

Online Game-Based Formative Assessment: Distant Learners Post Graduate Students' Challenges Towards Quizizz

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Abstract: Gamification in education provides a new pathway for learners to be more engaged in their learning journey. 'Quizizz' is an online game that is used by educators for academic purposes. It allows educators to conduct self-paced online formative assessments in a fun and engaging manner. This study is a quantitative study undertaken to explore the perception of 91 distant post graduate students towards 'Quizizz'. Most of these post graduate students are English teachers serving at elementary schools, secondary schools and tertiary institutions. In this article, despite the students' perceptions towards 'Quizizz' which generally are positive, however, the challenges to the learning process are also prominent. The questionnaire consists of 20 items. The data were analyzed descriptively (frequency and percentage) using SPSS version 25. Most of the respondents agreed that 'Quizizz' is able to provide a platform which promotes positive reinforcement, motivation and immediate feedback when their marks are being displayed on the leaderboard. It is hoped that the findings could provide some insights to educators in employing 'Quizizz' as their formative assessments.

Index Terms: distant learners, motivation, online games, post graduate students.

1. INTRODUCTION

THE term 'gamification' is generally used to denote the application of game mechanisms in non-gaming environments for instance in academic environment [1]. In educational context, gamification can be applied at all levels namely elementary, secondary and higher education. The growing popularity of gamification is due to the widespread belief on its potential to foster motivation, behavioral changes, healthy competition and collaboration Dichev and Dicheva [2]. From traditional lecture halls where most of the teaching and learning activities are conducted in a teacher-centered approach, learners are now experiencing a more dynamic, student-centered learning environment with gamification being increasingly adopted as one of the instructional strategies [3]. Gamification is one method that has been linked to increased enjoyment and engagement [4], [5], [6]. They further added that in most classrooms, when students are highly motivated, their engagement increases, leading to desirable learning behaviors and knowledge enhancement. Gamification is a potential tool to enhance participation of students in classroom, as it allows them to use the fun elements of gamified learning to enrich their imagination and thinking skills [7]. Proponents of gamification claim that gamification leads to positive learning outcomes. They asserted that gamification reinforces important skills in education, such as problem-solving, collaboration, and communication. Furthermore, the need for interaction among the group members in gamification encourages students to play an active role in their own learning process. In the context of post graduate distant learners in higher institutions, most of the students are working adults with a range of age from 20 years old up to 60 years old. Hence, they have very limited time to go through their notes and do extensive reading for their classes [8]. They stated that the challenge that underlies within this problem is that it resulted them in having low retention power to concentrate as well as increasing their anxiety level as they are not fully prepared for their classes. Since there are many studies which indicate the positive aspects of online games, the researchers employed an online game namely 'Quizizz' in their post graduate class. Thus, a study should be carried out to evaluate its effectiveness. Therefore, the researchers

conducted this study in order to identify the students' perceptions towards 'Quizizz' and its challenges.

2 LITERATURE REVIEW

2.1 Theoretical Background

2.1.1 Connectivism Theory

Ryan and Powelson [9] stated that students are most likely interested and engaged in learning characterized by autonomy and purpose. They further claimed that students are more likely to be highly motivated if they have the autonomy in determining their own learning and, when they feel connected to and supported by other students. In this context, the social interaction and online communities are the important components of gamification are relevant to distant learners especially they are geographical far from each other. Many distant learners dropped out from the program because they did not have social support and feel so detached from their classmates since they seldom met via face to face [8]. The proponents of connectivism theory provides more information about learning that takes place in the digital age with regards to learners' connection with the content and others in the community. They also proposed that students prefer to learn and work in a networked environment [10]. As a result, the students continually and actively acquire new knowledge within the learning community. This enable them to become autonomous and independent in building their own knowledge [3]. Gamification also incorporates connectivism approach in gamification through the elements of competition and collaboration with other members of the learning community [11]. Leaderboards, guilds, groups, and other collaboration strategies in games could bring together such communities to promote a sense of interrelated purpose [12], [13].

