APPLICATION OF DIGITAL-BASED MEDIA QUIZZZ TO STUDENT LEARNING OUTCOMES IN PANDEMI TIME

Eli Hermawati[1], Arrofa Acesta[2], Gina Noprianti[3]

PGSD, FKIP, Universitas Kuningan
[1] eli.hermawati@uniku.ac.id, [2] arrofa.acesta@uniku.ac.i, [3] gnoprianti@gmail.com

Abstract

The problem in this study is the use of learning media that is less varied which has an impact on decreasing the learning outcomes of fifth grade students of SD Negeri Maleber. This study aims to determine and describe differences in learning outcomes and differences in learning outcomes improvement between students who apply digital-based quizizz media in the experimental class and students who apply image media to the control class in class V SD Negeri Maleber. This study uses a quasi-experimental method with a non-equivalent control group design. The dependent variable in this study is media quizzz, while the independent variable is learning outcomes. The subjects of this study were students of class VA as the experimental class and students of class VB as the control class. The results of this study indicate that there are differences in learning outcomes and differences in improving learning outcomes between students who apply digital-based quizizz media in the experimental class and students who apply image media to the control class in class V of SD Negeri Maleber..

Keywords: Keywords: Learning Outcomes, Media Quizizz, Science

Abstrak

Masalah dalam penelitian ini yaitu penggunaan media pembelajaran yang kurang bervariatif yang berdampak pada menurunnya hasil belajar siswa kelas V SD Negeri Maleber. Penelitian ini bertujuan untuk mengetahui serta mendeskripsikan perbedaan hasil belajar dan perbedaan peningkatan hasil belajar antara siswa yang menerapkan media *quizizz* berbasis digital pada kelas eksperimen dengan siswa yang menerapkan media gambar pada kelas kontrol di kelas V SD Negeri Maleber. Penelitian ini menggunakan metode quasi eksperimen dengan *non-equivalent control group design*. Variabel terikat dalam penelitian ini adalah media *quizizz*, sedangkan variabel bebasnya yaitu hasil belajar. Subjek penelitian ini adalah siswa kelas VA sebagai kelas eksperimen dan siswa kelas VB sebagai kelas kontrol. Hasil penelitian ini menunjukkan bahwa terdapat perbedaan hasil belajar dan perbedaan peningkatan hasil belajar antara siswa yang menerapkan media *quizizz* berbasis digital pada kelas eksperimen dengan siswa yang menerapkan media gambar pada kelas kontrol di kelas V SD Negeri Maleber.

Kata Kunci: Kata Kunci: Hasil Belajar, Media *Quizizz*, IPA

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INTRODUCTION

The Covid-19 pandemic has had a big impact on the education sector in Indonesia. This is one of the conditions that encourage changes in learning in schools, including elementary schools (SD). This change was made with the aim of creating ideal learning conditions for students during a pandemic. The face-to-face learning process has been suspended and replaced

with online learning. To support learning activities during a pandemic, there are many applications available and teachers can use them to support the implementation of online learning activities. This is in line with the opinion of Puspitasari and Devi (2021: 60) which states that there are several online learning media that can be used as intermediaries between teachers and students, namely Learning Management Systems (such as Moodle, Edmodo, Google Classroom, etc.), live streaming media (such as Zoom, CloudX or Google Meet), group chat applications (such as WhatsApp or Telegram), and other online media (such as YouTube, Kahoot and Quizizz).

However, in reality teachers have not explored much of this varied digital-based learning media. Not all teachers have the same skills in utilizing digital-based learning media. There are teachers who are relatively more able to adapt, but there are also those who are less able to adapt. This is in line with the opinion expressed by Dewi, et al (2020) which states that some senior teachers are not fully capable of using devices or facilities to support online learning activities and need assistance and training first.

In implementing online learning, most teachers only use WhatsApp media to support learning activities, both in the delivery of material, assignment instructions, and collection. Online learning is felt to be very ineffective, especially for elementary school-age children, because the teacher is not optimal in providing material. So that it makes the material incomplete and the use of media in learning is also less varied. This results in students feeling very bored with online learning.

