



Jurnal Eduscience (JES)

Volume 9, No. 1

April, Tahun 2022

Submit : 04 February
2022

Accepted : 04 Maret 2022

EVALUATE RECOVERY OF PROSPECTIVE ELEMENTARY SCHOOL TEACHERS USING QUIZIZZ: IS IT EFFECTIVE?

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Abstract

The Covid-19 pandemic has a significant impact on Indonesia's education today. Students from both junior and senior batches of universities must experience changes in learning systems and models. Demands for change are felt not only by students but also by teachers. The teacher must meet the demands of distance learning. This also impacts on the use of appropriate tools in evaluating student learning outcomes. The Quizizz website is one of the teacher's tools for evaluating. However, it is not yet known whether Quizizz is the right tool for evaluating. The purpose of this study was to determine the effectiveness of using Quizizz as an evaluation tool. The research method is quantitative with quasi-experimental design. There are control and experiment classes, each with a sample of 37 students of Elementary School Teacher Education Study Program. Data obtained in the form of test score figures will be analyzed using independent t-test to find out whether the two data groups have significant mean differences. The "t-test for Equality of Means" column shows the results of the independent t-test. Sig. Value from the t-test is 0.138. If $\alpha = 0.05$, then $\text{Sig.} > 0.05$. This shows that there is no significant difference between the experimental class and the control class. The results of the data analysis showed that there were no significant differences between the experimental and control classes. This shows that the use of the Quizizz website is less effective as a means of evaluating learning outcomes. The use of the quizizz website as a means of evaluating student learning outcomes needs to be further examined

Keywords: Learning Evaluate, Online Learning, Pandemic, Quizizz

Abstrak

Pandemi Covid-19 telah memberikan dampak yang signifikan terhadap pendidikan Indonesia saat ini. Mahasiswa dari perguruan tinggi baik angkatan junior maupun senior harus mengalami perubahan sistem dan model pembelajaran. Tuntutan perubahan tidak hanya dirasakan oleh siswa tetapi juga oleh guru. Guru harus memenuhi tuntutan pembelajaran jarak jauh. Hal ini juga berdampak pada penggunaan alat yang tepat dalam mengevaluasi hasil belajar siswa. Situs web Quizizz adalah salah satu alat guru untuk mengevaluasi. Namun, belum diketahui apakah Quizizz merupakan alat evaluasi yang tepat. Tujuan dari penelitian ini adalah untuk mengetahui efektivitas penggunaan Quizizz sebagai alat evaluasi. Metode penelitian yang digunakan adalah kuantitatif dengan pendekatan eksperimen semu. Terdapat kelas kontrol dan eksperimen masing-masing dengan sampel 37 mahasiswa Prodi Pendidikan Guru Sekolah Dasar. Data yang diperoleh berupa angka skor tes akan dianalisis menggunakan independent t-test untuk mengetahui apakah kedua kelompok data memiliki perbedaan mean yang signifikan. Tabel "t-test for Equality of Means" menunjukkan hasil uji-t independent dengan nilai sig. dari uji-t adalah 0,138. Jika $\alpha = 0,05$, maka $\text{Sig.} > 0,05$. Hal ini menunjukkan bahwa tidak terdapat perbedaan yang signifikan antara kelas eksperimen dan kelas kontrol. Hasil analisis data menunjukkan bahwa tidak terdapat perbedaan yang signifikan antara kelas eksperimen dan kelas control. Hal ini menunjukkan bahwa penggunaan website Quizizz kurang efektif sebagai sarana evaluasi hasil belajar. Penggunaan website quizizz sebagai sarana evaluasi hasil belajar siswa perlu diteliti lebih lanjut.

Kata Kunci: Evaluasi Pembelajaran, Pembelajaran Online, Pandemi, Quizizz



The COVID-19 pandemic has attacked Indonesia for the past 3 months. During those 3 months, many vital activities such as trade, tourism and education were disrupted (Şeren & Özcan, 2021; Hwa et al., 2020). In the aspect of education, the appeal of social distancing implied by studying at home has a very significant impact. Many educational regulations change and require all stakeholders in the education system to follow them (Radha et al., 2020). Students and Teachers as the 2 main characters in lectures certainly change the pattern of lectures. Students must familiarize themselves learning independently with minimal help from the teacher. Students should be more active in digging up information individually rather than in groups which might often be done when lecturing activities are carried out on campus (Biton & Segal, 2021). Online learning activities carried out independently, have eliminated aspects of social interaction that may be established between lecturers-students and students during lectures. In addition, many studies show that student learning outcomes when lectures conducted online tend to decrease (Kustandi et al., 2020; (Nisa' et al., 2020; (Casey & Hallissy, 2014).