2.1.2 Gamification

Gamification refers to the use of game characteristics and elements (such as points, leaderboards, levels, challenges and badges) in non-game contexts [1], [14]. According to Hamari et al. [4], gamification is the act of creating gamified experiences while Werbach [15] described gamification as the process of making activities more game-like. Gamification is

increasingly gaining popularity as an effective way to deliver learning contents to digital native students [3]. Gamification has been adopted in classroom context to support learning in a variety of contexts and subject areas to help educators address students' attitudes and behaviors, such as participation, collaboration, self-guided study and creativity [16], [17]. Gamification has also been used by educators as students' assignments and assessments, while encouraging their exploratory approaches to learning, and classroom retention. This is because the game elements would engage learners and change their behavior in a desirable way similar to what happens in games [18], [19]. There are four game elements that are deemed salient to tertiary education namely: narrative, challenge, progression and feedback [20]. Narrative involves the use of stories to engage students in learning, such as a case study; the use of a task that is both challenging and fun; progression refers to the flow of learning activities (tasks) while feedback is the use of frequent and prompt responses that encourage students to learn [21]. These elements are important to motivate students to be more engaged in the learning activities [22].

2.1.3 Anxiety

According to Emanuel [23], anxiety refers to the response against unrecognized factor, either in the environment or in the self. Anxiety is characterized by tension, worried thoughts and physical symptoms, such as sweating, trembling, dizziness or a rapid heartbeat [24]. Kazdin [24] further elaborated that severe anxiety impairs one's daily function and decreased work productivity of individuals. In addition, he further added that in regards to learning, anxiety could reduce students' motivation and concentration on a range of tasks including reading, writing, listening and speaking. It blocks students' normal thinking process and interfere with their memory, attention, and concentration. Such blocks could lead to poor understanding, loss of self-confidence and resulted in poor results. Anxious students are often lack of confidence and fail to engage actively with the learning materials, thus, fail to internalize concepts successfully. Anxiety is also associated with a general sense of incompetence. In the long run, eventually, the insecurity builds upon itself leading the students to feel demotivated to proceed with their learning [25], [26].

2.1.4 Motivation

Gamification turns a course content into a 'game' with activities that resemble learning environment. These activities incorporate elements such as repeated self-learning, ongoing interaction and feedback which are aimed to increase learning interest and motivation of students [27]. The game format provides students with interesting choices, desirable goals, immediate feedback and opportunities to see and evaluate their improvement [28]. These features are usually available in gamification. Motivation is an important factor that resulted in continued learning [3]. Students could be motivated to engage in learning tasks to the extent that they feel they could be successful at certain skills or knowledge and to the extent they perceive that the task as being important to them. Apparently, the students would be able to choose and engage themselves in appropriate learning task(s) according to their capabilities. Games are generally difficult to beat at the first time of playing, thus, students need to try playing it repeatedly to discover the rule set and mechanics [3]. It is common for student users to

be highly motivated in trying to accomplish a particular level of the game in order to move to the next level. Similarly, students may show the same sense of motivation in completing their task(s) when the learning content is mapped with game design as they strive to progress from one level of difficulty to another [20]. In this context, gamification may not only help to enhance students' motivation, but also their perseverance. It is important to ensure that students are motivated to learn. This is because motivated students are more enthusiastic about learning and they truly enjoy the learning process with high determination to succeed [29]. Besides that, the motivational strength of games has led to the increasing use of gamification for learning [30]. Other scholars, Malone and Lepper [31] had reported the essential features that make learning intrinsically motivating for students. These features are challenge, fantasy, curiosity and control. Advantageously, these features are present in games, leading to strong belief that gamification could increase students' motivation. Apart from that, students often find incentives such as stars, points, leader-boards, badges, and trophies which are common in games as enjoyable and interesting [32], [33]. Thus, when these incentives are found in gamification, it is expected that students would be equally interested in pursuing the gamified learning content

3 METHODOLOGY

3.1 Setting

The respondents for this study comprised of 91 post graduate students who enrolled in a distant learning course, 'Psycholinguistics & Language Teaching'. Most of them teach English as their first degree is Teaching English as a Second Language. Their age range is from 26 to 50 years old. These Masters of Teaching English as a Second Language students are English teachers who serve at primary schools, secondary schools and tertiary institutions. Most of them possess a degree in Teaching English as a Second Language. This course is offered within 14 weeks or one semester by the Faculty of Education in a public university in Malaysia. These students only came to the main campus during the one-week school holiday as they live all over throughout Malaysia. Normally, the lessons are taught into two modes namely via face to face and online. Therefore, the course lecturer only met the students via face to face twice in a semester or only 32 hours. The online lessons were carried out in at least 10 hours. Ten topics were taught via face to face (during the school holidays) and other topics are delivered via online (when the students are at home). One of the evaluations is online quiz via Quizziz. Online quiz contributes to 30 percent of the total percentage of evaluations. The online quiz covered only 6 topics. For all the quizzes, the students were given 3 minutes to answer each question. There are 5 questions per topic. They could refer to the notes and discuss with their friends to answer each question. In this study, since the course lecturer was aware about the students' anxiety level in answering quiz questions, she used a few strategies to reduce the students' affective level. The students were given two modes of answering the 'Quizizz' questions: (a) the students were instructed to answer the questions immediately after the face to face lessons (b) the students were instructed to answer the 'Quizizz' questions at home as homework. If the online quizzes were given as homework, they were given two weeks to complete each quiz. In the context of 'Quizizz', the

