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Development of Quiz-Based Learning Evaluation on Theme 3 Subtheme 1 Class IV Students of Free Methodist 1 Private at Elementary School

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Abstract

This study aims to develop a technology-based learning evaluation media Quiz on Theme 3 Subtheme 1 Class IV of SD Swasta Free Methodist 1 Medan, using the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). The research method used is Research and Development. The evaluation instrument was validated by media and evaluation experts to ensure its quality. The validation results showed that this media was feasible and effective with some minor improvement suggestions. Students showed high enthusiasm during the Quiz-based evaluation, indicating that this media was not only effective but also interesting and relevant to learning. These findings support the application of technology in learning evaluation to increase student motivation and engagement.

Keywords: Learning Evaluation, Quiz, Elementary School, ADDIE Development, Technology in Learning

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Introduction

Abundant natural resources cannot be utilized if they are not supported by human resources who are able to process them. Quality human resources are produced through a training and learning process known as education. Therefore, education is very important for building superior Human Resources (HR). When the quality of HR increases, the quality of a nation will also be boosted. Thus, education has a great influence on the interests of a nation.

Over time, education continues to develop. This is due to the dynamic nature of education, which always adapts to the times. This educational progress goes hand in hand with technological progress. Technology, which is a variety of means created to facilitate and improve the comfort of human life, is also used to process available natural resources.

Teachers are an important element in building HR in schools. Ahmad (2013, p. 190) stated that teachers must be able to create a learning atmosphere that makes students active in forming, discovering, and developing their knowledge. Learning is needed by students in the learning process to attract students' attention are needed, including the use of strategies (Wanda & Putra, 2021). In addition, students also need to understand the material being taught, remember it, and be able to

develop it further (Anjani et al., 2023). Therefore, teachers need to have good teaching skills and be able to apply various approaches, strategies, and learning models.

Law Number 14 of 2005 concerning Teachers and Lecturers states that teachers are professional educators whose duties include educating, teaching, guiding, directing, training, assessing, and releasing students in formal education at elementary and secondary levels. In explaining it, teachers can use various methods that are appropriate to the situation and conditions. In this modern era, teachers are also expected to be able to utilize technology in the learning process.

One of the main tasks of teachers is to conduct evaluations. Evaluation aims to assess whether the learning program that has been designed and implemented is running as expected. Another goal is to find out whether students have understood the learning material well. Evaluation is very important because without it, teachers cannot transmit the effectiveness of the learning process, and students also cannot know their abilities (Magdalena, 2020, p.2). Thus, the success of learning objectives cannot be measured without evaluation.

Evaluation can be carried out in various ways, such as tests and non-test methods, depending on the needs. The use of monotonous evaluation methods can reduce their effectiveness, while varied evaluations can help improve student understanding.

To carry out evaluations, teachers need tools, one of which is a test instrument (Putra, W. S., 2020). This instrument must be prepared according to the students' abilities and the learning competencies to be achieved.

Based on the results of observations at the Free Methodist 1 Medan Private Elementary School on June 26, 2023, several obstacles were found faced by teachers in carrying out learning evaluations. One of the obstacles is the use of questions sourced from student books (Thematic Books guiding students) rather than compiling their own questions. In fact, evaluation questions should be made by teachers by considering students' abilities. In addition, learning evaluations are often carried out in the same way (paper tests) without utilizing technology, so that students are less motivated to do the test. As a result, learning evaluations become less effective, which ends in low student understanding and learning outcomes that do not meet the Minimum Completion Criteria (KKM) (Putra & Wanda, 2023). Based on the Semester 1 Daily Exam Scores of Grade IV Students at Free Methodist 1 Medan Elementary School for the 2022/2023 Academic Year, 17 students scored ≤70 with the criteria of not yet complete, 13 students scored ≥70 with the criteria of complete.

Efforts to overcome the above problems need to be carried out by carrying out various learning evaluation activities. Various learning evaluation activities can affect the level of effectiveness of learning evaluation so that students can understand the learning that has been done and indirectly can affect student learning outcomes. Because in principle, the concept of education policy itself is evaluated by measuring and comparing the final results of education policy programs with the goals of education policy (Yunita et al., 2023). One of the various learning evaluation activities can be done by using the use of technology. Utilizing technology in implementing learning evaluation activities can be

done with various applications. In addition to using Whatsapp, you can also use the Quiz application. This is supported by research conducted by Dwi Adelin Septiana Zai in 2023 entitled "Development of Quiz-Based Learning Evaluation on Theme 6 Subtheme 1 in Class V SDN 106811 Bandar Setia Academic Year 2022/2023". The Quiz application is an online quiz application that can be accessed as long as it has an adequate internet network, where by using this application users can ask questions like online games. This application is easy to use and can be played anywhere. The Quiz created are arranged to have 4-5 answer choices. In addition, it can load images and design questions according to your wishes and needs.

Based on the description above, the author is interested in conducting research with the title "Development of Quiz-Based Learning Evaluation on Theme 3 Subtheme 1 for Grade IV Students of Free Methodist 1 Medan Private Elementary School in the 2023/2024 Academic Year.