While lecturers as educators certainly do a lot of changes in each lecture process. Starting from the use of video conference applications such as Zoom Meeting, Edmodo, or Google Meet as a means for the knowledge transfer stage (Rahmawati et al., 2020). At the assignment stage, other applications such as Google Classroom are often chosen by lecturers during this pandemic (Pei & Wu, 2019). At the lecture evaluation stage, there is a simple Website which is quite popular among lecturers namely Quizizz.

Quizizz is a website that contains interesting tasks based on competition, where students are required to solve certain problems and lecturers can monitor the progress of student work in real-time (Lai et al., 2015). The difference between Quizizz and other applications is the element of competition that is quite thick between students (Kovach & Montgomery, 2010). Each student will compete to complete the assignment / problem given as quickly as possible. The advantage of Quizizz is its easy access, including for lecturers who may not have been "literate" in technology (Pattanapichet & Wichadee, 2015). In addition, there are many interesting figural that can be used by lecturers as illustrations in the given questions.

With the competition system, students are increasingly motivated to solve the questions given. But this is like 2 blades that are just as sharp. Students who want to solve problems that are given quickly, ultimately have minimal accuracy of answers (Sun et al., 2019). Students tend to want to solve problems immediately without paying attention to the truth of the answers. This is certainly quite confusing for teachers who incidentally use Quizizz as an evaluation tool, if factor x such as "inaccurate" affects students in the process then it will be difficult for teachers to assess the extent to which students' understanding of a material (Reuter et al., 2015). Continuous technological innovations in education services sector are



having a profound effect on educational systems at all levels encompassing various educational institutions. Online courses, e-learning, teaching aids, educational software, social networking tools, applications and other emerging technologies are rapidly disrupting the conventional classroom environment to a greater extent with effective knowledge dissemination processes, evaluation and feedback mechanisms (Demitriadou et al., 2020).

Considering the continuous vast spread of COVID-19 pandemic across the world, it is paramount to address the educational needs of schooling children and youth during the crisis affected period. In view of this, it is necessitated to support education leaders and policy makers at varied levels of educational governance in public, private and semi-governmental educational institutions; in formulating adaptive, coherent, effective and equitable education responses to a crisis situation that will significantly disrupt educational opportunities. In this scenario it is noted that online learning and evaluation provides the greatest versatility and opportunity for interaction for students and children simultaneously (Gilmour et al., 2019). Kahoot, Quizizz, Google Forms and such other interactive contemporary academic applications are learning technology that opens vistas for novel ways of teaching in the modern classroom environment. Modern ICT devices and the laptop devices connected to video projectors, modern wireless networks and the students' smartphones, tablets, laptops can be utilized to improve the interaction between the teachers and students, whilst enhancing the students' motivation, engagement and learning aspect to a greater extent (Boutebba et al., 2019).

Quizizz is a game-based educational application, which brings multi-player activity to the classroom and makes the class environment more interactive and amusing during training in classrooms. Course assessment itself is not just to meddle with a set of numbers without meaning and requires more than that as part of a feedback to the planning and implementation of an activity which is the assessment of students engaged in online learning, in this case. Open and adaptive insight is necessitated in the present era of industrial revolution while innovations designed in assessment can strengthen the feedback that students receive on their learning to produce substantial learning outcomes. Therefore, the improvement in implementation of assessment will have a favorable impact on the quality of learning process (Acevedo Nistal et al., 2012).

Related to this, evaluation of learning runs well when the teacher / lecturer can accurately measure the depth of student understanding (Nesbit & Leacock, 2019). When this evaluation can only provide a conclusion of normative values without the insight of the teacher / lecturer on the understanding of students in a material, the evaluation of learning conducted is not good. Learning evaluation functions for, (1) As a selection tool; (2) as a placement tool; (3) As a measure of success; (4) As a diagnostic tool by

Iizuka et al. (2016). When these functions are not fulfilled, the evaluation of learning given can be said to be ineffective. If the evaluation of learning given to students is not effective then what happens is the values produced and included in the learning outcomes sheet (report cards or score transcripts) become invalid. Because these values may not necessarily represent the true understanding or abilities of students. Based on this explanation, the researcher wants to explore whether the use of the Quizizz website as a means of evaluating learning has been effective. The researcher wants to see whether the use of Quizizz can also fulfill the correct learning evaluation functions and be able to accurately measure the level of student understanding.