Therefore, this will certainly affect student learning outcomes when face-to-face learning during the pandemic is reinstated even though it is not yet fully normal as before. According to According to Acesta (2014: 99) learning outcomes are the realization or expansion of the potential skills or capacities of a person, the level of student mastery of the learning objectives in the material taught by the teacher, which is measured based on the number of correct answer scores on the questions prepared according to indicators. So that it can be understood that learning outcomes are results achieved through the learning process which are expressed in scores based on learning outcomes tests. One of the less optimal student learning outcomes is the science content. Even though science is a mandatory content in the 2013 curriculum in elementary schools and is important for students because it can be useful for continuing to the next level of education and also useful in their lives. In improving the quality of learning, a stimulus is needed that can make students feel interested in participating in learning activities. Stimulus for these students can be done by applying appropriate learning media to improve learning outcomes.

Learning media in today's era are so diverse and many are digital-based. Therefore, teachers must be smart in choosing learning media that are interesting, interactive, and relevant to the current ideal conditions, namely learning during a pandemic. The benefit of implementing media in learning in general is to improve the quality of student learning. This is in line with the opinion of Purnowo, et al (2014) who argued that learning media has an important role in supporting the quality of the teaching and learning process, the media can also make lessons more interesting and fun. Thus, researchers took an alternative in order to be able to solve problems regarding the low learning outcomes of students in class V on the water cycle material by applying digital-based quizizz media.

According to Citra and Rosy (2020: 263) quizizz is a game-based educational application that brings multiplayer activities to the classroom and makes learning in class more fun and more interactive. So it can be understood that quizizz media is a digital-based learning media that can be used as an educational game in learning activities that involve student activity so that learning is more fun. According to Kurniawan and Huda (2021: 38) there are several features that attract students' attention, including the option to activate background instruments when working on questions, attractive letter designs and colorful layouts, feedback when answering different correct or wrong answers. , and there is a leader board that shows student rankings based on the scores achieved. Based on this, students will feel as if they are playing when doing practice questions or quizzes on Quizizz. Quizizz also makes students compete with each other in the quizzes that are being played and motivates them to study so that their learning outcomes can increase.

Seeing the many advantages of quizizz media stated above, it can be concluded that this media is very appropriate when applied in learning activities to improve student learning outcomes during a pandemic. Moreover, SD Negeri Maleber has not yet implemented digital-based quizizz media in learning activities. So learning science using digital-based quizizz media can make students feel interested and create a fun and meaningful learning atmosphere.
Relevant research was conducted by Annisa and Erwin (2021) with the research title "The Effect of Using the Quizizz Application on Students' Science Learning Outcomes in Elementary Schools". The results of this study indicate that there is an effect of using the Quizizz application on the science learning outcomes of students IV at SDN Sumur Batu 08, Central Jakarta. Based on this, the researchers chose digital-based quizizz media which allegedly could be used as a solution to overcome the problem of low student learning outcomes in science content. This study aims to identify and describe differences in learning outcomes and differences in increased learning outcomes between students who apply digital-based quizizz media in the experimental class and students who apply picture media in the control class in class V SD Negeri Maleber.

METHOD

This study uses quantitative research methods with experimental research types. The experimental research design used was quasi-experimental with a non-equivalent control group design. This research was conducted at Maleber Public Elementary School, Maleber District, Kuningan Regency. The research subjects in this study were 24 students in the VA class as an experimental class who were treated by applying digital-based quizizz media and 27 students in VB class as a control class who were treated by applying picture media. The data collection technique used in this study was a test of learning outcomes through pretest and posttest in the form of multiple choice and observation of student activities as supporting data in answering the problem formulation. Data analysis in research is to process data from the final test results through instrument testing and statistical requirements testing. Instrument tests carried out were validity test, reliability test, level of difficulty, and discriminatory power. While the statistical requirements test is by processing the results of the final test through statistical formulas in the form of a normality test, homogeneity test, hypothesis test (t test) and N-Gain test.

RESULTS AND DISCUSSION

Results

This research was carried out by researchers by compiling various procedures, starting from the preparatory stage, namely compiling learning tools and research instruments. At the implementation stage, giving an initial test (pretest) to the experimental class and the control class. The pretest results in the experimental class with a total of 24 students obtained an average score of 54.79, while in the control class which totaled 27 students obtained an average value of 52.22. The experimental class and the control class obtained an average value that was not much different. This shows that the two classes have initial knowledge abilities that are not much different because the two classes have not been given treatment.

