17) and *cognitive* (items 18–23) – were characterized. The figures for university students' satisfaction were also collected from item 24. It took approximately 15 minutes to complete the questionnaire. For the qualitative method, a semi-structured interview was used to investigate the advantages and disadvantages of using Quizizz in their English language learning. Each interview lasted for nearly 18 minutes. The interviews were stored, manually coded, and analyzed by themes.

2.3 Data collection and analysis

The items in the questionnaire were examined and revised by colleagues for accuracy before it was administered. The questionnaire was then delivered to 150 university students via Google Forms due to the Covid-19 pandemic. After one week, 116 responses were returned figuring at 77.33% of the initial number of participants.

The questionnaire was then measured by the Statistical Package for the Social Sciences (IBM SPSS) Statistics version 25 for reliability. The result from Cronbach’s Alpha value was .94, which indicated the reliability of the questionnaire.

3 Results

3.1 Results from the questionnaires

The results of data analysis for the extent university students expressed their positive attitudes towards the use of Quizizz in their English language learning were measured by a Descriptive Statistics Test and a One-sample t-Test.

Table 1. Mean score of participants’ attitudes towards the use of Quizizz

Components	N	Mean	SD
Affective	116	4.132	.616
Behavioral	116	4.016	.706
Cognitive	116	3.759	.626
General Mean	116	3.989	.592

Table 1 reveals that university students’ attitudes towards the application Quizizz were 3.989 (SD=.592). Moreover, the results from a One-sample t-Test indicated that this figure was not statistically different from the test value of 4.0 ($t = -.198$, $p = .844 > 0.05$, see Table 2). As a result, participants’ attitudes towards the use of Quizizz in their English language learning were highly positive. Especially, among the three components of attitudes, the *affective* component was perceived at the highest level (M=4.132, SD=.616). The results implied that the contribution of affective factors as feelings or emotions to university students’ attitudes when they used Quizizz was more significant while cognitive factors were perceived as much a lower level.

Table 2. One-sample t-Test of general means (Test value = 4)

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Attitudes	-.198	115	.844	-.011	-.120	.098

Students’ perceptions of each component of attitudes were measured by a Descriptive Statistics Test to identify the effects of each factor on participants’ attitudes.

Table 3. Mean score of affective components

Affective Components	N	Mean	SD
1. I feel motivated when I play Quizizz games.	116	4.276	.861
2. I feel excited when they won Quizizz games.	116	4.440	.816
3. I am eager to learn via Quizizz	116	4.155	.966
4. I find Quizizz competitive.	116	4.233	.927
5. I feel happy about my results in Quizizz games.	116	3.224	1.202
6. I feel energetic when I play Quizizz games in class.	116	4.199	.998
7. I feel more confident choosing the correct answers.	116	4.345	.845
8. I feel relaxed in Quizizz sessions.	116	4.181	.900

As presented in Table 3, university students' perceptions of affective components were dramatically positive. Especially, it was the most considerable that participants expressed their excitement when they won Quizizz games (M=4.440, SD=.816). However, the figures for participants' happiness about their scores in Quizizz games were not very high (M=3.224, SD=1.202). In other words, students did not feel very pleased with their results after the games.

Table 4. Mean score of behavioral components

Behavioral Components	N	Mean	SD
9. I look forward to playing Quizizz games.	116	3.870	1.009
10. I focus on the questions in Quizizz games.	116	4.336	.844
11. I focus on the answers in Quizizz games.	116	4.241	.820
12. I respond as quickly as possible to each question.	116	3.957	.964
13. I respond as accurately as possible to each question.	116	3.905	.995
14. I maintain collaboration in Quizizz games.	116	3.974	.918
15. I maintain competitiveness in Quizizz games.	116	3.862	1.003
16. I study harder to win Quizizz games.	116	3.957	.908
17. I expect Quizizz to be used in every lesson.	116	4.043	1.008

Table 4 describes that university students generally had a positive perception of behavioral components. The results revealed that participants mainly focused on both questions and answers in Quizizz games to win (M=4.336 and 4.241, SD=.844 and .820). They also tried to respond as fast and accurately as possible to get more points. Moreover, students expected to have Quizizz games played in every lesson (M=4.043, SD=1.008).