RESEARCH METHOD

Research Design

This research uses quantitative methods in the process of collecting and analyzing data. The research design used was quasi-experimental. This is because the researchers chose the study sample not by random method, but with the consideration that the selected sample group has the same characteristics (Creswell, 2014). There are experimental and control classes in this study. The research design is as follows:

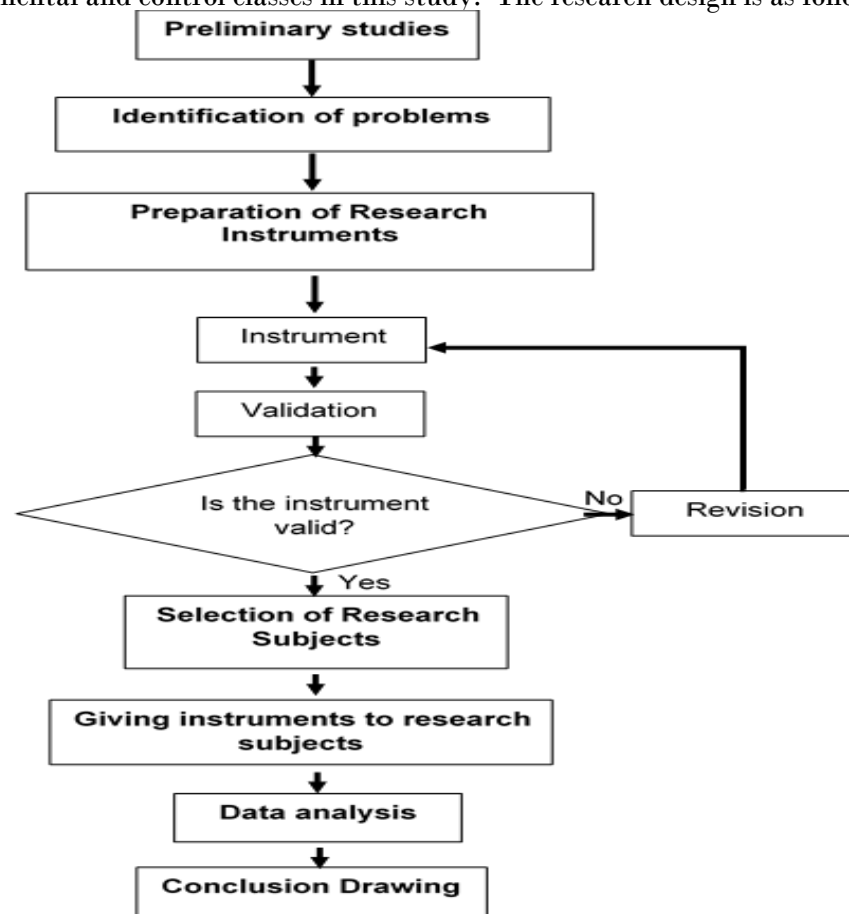


Figure 1. Research Design

Participant

The research subjects involved in this research were 40 5th grade students at an elementary school in Mataram City which were divided into 2 class groups. Each class consists of 20 students. The first class becomes the control class, where the evaluation of learning uses the WA group platform, while the second class becomes the experimental class where the evaluation of learning uses the Quizziz platform. This subject was selected based on several criteria including; (1) Have followed the online learning process for at least 8 weeks (2 Months); (2) 5th grade students who have completed the learning evaluation process.

Material

The research instrument used in this study is a test question that has been transformed on the Quizziz website. This evaluation instrument was validated by 2 validators consisting of an expert validator and a content/material validator. Before being given this evaluation question, the researcher made sure that the teacher did the online learning process beforehand. To ensure this, the researcher asked for documentary evidence and brief interviews conducted with teachers who teach in 5th grade. The indicators of the evaluation questions grid used in this study are:

Table 1. Evaluation Question Indikator

Aspects of Question	Indicator's	question number
Ratio	• Students can determine comparative questions on story questions	1
	• Students can determine the number of comparisons that are already known in story problems	2
	• Students can determine the differences and comparisons that are already known	3
Fraction counting work	• Students can determine the percentage of many certain objects	4
	• Students can convert common fractions to decimals or percent	5
	• Students can determine the value of fractions from the pictures that have been given	6
Scale	• Students can determine the scale of the comparisons that are already known in the story problems	7
	• Students can determine the actual distance from a known scale	8
	• Students can solve story problems related to the actual scale and distance that have been determined	9
Characteristics of Building Space	• Students can determine the number of corner points of an image of a geometric figure presented	10

	• Students are able to determine the edge of a given shape	11
	• Students can determine the name of the plane that limits the shape of the space that has been determined	12
Nets of cubes and blocks	• Students can determine the nets on the cube	13
	• Students can determine the shape of the grid of blocks	14
	• Students can draw one of the given spatial grids	15

Procedure

Students in the experimental class will be given treatment in the form of distance learning with an evaluation process utilizing the Quizizz website. Students in the control class do their recovery and evaluation with a standard online platform. After 8 weeks of lectures, the control and experiment class will be given a test of 15 elementary school math items (multiple choice). Each student in both classes are given 5 minutes to work on each item. This means students have enough time to solve the problem without being rushed.

