

Students' Perception On Quizizz As Digital Game-Based Learning Tool For Formative Assessments

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Abstract

This study is entitled “Students' Perception on Quizizz as Digital Game-Based Learning Tool for Formative Assessments (A Study at the Tenth Grade of SMK Negeri 1 Wanareja in the Academic Year of 2021/2022)”. The study aimed at knowing how students' perception on Quizizz as Digital Game-Based Learning tool and how Quizizz used for formative assessment. This research used a qualitative descriptive design. The subject of this research was the tenth-grade students of SMK Negeri 1 Wanareja in the academic year of 2021/2022. The population was 609 students divided into 17 classes consisted of 7 majors. The samples of this research were 150 students that were taken randomly from all classes. The data were collected using questionnaire, interview and document. Method triangulation was used as data validation technique. The result of this research showed that students gave positive responses on Quizizz as Digital Game-Based Learning tool dealing with students' learning and engagement, rules and goals, clear outcomes and immediate feedback, and also students' interaction. They also gave positive responses on Quizizz used for formative assessment in English class. Furthermore, the activities on Quizizz elicited evidence of learning, provided feedback as well as allowed students to own their learning.

Keywords: students' perception, Quizizz, Digital Game-Based Learning, formative assessment

INTRODUCTION

Since entering the 21st century, technology literacy has been a concern in many aspects including in education. It requires teachers and learners to explore many kinds of digital tools in education to support their teaching and learning process. Introducing digital tools in education has some common purposes that can help teachers in many ways to monitor the students' potentials by giving specific individual feedback or gaining insights into their progress to develop a better work plan. Furthermore, Haelermans (2017:26) added that ICT can be an important tool for teachers to identify the students' lacks of performance and understanding in individual student progress and help them gain greater insight into students'

performance. It is in line with Stiggins, et al. (2004) in Burke (2010:20) believed that it is important for the teachers to acquire the knowledge and skills needed in order to monitor students' progress toward mastery of learning standards. Digital tools in education provides teachers a fast and easy way to monitor the students' progress through digital learning assessments. Using digital tools for formative assessment can be seen as a creative and innovative attempt to apply technology literacy in class. One of digital tools that can be used for learning assessment is a digital game-based learning platform called Quizizz. It enables teacher to make quiz-type of game-based learning assessments to support the educational processes.

Previous study showed some different ways of applying Quizizz. Boulden et al. (2017) found that students were more focused and attentive to the quiz when using Quizizz. Chaiyo and Nokham (2017) found differences in students' perception of different educational apps. Students responded more positively when using Kahoot and Quizizz than using Google forms. Suo, Suo, and Zalika (2018) applied Quizizz in the Arabic classroom and found it was effective to enhance students' learning as a game-based learning tool. Zhao (2019) applied Quizizz to integrate fun multiplayer activity in Accounting Classroom and found it brought positive impact on students' learning experience.

This study explored Quizizz as digital game-based learning tool for conducting English quiz during distance learning. It aimed at exploring how students' perception on Quizizz as Digital Game-Based Learning tool were and how Quizizz was used for formative assessment.

Theoretical Framework

Since the last few decades, massive development of Information and Communication Technology (ICT) has been affecting both our social and individual life (Bhattacharjee and Deb, 2016). The development of Digital Game-Based Learning acts as a result of massive development of ICT in every aspect of human's life, in this case, education. ICT in education generally refers to any technology involved in education to support the educational process. These include the devices and software, such as educational games or any digital learning tools, which can be found easily on internet. (Haelermans, 2017:25).

As Marc Prensky (2001) stated that the urge of digital game-based learning started when global technology boomed in the last 20th century decades. Today's students living their life in digital era, so

it becomes a concern that teacher nowadays need to update their way of teaching following the latest trend. Prensky recommended teacher to implement digital game-based as learning tool as teachers can use any kinds of digital-based games to teach various subject areas in a variety of ways (Prensky, 2001) in Coffey (2009).