Table 1

Data on Science Learning Outcomes in Experimental and Control Classes

	Pretest		Postest	
	Control Classes	**Eksperimental Classes**	**Control Classes**	**Eksperimental Classes**
Mount	1410	1315	1765	2000
Mean	52,22	54,79	65,37	83,33
Standard Deviation	11,86	12,85	12,03	10,6

From the pretest data obtained, then the data normality test was carried out. The results of the calculation of the normality test show that the value 〖X^2〗 _count for the experimental class (3.8555) < the value 〖X^2〗 _table (7.8147) and the value 〖X^2〗 _count for the control class (6.6325) < the value 〖X^2〗 _table (7.8147), so that it can be interpreted that the pretest value data for the experimental class and control class are normally distributed or come from a normally distributed population. Therefore, the researcher proceeded to calculate the homogeneity test.

The results of the calculation of the homogeneity test of the initial test (pretest) data obtained from the experimental class and the control class obtained a F_count value (1.173) < F_table (4.038), so it can be concluded that the data from the two classes came from populations that were not much different in diversity or homogeneous . Therefore, the data meets the requirements for a difference test. After the researcher conducted the initial test (pretest), the researcher gave a different treatment. The control class was given treatment by applying media images, while the experimental class was given treatment by applying quizizz media. Then both classes were given a final test (posttest). Posttest results in the experimental class with a total of 24 students obtained an average value of 83.33. While in the control class with a total of 27 students obtained an average value of 65.37. The conditions of the two classes have significantly different averages. This shows that the two classes have different final knowledge

abilities after being given treatment. The experimental class that was given treatment with digital-based quizizz obtained a higher final score compared to the control class that was given treatment with media images.

From the final test data (posttest) obtained, then the data normality test was carried out. The results of normality test calculations show that the value ⟦X^2⟧_count for the experimental class (6.4257) < the value ⟦X^2⟧_table (7.8147) and the value ⟦X^2⟧_count for the control class (5.9893) < the value ⟦X^2⟧_table (7.8147), so that it can be interpreted that the posttest value data for the experimental class and the control class are normally distributed or come from a normally distributed population. Therefore, the researcher proceeded to calculate the homogeneity test.

The results of the calculation of the homogeneity test of the final test (posttest) data obtained from the experimental class and the control class obtained a F_count (1.286) < F_table (4.038) so that it can be concluded that the data of the two classes came from populations that were not much different in diversity or homogeneous. Therefore, the data meets the requirements for a difference test.

After analyzing the posttest value data obtained from the two classes, the researcher tested the hypothesis with the t test. Based on the results of testing the hypothesis using the t test, the value of t_count (5.666) > t_table (2.010) is obtained, so the hypothesis is accepted or there are differences in learning outcomes between students who are treated using digital-based quizizz media and students who are treated using media images.

Furthermore, to find out the increase, the N-Gain test was carried out to find out the increase in student learning outcomes after being given treatment. This hypothesis test was carried out to test the second hypothesis which reads "there are differences in increasing learning outcomes between students who apply digital-based quizizz media in the experimental class and students who apply media images in the control class". The results of the calculation of the N-Gain test are as follows:

Tabel 2
Average of *N-Gain*

Calss	Score	Description
Eksperimental	0,67	Middle
Control	0,29	Low

Based on the table above, it can be explained that the average value of the increase (gain) in learning outcomes in the experimental class is 0.67, so it can be classified in the medium criteria, while in the control class it is 0.29 which is included in the low criteria. The difference in the increase (gain) of the two classes can be seen in the following diagram:

Averag *N-Gain* Kelas Eksperimen dan Kelas Kontrol

(chart)

- Kelas Eksperimen
- Kelas Kontrol
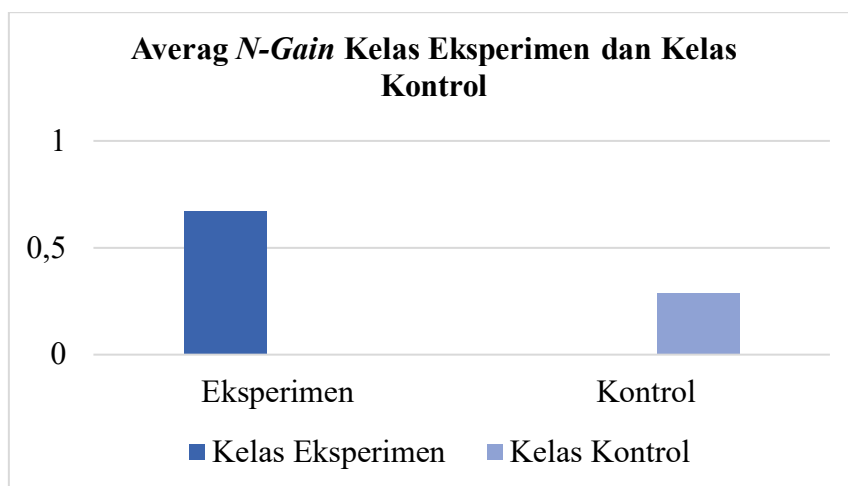
Picture 1
Diagram Rata-Rata *N-Gain* Kelas Eksperimen dan Kontrol