Data Analysis

Data obtained from both the control class and the experimental class were collected and then analyzed using SPSS 24 version for windows 10. Data is checked whether normally distributed first. The next process is checking whether the data has homogeneous variance. After the two prerequisite tests are fulfilled, an independent t-test is performed to test whether there is a significant difference between the average scores of the control class and experimental tests. Based on the output displayed by SPSS 24, the data will be analyzed and concluded (Heale & Twycross, 2015)".

RESULT AND DISCUSSION

Research data in the form of test score scores from the experimental class (2B) and control (2D). The first prerequisite test was a normality test. The following are the results of a normality test with SPSS 24.

Table 2. Normality Test Results

	Shapiro-Wilk		
	Statistic	df	Sig.
2B (Experimentation Class)	.965	37	.286
2D (Control Class)	.945	37	.065

Based on Table 2 above, it appears that Sig. for 2B (Experiment Class) 0.286 with $\alpha = 0.05$, so Sig. > 0.05. This means that the data 2B (Experiment Class) is normally distributed. 2D (Control Class) has Sig. = 0.065 > 0.05. This means that 2D (Control Class) data also has normal distribution.

Table 3. Homogeneity Test and Independent T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig.
Value of 2B and 2D	Equal variances assumed	3.345	.072	1.501	72	.138
	Equal variances not assumed			1.501	67.680	.138

The next prerequisite test is the homogeneity test. If seen from the column "Levene's Test for Equality of Variances", Sig. shows the number 0.072. Because $\alpha = 0.05$, then $\text{Sig.} > 0.05$. This means that the variance of the control class and homogeneous experimental class data. The "t-test for Equality of Means" column shows the results of the independent t-test. Sig. Value from the t-test is 0.138. If $\alpha = 0.05$, then $\text{Sig.} > 0.05$. This shows that there is no significant difference between the experimental class and the control class.

Table 4. Descriptive Statistics of Experimental Classes and Control Classes

Group	N	Mean	Std. Deviation	Std. Error Mean
2B-Experimentation	37	53.95	17.679	2.906
2D-Control	37	48.43	13.656	2.245

This is reinforced by Table 4 which shows that the average score of the experimental and control classes did not have a large difference, namely 5.52 adrift only. The average score of the experimental class that is 53.95 is greater than the average score of the control class.

Sample selection so that there are two classes namely the control class and the experimental class are considered based on the results of tests and observations made before the study. Two classes with relatively similar characteristics were decided to be the control class and the experimental class in this study. Based on the results obtained, the test scores from the control and experiment classes are both normally distributed and both have homogeneous variances. After continuing with the independent t-test, it was found that there was no significant difference between the average scores of the experimental and control class tests. This means that the average class test scores treated with the use of the website quizz do not have a significant difference with the classes given conventional learning treatments. There is an additional explanation that the average score of the experimental class is 53.95 and the control class is 48.43. This shows that the average score of students when completing a given problem is very low. The conventional evaluation process on distance learning that is done does not have such a good effect on student learning outcomes. This also applies to the use of the website quizz as a learning evaluation tool. Because it has an average that is not much different, the use of the website quizz as a means of evaluation has no significant effect and is felt to be still less effective.

During the current pandemic, educators/teachers can choose Quizz as one of the interesting learning media that can support the teaching and learning process. Quizz is a digital-based learning media (multimedia). digital media (multimedia) is media whose content is in the form of a combination of data, text, sound, and various types of images that are stored in digital format and disseminated through networks based on broadband optical cables, satellites and microwave systems (Duflo & Kiessel, 2014). Quizz is one of the digital media in the form of game practice questions and online presentations that



help educators/teachers to distribute teaching materials to make it easier for students to understand. It can even increase students' interest and enthusiasm for learning certain materials when using this digital learning media.