Mark Griffiths (2002) in Coffey (2009) noted that digital games can be a great tool for educational research to help students working towards their learning achievements, provide helpful feedback, and maintain records for individual measurement purposes. Besides providing better students' engagement and motivation, digital game-based learning is also potential to promote a long-term memory and provide a practical learning experience for students (Deubel, 2006). Furthermore, Deubel (2006) as cited in Coffey (2009) suggests some components for implementing digital game-based learning effectively. The first is that the games must require high-level of students' learning and engagement. Then, rules and goals must be considered well. Clear outcomes and immediate feedback must also be provided by teachers. Finally, Deubel recommends students to have interaction with the games as well as other students.

Quizizz is an educational digital application with the concept of gamification (MacNamara & Murphy, 2017) as cited in Zhao (2019). It is easily accessible for everyone from elementary to higher education students. It gives users a similar experience as a game does with the colorful interface, avatars and music that will allow students to experience fun and engaging atmosphere during the class as well as boost their learning motivation. It also provides funny memes after the students answer the questions. Different relatable memes will appear directly after each answer to give instant feedback whether the answer

is right or wrong. Besides, there is also called as power-ups which are single-use abilities designed to increase students' engagement and participation. Quizizz also provides time feature in every question to boost students' competitiveness as well as their performance to answer the question accurately in certain limited time.

In education, there are two types of assessment based on their instructional purposes. The first is formative assessment which serves as assessment for learning, the other is summative assessment which serves as assessment of learning. Formative assessment tends to focus at giving specific feedback and directions to students as their learning process to the instructional goals. The feedback is expected to help students reflecting their own learning and adjusting the effective strategies needed to exceed the standards and achieve deeper understanding of the important concepts (Burke, 2010:21).

Feedback is the heart and the soul of formative assessment. O'Connor (2009:125) in Burke (2010:22) stated that students need both feedback providing descriptive information about what they did and guidance providing information about what they should improve. Moreover, Guskey (2008:28-29) in Burke (2010:21) noted that formative assessment is also used to determine which concepts that is learnt well and which problems are still exist. In addition, Popham (2018) as cited in Burke (2010:21) observed that formative assessment involves distinguishable acts that carefully considered the part of teachers or students or even both and these acts involve educational assessments, but they play role in the process-not as the process itself. Formative assessment uses both formal and informal techniques to get the information such as having class interaction or observation as informal

way or it can be through performance assessment or quizzes as the formal way (Attaya, 2007) in Burke (2010:21).

William & Thompson (2007:192) stated that there are five strategies of effective formative assessment:

1. Clarifying learning intentions and sharing criteria for success
2. Engineering effective classroom discussions, questions, and learning tasks that elicit evidence of learning
3. Providing feedback that moves learners forward
4. Activating students as the owners of their own learning
5. Activating students as instructional resources for one another

METHOD

This research uses descriptive qualitative research. The subject of the research was tenth grade students of SMK Negeri 1 Wanareja. The samples used were 150 students which were taken randomly covering all the 17 classes of 7 different majors. The data were collected using questionnaire, interview, and document. Method triangulation is used in this research to check the data validity Denzin (1978) and Patton (1999) in Carter et al. (2014). The data were analyzed using three steps of data analysis proposed by Miles and Huberman (2014), which were data reduction, data display, and draw conclusion. The data were displayed using percentage proposed by Sudijono (2014:43).

$$P = \frac{F}{N} \times 100\%$$

P: of students'

F:

Number of students answering the question items

N: Total

number of students

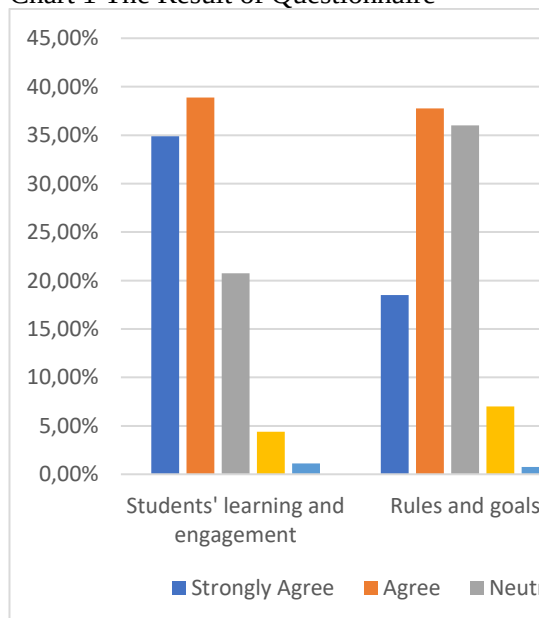
Findings and Discussion

There are three basic results and findings in this research. Each result and finding are described as follows:

Questionnaire Results

In this research, the questionnaire was utilized by the researcher. The questionnaire was adapted from Deubel (2016) and redesigned based on the purposes and the research questions of this research. The questionnaire results below investigated students' perception on Quizizz as Digital Game-Based Learning tool. There were 20 close-ended questions and the perception was measured using 5 points of Likert scale which were strongly agree (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD). The results of the general perception covering students' learning and engagement; rules and goals; clear outcomes and immediate feedback; and students' interactions are demonstrated as the chart below.

Chart 1 The Result of Questionnaire



The chart above shows the overall result of questionnaire. From the chart, it is clearly shown that most students had positive response on Quizizz as Digital Game-Based Learning tool covering

students' learning and engagement (73.8%), rules and goals (56.3%), clear outcomes and immediate feedback (79%), as well as students' interaction (54.7%). The detail of each aspect is presented as follows:

Table 1 The Result of Questionnaire on Items Students' Learning and Engagement

Items	Results (%)				
	S D	D	N	A	S A
I feel motivated when using Quizizz for English quiz.	0	4	3 8	3 9	19
Colorful display on Quizizz eases me remembering the material.	1	3	2 4	4 4	28
Avatar feature on Quizizz is interesting.	1	2	1 5	3 6	46
Music feature background on Quizizz creates fun atmosphere.	1	3	2 4	3 8	34
Memes appearing after answering questions interest me.	1	4	1 9	3 8	38
Time limit feature in each question challenges me.	5	9	1 9	3 5	32
I always use the appearing	0	5	1 3	4 1	41

power-up feature during the quiz.					
Power-up	0	5	1	4	41
feature helps me during the quiz.			4	0	

From the table above, it can be seen how students responded positively on each item as more than 50% of them had positive response on Quizizz dealing with students' learning and engagement. It can be concluded that most students believed that Quizizz had features that helped students' learning and engagement for English quiz during distance learning.

Table 2 The Result of Questionnaire on Items Rules and Goals

Items	Results (%)				
	SD	D	N	A	SA
Quizizz is easy to use for English quiz.	0	6	37	34	23
I understand the learning goals before doing the English quiz.	2	9	33	41	15
I always know what material I am facing when doing English quiz.	0	8	38	35	19
Quizizz helps me achieve the English learning goals.	1	5	36	41	17

From the data result, it can be seen that most students believed that Quizizz is

easy to use for English quiz (57%). Students had known learning goals (56%) and specific material they would face in each quiz (54%). In addition, most of them believed that Quizizz helped them achieve the learning goals (58%),

Table 3 The Result of Questionnaire on Items Clear Outcomes and Immediate Feedback

Items	Results (%)				
	SD	D	N	A	SA
Point feature on Quizizz challenges me to achieve better final score.	0	3	16	39	42
Feedback I get from Quizizz motivates me to learn better.	0	4	17	42	37
Feedback I get from Quizizz increases my curiosity.	0	2	21	41	36
Feedback feature helps me understand my weaknesses.	1	3	16	43	37
Feedback feature helps me understand the materials better.	0	3	19	44	34

According to the table above, most students responded positively on each item dealing with clear outcomes and feedback as each item had positive response more than 75%. It can be concluded that Quizizz as Digital Game-Based Learning tool provides feature to

give clear outcomes and immediate feedback that help students to improve their understanding.

Table 4 The Result of Questionnaire on Items Students' Interaction

Items	Results (%)				
	SD	D	N	A	SA
I frequently share my feedback results with friends.	6	9	37	30	18
I frequently discuss my feedback results with my friends.	3	12	34	34	17
The discussion results with friends help me understand the materials better.	0	5	30	40	25

From the presented data above, it can be seen that most students share their feedback results provided by Quizizz (48%) and discuss it with their friends (51%). Most of them also believed that the discussion helped them improving their understanding on the materials (65%).