'homework' feature allows students to set a particular task as homework, and keep it active for up to two weeks. They were asked to read some notes which were uploaded in a learning management system designed by the university. Besides reading, they were expected to watch a few videos in which the links were given in the same learning management system. After they have read and watched the video on a certain topic within two weeks, they were assigned to answer 'Quizizz' questions to ensure that the students do their reading at home and to serve as a yardstick of the students' comprehension of the topic.

3.2 Research Instruments

The undertaken study was conducted using quantitative approach. Quantitative instrument such as questionnaire allows easier compilation of respondents' responses in the form of numerical scores along a continuum that are assigned to their different perceptions [34]. The research instrument is a questionnaire that consists of 32 items. The items were constructed based on the themes derived from the interview responses of the previous cohort. The questionnaire used four Likert scale ranging from (1) strongly agree (2) agree (3) disagree (4) strongly disagree. The items were given to two experts to be reviewed for validity purposes, namely two academic members; each from the Centre of Innovation in Teaching and Learning, UKM and Centre of Educational Evaluation, UKM. The expert from the Centre of Educational Evaluation, UKM was selected to validate the items due to his/her expertise in item development while the expert from Centre of Innovation in Teaching and Learning, UKM was selected due to his/her familiarity with the constructs studied in this research. The experts validated the items in terms of the content and face value. A pilot study was carried out to determine the reliability of the items. Based on the pilot study, the Cronbach Alpha value for each item is above 0.7, thus, all the items are accepted. The questionnaire was disseminated to all the students (96 respondents) during the second meeting when they had completed all the online game assessments. However, only 91 of them returned the questionnaire to the researchers. The data collected from these respondents were analyzed descriptively (frequency, percentage, mean and standard deviation) using SPSS version 25.

4 RESULTS AND DISCUSSION

This study was conducted to find the answer to the following research questions:

1. What are the perceptions of 'Quizizz' among distant post graduate students?
2. What are the challenges of 'Quizizz' among distant post graduate students?

4.1 Perception on Quizizz among Distant Post Graduate Students

The table (Table 1) below shows that the almost all students perceived 'Quizizz' as a positive learning tool and experience.

TABLE 1

Item	Statement	Strongly Disagree	Disagree	Agree	Strongly agree
1	I enjoy the positive reinforcement given in	0 (0.0)	2 (2.2)	40 (44.0)	49 (53.8)

2	'Quizizz'. I feel a sense of competition when my marks are being displayed on the leaderboard.	1 (1.1)	4 (4.4)	25 (27.5)	61 (67.0)
3	I like the usage of leaderboard	0 (0.0)	7 (7.7)	47 (51.6)	37 (40.7)
4	I like the usage of Avatar	1 (1.1)	1 (1.1)	52 (57.1)	37 (40.7)
5	I enjoy the music background	4 (4.4)	9 (9.9)	51 (56.0)	27 (29.7)
6	The interface is user friendly	0 (0.0)	1 (1.1)	54 (59.3)	36 (39.6)
7	I prefer the leaderboard be discarded	12 (13.2)	55 (60.4)	17 (18.7)	7 (7.7)
8	I prefer the teacher to discuss the questions many of us are weak at.	3 (3.3)	16 (17.6)	43 (47.3)	29 (31.9)