From the results of this analysis it can be explained that students who study using digital-based quizizz media obtain better learning outcomes compared to students who learn using image media. So it can be concluded that the second hypothesis in this study was accepted or there were differences in increasing learning outcomes between students applying digital-based quizizz media in the experimental class and students applying media images in the control class in class V SD Negeri Maleber.

DICUSSION

The results of the research on fifth grade students of SD Negeri Maleber found that the learning outcomes of science content were still low. The low learning outcomes of fifth grade students at SD Negeri Maleber are influenced by several factors, including the learning media used have not yet explored various digital-based media, there has been no innovative learning media used in learning activities, and the media used in science learning has not explored educational games.

In the research, the VA class students as the experimental class were treated by applying quizizz media, while the VB class students as the control class were given treatment by applying picture media. The purpose of this study was to find out differences in learning outcomes and differences in increased learning outcomes in the cognitive domain between students who were given treatment using digital-based quizizz media and students who were given treatment using picture media in class V SD Negeri Maleber on theme 8 of our friend's environment in science content. water cycle.

From the results of this analysis it can be explained that there are differences in learning outcomes between students who use digital-based quizizz media and students who use picture media. In the experimental class there was a good increase when compared to the control class. So it can be concluded that the first hypothesis in this study was accepted or there were differences in learning outcomes between students applying digital-based quizizz media in the experimental class and students applying image media in the control class in class V SD Negeri Maleber.

Better student learning outcomes in the experimental class occurred because students who were treated using quizizz media were more enthusiastic and enthusiastic in learning activities. In learning activities with quizizz media, students can listen to material through quizizz media in the form of text, images, and learning videos. In addition, students can be directly involved in educational games or quizzes using quizizz media which makes students interested and enthusiastic about participating in learning activities. Every student is used to playing games using their gadgets, so when taking quizzes using quizizz media students seem to be playing games because there is different feedback after each answer. There is also a leader board display to see quizzes based on the score obtained, so that this triggers the enthusiasm of every student in the group to really work on the quiz questions well.

Therefore, the use of digital-based quizizz media in this learning activity has a better impact on student learning outcomes because it can add to student learning experiences. As stated by Amri & Shobri (2020: 129), that some of the benefits that can be obtained from using game-based applications are that students become more active, a more dynamic learning atmosphere and additional learning experiences in general.

The difference in increasing learning outcomes occurs because the use of educational game-based media through quizizz media can increase activity, motivate students to learn, and increase understanding of subject matter so as to improve student learning outcomes. As stated by Sari (2020: 75) that the quizizz educational game allows for competition thereby encouraging students to be more active in the learning process and motivated to do exercises in the form of quizzes in the hope of being able to obtain high quiz results and have an impact on improving student learning outcomes. Furthermore, according to Mawaddah, et al (2021: 3114) that the application of innovative learning media in the form of quizizz media can increase student activity, student understanding and accuracy for students so that student learning outcomes will increase.

The results of this study are also in line with previous research conducted by Nafisaturrafiah, Setianingsih, and Subekti (2021). Based on the results of the t test calculation, the results obtained are t_count > t_table, namely $6.262 > 2.11$, then H_0 is rejected, H_1 is accepted. So, it can be concluded that student learning outcomes using quizizz media are better than student learning outcomes before learning using quizizz in Theme 8 Sub-theme 1 class V SD Negeri 2 Menawan, Grobogan Regency.

CONCLUSION

Based on the data analysis and discussion that has been presented, there are differences between the experimental class and the control class in the research conducted in class V SD Negeri Maleber in theme 8 of the IPA content on the water cycle. The conclusion from the research results is that there are differences in learning outcomes and differences in increasing learning outcomes between students who apply digital-based quizizz media in the experimental class and students who apply media images in the control class in class V of SD Negeri Maleber. This shows that learning using digital-based quizizz media has a good effect on learning activities and is quite significant in improving student learning outcomes

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