Interview Result

The interview was conducted as semi-structured interview, so there were 5 main points guiding the questions adapted from William & Thompson (2007:192). Additional questions were asked to gain more detail information.

- a. Clarifying learning intentions and sharing criteria for success

Learning intentions and criteria for success are important for students to

understand the aims of their learning, the requirements they need to fulfill in their learning process, and the skills and knowledge they will get from the whole learning process. From the interview, it can be concluded that the teacher always tells the learning objectives before starting a new material. Learning objectives were told before the teacher giving the quiz to students. The materials were attached in first page on Quizizz before the students jumped into the questions. Teacher also provided time for students' preparation before taking the quiz. Even so, Quizizz was not used significantly for this aspect.

"The teacher always tells us the learning goals first for preparation. At that day, we prepare ourselves first because we are given the time to prepare."

"Sometimes, the material is put firstly in Quizizz followed by the questions, so we can remember what the material was or the material will be given (discussed) first before the quiz."

- b. Engineering effective classroom discussions, questions, and learning tasks that elicit evidence of learning

Students' activities are given to elicit the evidence of learning process. From the interview, it can be concluded that the students were given the quiz via Quizizz once a week, there were around 20 questions in a form of multiple choice.

"The quiz is given once a week."

"There are approximately 15 to 20 questions."

"The questions are multiple choice."

- c. Providing feedback that moves learners forward

Feedback is the soul of formative assessment. Learners should be given feedback so they will be able to understand their weakness, improve their understanding and make a better progress to fulfill the learning objectives. From the interview result, the teacher reviews the

result of students' performance on Quizizz and provides classroom discussion about it.

"Our feedback result will be discussed together if there is much time left."

"The teacher usually conducts classroom discussion to ask which material they still confused and lack at, until all students have passed the minimum score."

- d. Activating students as the owners of their own learning

Related to self-improvement, the students said that most of them reviewed their overall performance result including their rank and final score on Quizizz. Some of them also stated that they learned the material further and tried to improve their result from time to time.

"I often recheck it to know the correct answer for the wrongs."

"I often review the quiz and write them in a book sometimes."

- e. Activating students as instructional resources for one another

Furthermore, they were also asked about students' interactions. From the interview result, some students said that they tended to share their individual result with their friends, while some others did not do this. Even so, this aspect was not significantly explored for students' collaboration via Quizizz.

"I frequently share and discuss my result with friends."

"I never share and discuss it (my result)."

Documents Result

Another collected data in this research were documents in the form of lesson plan and students' exercises on Quizizz. Those documents were used as supporting data. From the documents collected, it was found things as follows:

- a. The materials for tenth grade students were about any kinds of texts, such as recount, narrative,

descriptive, and procedure. The lesson plan has included the learning objectives, the steps how the teaching process was planned to be implemented, the main materials to be taught, and the assessment plans.

- b. The students' exercises on Quizizz were about any kinds of texts such as recount, descriptive, or narrative. It matched with the learning goals and planned formative assessment in the lesson plan. The quizzes' type was multiple choice with around 10 to 25 questions. The questions were about the content of certain text, the generic structure, the text feature, and the aim of certain text.

CONCLUSION

This study explores students' response on how Quizizz acted as Digital Game-Based Learning tool and the findings showed that most students had positive response on its features and how it helped them in many ways during English quiz. From the elaboration of data result, it was found that students agreed that the features on Quizizz fulfilled the requirements of effective Digital Game-Based Learning by Deubel (2016); students' learning and engagement, providing clear rules and goals as well as clear outcomes and immediate feedback, also allowing students' interaction quite well.

The findings in this study also found that the activities covered some strategies of effective formative assessments by William & Thompson (2007) as it provides way to elicit evidence of learning by being a tool for formative assessment, in this case is for English quiz. It also provides feedback to move students' forward improving their understanding in English. In addition, it allowed students to be the owner of their

own learning as they learned further from the result provided by Quizizz.

Overall, this study found that students gave positive response on Quizizz as Digital Game-Based Learning tool for formative assessment in English class during distance learning.

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