Table 5. Mean score of cognitive components

Cognitive Components	N	Mean	SD
18. Quizizz helps me remember more details in my lessons.	116	3.922	.759
19. Quizizz helps me understand my lessons better.	116	3.707	.845
20. Quizizz helps me solve problems in my lessons faster.	116	3.664	.812
21. Quizizz helps me compare and contrast different kinds of terms in my lessons.	116	3.716	.789
22. Quizizz helps me make judgments about the information in my lessons.	116	3.733	.784
23. Quizizz helps me gain more knowledge and develop more skills.	116	3.810	.823

As depicted in Table 5, university students' perceptions of cognitive components were quite positive. They claimed that Quizizz could help them remember things in more detail (M=3.922, SD=.759). Besides, participants thought that they could have more knowledge and skills when they played Quizizz games (M=3.810, SD=.823).

Besides, university students expressed their satisfaction when they used Quizizz in their English language learning.

Table 6. Mean score of university students' satisfaction towards the use of Quizizz

Variable	N	Mean	SD
Satisfaction	116	4.078	.760

Table 6 shows that participants felt satisfied with the use of Quizizz in their English classrooms (M=4.078, SD=.760). The mean score was not significantly different from the test value of 4.0 in the One-sample t-Test ($t=1.101$, $p=.273>.05$). Therefore, it was concluded that university students' satisfaction was at a high level when Quizizz was implemented in their English language classes.

The correlations between university students' attitudes and their satisfaction with the use of Quizizz in their English language learning were also measured to see if each type of attitude promoted their satisfaction.

Table 7. Coefficient correlation between participants' attitudes and satisfaction

Variables		Attitudes	Affective	Behavioral	Cognitive
Satisfaction	Pearson Correlation	.584**	.508**	.608**	.421**
	Sig. (2-tailed)	.000	.000	.000	.000

Note: ** Correlation is significant at the 0.01 level (2-tailed).

As seen in Table 7, the Pearson Correlation (r) result showed that there was a strong relationship between participants' attitudes and satisfaction ($r=.584$, $p=.00<.05$). Among three types of attitudes, behavioral components had the strongest correlation

with participants' satisfaction ($r=.680$, $p=.00<.05$). The result indicated that university students' responses and reactions most contributed to their satisfaction. However, regarding cognitive components, knowledge, and skills students gained in Quizizz sessions relatively correlated to their satisfaction ($r=.421$, $p=.00<.05$), which implied that university did not highly appreciate the contribution of knowledge they learned in Quizizz games.

3.2 Results from the interviews

Advantages of using Quizizz for learning English. The analysis from the interviews supported that 85% of the participants felt satisfied with the application of Quizizz in their English language learning because of its convenience and efficiency. Many of them (18 out of 20) expressed their excitement when they won Quizizz games since Quizizz helped them boost their competitiveness and engagement in game sessions.

"When I play Quizizz games, I always want to win. When I won each game in Quizizz, I feel excited like in heaven because my teachers often give me a bonus for my participation. I really like Quizizz games because I can play alone or with others anytime and anywhere I like." (Participant D)

"Although it is competitive in Quizizz games, I really want to be the winner. When I'm a champion, my friends always show your admiration for my achievements, so I feel very motivated and more confident to compete with my classmates on Quizizz." (Participant M)

In addition to competitiveness in Quizizz games, 12 participants claimed that Quizizz made them think and respond quickly to win the games. Many of them focused on the questions and timer to get more points for their correct answers.

"When I see the questions, I move my eyes very fast and think fast to choose the correct answers because I can earn more scores. If I think and answer slowly, I just get fewer points although my answers are correct." (Participant H)

More significantly, 80% of the participants agreed that Quizizz games helped them remember more details and enhance their memory. They could review previous lessons faster especially for vocabulary and grammar lessons.

"I can remember more vocabulary because I can see the words and their definitions or examples many times as I play a game on Quizizz. I also review many grammar lessons that I had learned before." (Participant P)

Moreover, 13 out of 20 (65%) participants suggested that the result dashboard after a Quizizz game was essential since they could review and check the reasons why they got wrong answers, so this feature helped them to understand their lessons in a more effective way.