Research Method

Methods should make readers be able to reproduce the experiment. Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described. Do not repeat the details of established methods.

Type of Research

This research uses the Research and Development (R&D) approach. This approach aims to develop and produce a particular product while testing its effectiveness (Sugiyono, 2013, p.407).

The research model adopted is the model introduced by Dick and Carey in 1996, which is often known as the ADDIE model. This model includes five main stages, namely Analysis, Design, Development, Implementation, and Evaluation. This model was chosen because it is suitable for the development of media and learning modules, as carried out in the research of Diartika, Sueb and Al-Muhdhar (2024).

The expected result of this research is a learning evaluation tool based on the Quizi application. This tool is designed to make the evaluation process more efficient and enjoyable for users.

Place and Time of Research

This research was conducted at SD Swasta Free Methodist 1 Medan. This school is located on Jalan Beringin Raya No. 152E, Helvetia, Medan Helvetia District, Medan City, North Sumatra. This research was conducted at SD Free Methodist 1 Medan because there has been no innovation in implementing evaluations using technology. This research was conducted on June 27, 2023.

Research Subjects and Objects

The subject of the research is anyone or anything that can provide information and data to meet the topic being researched. In this research and development, the subjects of the research are Lecturers

from Medan State University who are evaluation experts and media experts, the homeroom teacher of grade IV of SD Private Free Methodist 1 Medan, totaling one person, and grade IV students totaling 30 people.

The object of this research is the thing or problem that will be studied. In this research and development, the object of the research is the Quiz-based learning evaluation tool on theme 3 sub-theme 1 for grade IV students of SD Private Free Methodist 1 Medan in the 2023/2024 academic year.

Research Procedure and Design

Research and Development (R&D) is research used to produce a particular product and test the effectiveness of the product. The research and development model used is the model developed by Dick and Carry (1996). This model is called the ADDIE model.

The stages or procedures used in conducting this development research are carried out in accordance with the research and development model used, namely the model developed by Dick and Carry (1996), namely the ADDIE model which consists of five stages. These stages are Analysis, Design, Development, Implementation, and Evaluation. The stages of this research can be seen in detail in Figure 1 of the product development flow.

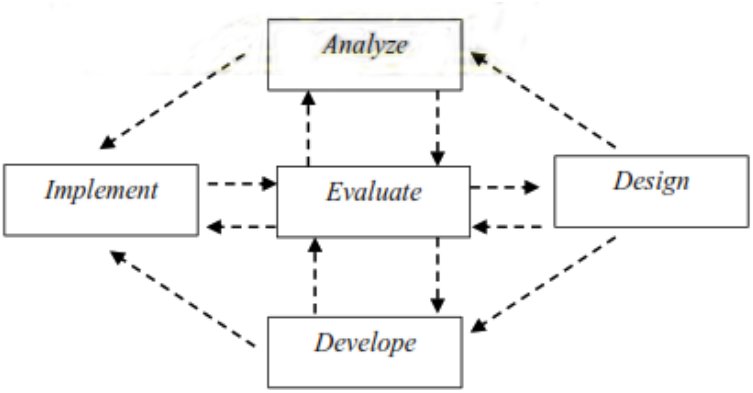

Figure 1. Stages of the ADDIE Model

a. Analysis Stage

The initial stage in this ADDIE product development model is the analysis stage, namely:

1) Problem Analysis

The researcher analyzes the problems experienced in the learning evaluation process by conducting observations and interviews with Teachers and Students.

2) Needs Analysis

The researcher analyzes the needs of teachers and students who will be users of this product.

3) Curriculum Analysis

This analysis contains core competencies, basic competencies and achievement indicators and learning objectives to be achieved with this product. This is to find out what kind of product you want to make.

4) Material Analysis

The material used is Theme 3 Caring for Living Things Subtheme 1 Animals and Plants in My Home

Environment Learning 3 which focuses on the subjects of Indonesian and Science.

b. Design Stage

After the first stage is complete, it can be continued to the next stage, namely the design stage which includes:

1) Product planning, where the KI, KD, and indicators of the evaluation questions to be made are already known.

2) Collection of Materials, where materials from Theme 3 Subtheme 1 Learning 3 have been collected from teacher books, student books and other sources.

3) Format Selection, where you choose what kind of questions you want to make. Are the questions made multiple choice or fill-in questions?

4) Initial Product Design, where all the materials that have been collected are made into Quiz-based learning evaluation questions.

5) Product Revision, where the product that has been prepared is revised based on the opinions of experts.

c. Development Stage

The next stage carried out is the development stage. At this stage, modifications are made to the initial design of the Quiz-based Evaluation. At this stage, the initial design of the previous product is revised and perfected based on the assessment given by the experts who have been determined so that the product becomes feasible for use.

d. Implementation Stage

The next stage is the implementation stage. Products that have been validated by experts are tested on users in small groups, namely fourth-grade students at Free Methodist 1 Elementary School, Medan. The results of this stage can be seen through the questionnaire that has been distributed.

e. Evaluation Stage

The Evaluation Stage is the final stage in the ADDIE model. This stage aims to evaluate each product development process in order to obtain good quality. This stage also aims to ensure the feasibility, effectiveness, and practicality of the product being developed.