In regards to benefits of gamification in terms of providing positive reinforcement, motivation and immediate feedback, the highest score (Item 2) was obtained by item 'I feel a sense of competition when my marks are being displayed on the leaderboard'. Almost all the students (97.8%) agreed (Item 1) that they enjoy the positive reinforcement given in 'Quizizz'. Many of them agreed that they had a sense of competition when their marks were being displayed on the leaderboard (Item 2); liked the usage of leaderboard (Item 3); liked the usage of Avatar (Item 4); enjoyed the music background (Item 5); felt that the interface is user friendly (Item 6) and preferred the teacher to discuss the questions which many of them were weak at (Item 8). According to Göksün et al. [35], 'Kahoot' and 'Quizizz' lead to competitive learning environment. The entertaining, and fun competitions contribute to better concentration among students in a classroom. The colorful interface, avatars and music features which are commonly found in gamification provide students a similar experience as a game does. After the students answered each comprehension question, 'Quizizz' would show pictures with memes to tell whether the answer is right or wrong. Funny pictures pop up with phrases like "good job" if the answer is correct [14]. These features serve as a positive reinforcement to students, besides entertaining them during the learning process [36]. The respondents in this study only showed their moderate agreement on whether leaderboard should be discarded from 'Quizizz' (Item 7). This is in line to the findings by Basuki and Hidayati [17] who reported that respondents in their study were satisfied and liked and the leaderboard feature of gamification. Leaderboard is one of the special characteristics of 'Quizizz' which shows the performance level and students' achievement. Students could see their live ranking among other users [14]. This helps to motivate them besides creating a healthy competition among their classmates. Leaderboard creates the social pressure for students to increase their engagement and consequently have a constructive effect on participation and learning [37].

4.2 The challenges of 'Quizizz'

Although majority of the students demonstrated positive perceptions towards the use of 'Quizizz', they still faced some

challenges along the way, such as learning anxiety and generation gap in using the gamification technology. As one size does not fit all, application of 'Quizizz' among students from varying background may result in plethora of challenges that needs to be addressed accordingly.

4.2.1 High Anxiety Levels

One of the most common problems faced by distance postgraduate students is the high level of anxiety in learning. This could be possibly due to the limited time that they usually spend for studying as a result of other life commitments. They often lack of motivation, self-esteem and confidence in performing their learning tasks because of the anxiety and other negative emotions, and this becomes a major challenge in distance learning. In this context, 'Quizizz' is believed to be capable of reducing such anxiety and undesirable attitudes towards learning. The table (Table 2) below shows how 'Quizizz' may help to address anxiety among the distance postgraduate students.

TABLE 2

Item	Statement	Strongly Disagree	Disagree	Agree	Strongly agree
1	I can organize my thoughts better by using 'Quizizz' to learn in the classroom.	0 (0.0)	3 (3.3)	64 (70.3)	24 (26.4)
2	I learn about the topic through short quizzes given in the 'Quizizz'.	0 (0.0)	2 (2.2)	51 (56.0)	38 (41.8)
3	I can understand a particular topic easily with the use of 'Quizizz'.	0 (0.0)	5 (5.5)	53 (58.2)	33 (36.3)
4	I prefer True-False questions than multiple choice questions.	3 (3.3)	39 (42.9)	38 (41.8)	11 (12.1)
5	I think the class is too noisy when playing 'Quizizz'.	18 (19.8)	59 (64.8)	13 (14.3)	1 (1.1)
6	I feel high anxiety when the leaderboard is displayed.	0 (0.0)	1 (1.1)	42 (46.2)	48 (52.7)
7	I find that the background music is too noisy.	20 (22.0)	50 (54.9)	14 (15.4)	7 (7.7)
8	I prefer 'Quizizz' as a homework activity than in class activity.	7 (7.7)	32 (35.2)	34 (37.4)	18 (19.8)
9	I tend to think fast when I attempt to answer 'Quizizz' questions.	1 (1.1)	7 (7.7)	40 (44.0)	43 (47.3)
10	I could not think	16	50	22	3

	properly when playing 'Quizizz'.	(17.6)	(54.9)	(24.2)	(3.3)
11	I think I am too nervous when answering the questions.	2 (2.2)	36 (39.6)	39 (42.9)	14 (15.4)