"After I finish a game, I always check the results to see why I'm wrong, so I can understand my lessons better. If I don't understand, I ask my teacher to explain to me. The answers often look very similar to the other choices." (Participant B)

Disadvantages of using Quizizz for learning English. The results indicated that many participants (80%) could spot some mistakes or errors in Quizizz games. A number of free and sharable Quizizz games were easily found with a search, so many answers were sometimes incorrect.

“When I search for a Quizizz game to play alone, I see some spelling mistakes. Sometimes I wonder if it gives me wrong answers because I know that anybody can create and share these games for free.” (Participant H)

All the participants agreed that Quizizz only worked with Internet connection like other applications such as Kahoot! or Quizlet. Moreover, Internet speed caused participants some trouble as they could not join the games or move to the next questions.

“I know that it's not efficient when my Internet connection is not stable. In class, when I play, I'm about to win, but my phone is lagged, so the last question doesn't come. In some cases, I can't join the game even though I could do it several days ago.” (Participant E)

Many participants (7 out of 20) indicated that the questions in Quizizz games were not varied by creators. The tests on Quizizz focused more on players' memorization and understanding. For higher levels of thinking as critical thinking skills, the questions were not satisfactory.

“Quizizz games are fun, but they just test my memory or my basic understanding. If the questions make me think critically, it will be better.” (Participant G)

Although Quizizz helped students enhance their competitiveness, it was reported by 55% of the participants as Quizizz increased their anger or they sometimes lost their temper since they hoped to become a champion.

“Of course, I want to win the games, so sometimes I get angry and disappointed with myself when I lost the games. It's just because of some technical issues as the poor Internet connection.” (Participant K)

4 Discussion

The findings supported that university students had positive attitudes towards the application of Quizizz in their English language learning which were consistent with the results from Lestari, Dhamayanti, and Irwansyah and Izzati [16], [23], [24] since Quizizz increased their motivation in class. In fact, affective factors had a strong influence on university students' attitudes when they used Quizizz to learn English. This finding was in line with several studies by [27] Fadillah and Maryanti, in which students' interest was enhanced in their English classes. Students felt more excited when they played Quizizz games to review their lessons as well as unwind after nerve-racking class time. For instance, participants got engaged in more classroom activities as Quizizz sessions were implemented, which was also supported by Gökşün and Gürsoy [17]. As a result, university students' outcomes were increased after a certain period of time using Quizizz for learning. This result was in accordance with Munawir and Hasbi [28] because students understood their lessons adequately, so they could perform better academic achievements.

The significant finding revealed that university students were satisfied with Quizizz at a high range, which was also similar to the result by Zhao [26]. More importantly, students' behaviors and feelings when they played Quizizz games were most correlated to their satisfaction. Moreover, they supported the use of Quizizz in their English class because of its outstanding features and effectiveness. The participants could increase their confidence when they played Quizizz games since the games aimed to review

their previous lessons. Although Quizizz games were quite competitive, students felt excited to join the games in hope of becoming a champion. Besides, university students could remember more details of vocabulary and grammar lessons when they played Quizizz games as well as review after-game results for improvement. However, the participants also complained that some mistakes and errors still existed in both questions and answers. Some users experienced login issues and lagging time during the games as Quizizz required a strong Internet connection.

5 Conclusion

Among various technological platforms and applications for English language learning, Quizizz outweighed the others because of its innovative features and efficiency. Therefore, university students expressed their positive attitudes towards the use of Quizizz in their English language learning. The investigation of university students' attitudes towards the application of Quizizz was significant as Quizizz brought them many benefits such as convenience, motivation and engagement, and memory enhancement. Moreover, the level of satisfaction was recorded at a high range since their behaviors and feelings when playing Quizizz games had a strong correlation to their attitudes towards this tool. Therefore, it is to imply that Quizizz was an outstanding technological tool for English language learning. From university students' perspectives and attitudes towards the application of Quizizz, language teachers could implement this tool in their classes to increase students' learning outcomes as well as make technology-enhanced learning sustainable. Quizizz developers were also encouraged to upgrade its features to serve not only academic users but all users in need.

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