Utilization of Information and Communication Technology (ICT) for learning purposes is one of the core competencies of teachers (educators/teachers) in the pedagogic aspect, referring to Permendiknas No. 16 of 2007 concerning Qualification Standards Academic and Teacher Competence. The ability of educators/teachers (teachers) in using Information Technology will greatly impact the development of teaching materials in the school. With the ranking score makes students more enthusiastic to get a higher rank. The quizizz application is used when students have studied the material and together discuss the material then continue in the final session with a quiz game that is in the quizizz questions. One of the advantages and uniqueness of this application is the application quizizz has an attractive appearance equipped with children's animation features as well as musical accompaniment and time limits in each question as well as accurate results when all students have completed the quizzes.

This educational game provides many benefits that can be felt through the use of quizizz learning media because it is interesting and can motivate students to learn more fun because it accommodates a variety of learning styles, both visual and audio as well as kinesthetic. Educators are expected to be more creative in their work and select existing learning media and follow up with the use of media to the learning process in the classroom (Myklebust & Høisæter, 2018). This quizizz application has been used in the midst of experiencing the corona virus pandemic which makes the learning process remotely or requires the learning process using audio visuals. Improving the ability of educators in take advantage of media quizizz already very good because students are very enthusiastic in filling out the questions in quizizz (Hampden-Thompson, 2010). Educators can access the quizizz application via smartphones and laptops. Teacher make related questions material that has been delivered later students answer correctly. In working on the questions in the application quizizz can't be put off for tomorrow even later because when entering into learning quizizz there is a code and the code is only can be used once and per day. To that's this application quells the feeling of laziness to students and students not bored given many tasks. Educators can strengthen understanding and skills of learners with advanced tasks according to purpose learning (Slater et al., 2012).

Another study aimed to investigate the reflections of gamification activities (of Kahoot & Quizizz applications) used as formative assessment tools for academic achievement and student engagement on learning environments, has noted that limited visual feedback capacity of the Quizizz application, owing to the fact that the questions progressed at an individual pace and the individual technological problems experienced by the participants may have prevented academic achievement and student engagement as demonstrated by the qualitative findings (Duflo & Kiessel, 2014). Moreover, this particular comparative study conducted in Turkey revealed that the academic activities gamified with Kahoot application albeit statistically insignificant, had a more positive impact on academic achievement and student engagement. On the other hand, it was observed that the positive impact of the activities gamified with Quizizz application was lower than that of the instruction method utilized in the control group both based on academic achievement and student engagement.

Research findings on investigating the effect of using Kahoot, Quizizz, and Google Forms in classroom on how the students' perception of concentration, engagement, enjoyment, perceived learning, motivation and satisfaction, demonstrated that students have learned something from doing the quiz via



Kahoot, Quizizz and Google Forms. Nevertheless, it was noted that there were no significant differences in the concentration, engagement, enjoyment, motivation and satisfaction considering Kahoot and Quizizz applications, although study has presented a lot of positive aspects over Google forms when used in the classroom for evaluations (Gronlund et al., 2009).

This is in line with research from Apsari et al. (2020) which states that the quizizz media is suitable for use as a learning evaluation application because it can improve student learning outcomes. Besides being easy to use, quizizz can present the results of the assessment quickly. Ariesca et al. (2021) stated that the application of quizizz as a mobile learning application can improve teacher skills in teaching. Then, when the application is applied to high grades, it makes students more enthusiastic about learning and makes it easier for teachers to evaluate students. Quizizz media as a learning evaluation application is declared effective because it is able to improve learning outcomes and students' understanding of the material. The media is declared efficient because it saves the use of paper, is practically used by teachers and students, and the results can be sent directly to the parents of students as a report.

CONCLUSION

Utilizing the Quizizz website as a means of evaluating distance learning during Covid-19 was not very effective. This is evidenced by the absence of a difference in the average score of learning outcomes between classes who use the Quizizz website or those who don't. Both classes get low averages and below the graduation threshold. Even so, the average score of learning outcomes using the Quizizz website has a greater average than classes with conventional evaluation styles. It should be noted that the use of website quizizz is not a bad thing or it can reduce student achievement. The use of the quizizz website as a means of evaluating student learning outcomes needs to be further examined. The researchers suggest that more in-depth research should be conducted on how to use the website quizizz that has been carried out by formal learning groups so that it can be given anticipation and modification of the design of further learning evaluation to be more effective.

In this study, the researcher only compared the data between the groups that used Quizizz and those who did not. The results of the research are general and not in-depth related to the factors that cause the evaluation of learning through Quizizz not too significantly different from the evaluation of conventional learning. For further research, in-depth research should be carried out regarding the factors that distinguish between Quizizz-based evaluations and not, as well as what factors affect student achievement from the aspect of learning evaluation.

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