The findings show that 70.3% students agreed that they could organize their thoughts better with 'Quizizz' (Item 1); 56% agreed that they learn about a topic through short quizzes in 'Quizizz' (Item 2); 58.2% agreed that they understood a topic easily with 'Quizizz' (Item 3); and 91.3% agreed that they could think fast while using 'Quizizz' (Item 9). In general, gamification helps to lower students' tension and anxiety towards language learning [38] as it increases positive emotions and enhance self-confidence of students in language classrooms by making the learning process more attractive to learners. Poor motivation that result from high anxiety among students may adversely affect their learning process. According to Lo and Hew [39], traditional strategies alone cannot provide a solution to this problem. Hence, gamification has been recommended as one of the tools to improve students' motivation. Aşıksoy and Sorakin [40] reported that 'Quizizz' is effective for increasing learning outcomes and decreasing anxiety among students, while Zainuddin et al. [41] attributed enhanced learning performance of students to the fun and entertaining features of 'Quizizz'. According to Zainuddin et al. [41], enjoyable learning experience provided by 'Quizizz' has a positive impact on students' engagement and motivation in classroom; it increases their enthusiasm and excitement in learning which subsequently leads to better academic performance. These positive feelings are considered as the emotional engagement of students towards learning. Thus, based on the findings of this study, it is believed that the issue of learning anxiety among the distance postgraduate students could be effectively solved by improving their emotional engagement with 'Quizizz'. On the other hand, 64.8% students disagreed that the class is too noisy when using 'Quizizz' (Item 5); 54.9% disagreed that background music is too noisy (Item 7) and 54.9% disagreed that they could not think properly when using 'Quizizz' (Item 10). As such, it could be concluded that the distance postgraduate students in this study did not perceive the use of 'Quizizz' as a source of distraction to their learning. Noise and other forms of distractions may affect the attention level, working memory and reasoning of students during learning process. For students who are suffering from learning anxiety, distractions could easily aggravate their condition as it becomes more difficult for them to focus and retain the learned content. Nevertheless, the findings of this study have indicated otherwise, suggesting the potential of using 'Quizizz' as a convenient tool to support learning of distance postgraduate students. On using 'Quizizz' as homework rather than as classroom activity (Item 8), it was shown that 37.4% students agreed while 35.2% disagreed. Similarly, on preference for True-False questions over multiple choice questions (Item 4), 41.8% students agreed while 42.9% disagreed. These may be due to individual differences in learning among the distance postgraduate students. Nevertheless, the possibilities of using 'Quizizz' as either classroom activity or homework provide greater flexibility to students pursuing distance education. This is because students may complete the quizzes at their own pace, at anytime and from anywhere, rather than racing

against time to do so in the classroom. This would encourage them to be independent learners. For the type of questions, both multiple-choice and True-False options in 'Quizizz' are good for helping students recall facts and prepare for conventional tests, although may not be adequate to stimulate deeper levels of thinking [42]. Besides, the findings of this study also showed that 98.9% students agreed that they feel high anxiety when leaderboard is displayed (Item 6), despite only 42.9% of them agreed that they feel too nervous answering questions in 'Quizizz'. These indicate that students were still highly anxious about their ranking in the leaderboard, although they did not feel nervous about answering the quizzes. Leaderboard showed the score of all participants, and this could make some students uncomfortable due to their lower rankings. They may also feel pressured to achieve better positions on the leaderboard. However, educators have the option for not displaying the leaderboard of 'Quizizz' to prevent students from seeing each other's ranking. In regards to this study, the educators may have to opt for not displaying the leaderboard to reduce anxiety among the distance postgraduate students.

4.2.2 Generation Gap

Distance postgraduate students are commonly comprised of multiple age groups, which also means that they are from the different generations. The current Generation Z and Millennials are generally regarded as more competent users of technology as compared to those from the preceding generations, especially the Baby Boomers and Generation X. As such, students from the older age groups often face difficulties in embracing new technologies and tools in education. Apparently, this had been identified as a challenge in using 'Quizizz' for distance postgraduate students. The table (Table 3) below shows how distance postgraduate students perceive generation gap in using 'Quizizz'.

TABLE 3

Item	Statement	Strongly Disagree	Disagree	Agree	Strongly agree
1	I discover a lot of others useful information and knowledge while using 'Quizizz'.	0 (0.0)	7 (7.7)	48 (52.7)	36 (39.6)
2	I could pay more attention while using 'Quizizz' as compared to normal lessons.	0 (0.0)	9 (9.9)	33 (36.3)	49 (53.8)
3	I find that 'Quizizz' is user friendly.	0 (0.0)	1 (1.1)	38 (41.8)	52 (57.1)
4	I find that it is easy for me to understand the instructions in the 'Quizizz'.	0 (0.0)	1 (1.1)	35 (38.5)	55 (60.4)
5	I find that the colors are attractive.	0 (0.0)	2 (2.2)	26 (28.6)	63 (69.2)
6	I find that the prompt responses help me to discover my error instantly.	0 (0.0)	1 (1.1)	46 (50.5)	44 (48.4)
7	My retention power is longer when I need to answer 'Quizizz' questions.	0 (0.0)	5 (5.5)	65 (71.4)	21 (23.1)
8	I feel bored using 'Quizizz'.	49 (53.8)	40 (44.0)	2 (2.2)	0 (0.0)
9	I think it is a childish	54	36	1	0

	activity.	(59.3)	(39.6)	(1.1)	(0.0)
10	I prefer pen paper quiz.	20 (22.0)	53 (58.2)	14 (15.4)	4 (4.4)

Findings showed that 52.7% students agreed that they discovered a lot of others useful information and knowledge while using 'Quizizz' (Item 1); 53.8% strongly agreed that they could pay more attention while using 'Quizizz' as compared to normal lesson (Item 2); 57.1% strongly agreed that 'Quizizz' is user-friendly (Item 3); 60.4% strongly agreed that it is easy for them to understand the instructions in 'Quizizz' (Item 4); 69.2% strongly agreed that the colors used in Quizizz are attractive (Item 5); 98.9% agreed that the prompt responses helped them to discover their error instantly (Item 6); and 71.4% agreed that their retention power is longer with 'Quizizz' (Item 7). On the other hand, 53.8% students strongly disagreed that they feel bored using 'Quizizz' (Item 8); 59.3% disagreed that 'Quizizz' is a childish activity (Item 9); and 58.2% disagreed that they preferred pen paper quiz over 'Quizizz' (Item 10). These data suggest that 'Quizizz' is an age-appropriate and interesting online quiz application that can enhance learning among the distance postgraduate students from the different age groups. The structure and settings of 'Quizizz', including the fun elements allow educators to conduct student-paced formative assessments in a fun and engaging way. 'Quizizz' uses bright colors, music, avatars, live leaderboard and funny memes to create an energetic, fun-filled learning atmosphere for students of many age groups, regardless of their digital competency. 'Quizizz' is also user-friendly and capable of providing enjoyable learning experience to students at different stages of lessons. As such, generation gap may not be a challenge in using 'Quizizz' as a learning tool among distance postgraduate students in this study.

4.2.3 Allows to Copy Each Other

Another challenge in using 'Quizizz' as a formative assessment is that, it may allow students to copy each other. Thus, the scores obtained might not represent the actual achievement of the students. The table (Table 4) below shows how distance postgraduate students perceive this particular challenge in using 'Quizizz'.

TABLE 4

Item	Statement	Strongly Disagree	Disagree	Agree	Strongly agree
1	I tend to discuss with the person/close to me when answering the questions.	5 (5.5)	19 (20.9)	46 (50.5)	21 (23.1)
2	I prefer to be given the opportunity to refer to my notes when answering the questions.	1 (1.1)	8 (8.8)	35 (38.5)	47 (51.6)
3	I think it allows my classmates to copy each other.	8 (8.8)	44 (48.4)	35 (38.5)	4 (4.4)

Findings of the study showed that 50.5% students agreed that they tend to discuss with the other when answering questions in 'Quizizz' (Item 1) and 51.6% strongly agreed that they prefer to be given the opportunity to refer to notes when answering the questions (Item 2). These indicate that the distance postgraduate students prefer to involve in collaborative learning rather than learning independently. On the other

hand, 48.4% disagreed while 38.5% agreed that 'Quizizz' allow classmates to copy each other (Item 3). Nevertheless, Quizizz offers different question and game settings. According to Anamalai and Mohamad Yatim [43], it is possible for educators to jumble the questions and answers in 'Quizizz'. By doing this, students sitting next to each other may not have the same question at the same time, thus, preventing them from copying each other. Therefore, 'Quizizz' could be implemented with minimum chances for students to discuss with or copy each other.

5 CONCLUSION

The undertaken study successfully explored distance postgraduate students' perception on 'Quizizz' and the challenges in using 'Quizizz' as a formative assessment. Findings revealed that the students perceived 'Quizizz' positively especially in enhancing their motivation to learn. The study also presented three main challenges in using 'Quizizz' including high anxiety level, generation gap and possibility of copying each other. The data show that 'Quizizz' reduced learning anxiety among the distance postgraduate students; and it is suitable as online quiz application which can be used by the distance postgraduate students from different age groups. The educator should jumble up the questions and answers in order to prevent the distance postgraduate students from copying each other. As such, 'Quizizz' could be effectively used as a learning tool among distance postgraduate students.

ACKNOWLEDGMENT

We would like to extend our gratitude to Universiti Kebangsaan Malaysia for allowing us to carry out this research work and to all the students involved. The publication for this article was also made possible by the financial assistance given by the Universiti Kebangsaan Malaysia GG 2019-08 FPEN-2019

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