Expert Validation Analysis Instrument

The expert validation analysis instrument is a tool used to obtain assessments, criticisms, and validation suggestions from evaluation experts and media experts who are lecturers from the State University of Medan (UNIMED). Validation includes material aspects, linguistic aspects, and evaluation presentation aspects.

User Response Analysis Instrument

The user response analysis instrument is a tool used to determine the response and ease of the product being developed. The Grade IV Homeroom Teacher and fourth-grade students of Free

Methodist 1 Private Elementary School, Medan will fill out this instrument. The instrument grid for Grade IV Homeroom Teachers and students includes the feasibility of the Quiz-based learning evaluation display and the feasibility of the evaluation.

Result and Discussion

Description of Research Results

This study uses the ADDIE model which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. This model was chosen to ensure that each stage in the process of developing technology-based evaluation media can run systematically and structured. The following is a description of each stage:

Analysis Stage

The analysis stage plays an important role in identifying needs and problems in the field. Observations were made on the evaluation process currently implemented in schools. The researcher found that the evaluation method used by teachers was still conventional, in the form of written tests. The results of the observation showed that students seemed less interested in the written test format, which resulted in suboptimal evaluation results.

The analysis stage began by interviewing grade IV teachers to understand the conditions and needs in learning. Based on the interviews, it was found that conventional evaluation methods, such as written tests, often did not attract students' attention. Teachers stated that students tended to feel bored and unmotivated when working on evaluations in the same way over and over again. In addition, the time needed to correct written evaluations was quite long, so feedback to students was often delayed.

In interviews, teachers also revealed that students were more responsive to technology. Thus, teachers welcomed the idea of using Quiz as an evaluation medium because this platform offers a more interactive and fun form of evaluation. Based on input from teachers, it was decided that the development of technology-based evaluation media was the right solution to meet the needs of more dynamic learning and in accordance with the characteristics of today's students.

To obtain more in-depth information, the researcher conducted an interview with the teacher concerned. The teacher said that the written test method was not entirely effective in engaging students, because most students felt bored and unmotivated. In addition, the teacher felt that the evaluation method limited students in exploring their abilities interactively. Based on this interview, the researcher concluded that technology-based evaluation media such as Quiz could be a solution, because this media offers a more interactive and fun form of evaluation, which is expected to increase student motivation and understanding.

Design Stage

At the design stage, the researcher designed a Quiz-based evaluation tool with material that was adjusted to the Basic Competencies for Theme 3 Subtheme 1. The design process began by compiling questions in the form of multiple choices, where each question was equipped with relevant answer options and supporting images to improve student understanding. Quiz was chosen because it has a quiz feature that allows the use of images, colors, and interesting answer choices, which can help students to be more involved in the evaluation. The language used in the questions is also designed to be appropriate for the age and level of understanding of fourth grade students. The researcher noted the importance of using simple language but still in accordance with the General Guidelines for Indonesian Spelling (PUEBI). Furthermore, the researcher also designed the visual appearance of the questions to be more attractive, by utilizing various features available in Quiz, such as color choices, icons, and variations of questions in the form of drag-and-drop, multiple choice, and true/false.

Development Stage

After the design is complete, the next stage is development, where the designed questions are entered into the Quiz platform. This evaluation instrument is then validated by media experts and evaluation experts to ensure its feasibility and quality. Validation is carried out with a focus on three main aspects: material aspects, language aspects, and presentation aspects.

From the results of validation by experts, useful input is obtained for improving the instrument. For example, media experts suggest that the use of color on the display be improved to provide better contrast and make it easier for students to read the questions. Meanwhile, evaluation experts provide input so that the variety of questions is expanded, so that students can be more challenged and motivated. After revision, this Quiz-based evaluation instrument was declared suitable for use with several minor notes for visual improvements.

Implementation Stage

The Learning Implementation Plan (RPP) is prepared to integrate Quiz as an evaluation medium in one learning meeting. The lesson plan used in this study was designed based on the Basic Competencies (KD) that were in accordance with the theme and sub-themes taught, namely Theme 3 Sub-theme 1.

At the beginning of the meeting, the researcher and teacher delivered learning materials according to the steps in the lesson plan. The learning process was carried out interactively to involve students and help them understand basic concepts. After the material was delivered, students took part in an evaluation session using Quiz which was carried out via a computer or gadget.

In the lesson plan, Quiz was used at the assessment stage. Students were given time to complete the questions that had been loaded on Quiz, which consisted of various multiple-choice questions with distractors designed to make students think critically. The teacher observed student responses during the evaluation session. Based on the results of the observation, students seemed more

enthusiastic about participating in the evaluation because Quiz allowed them to get direct feedback. The results of this evaluation were also immediately stored digitally, making it easier for teachers to access and analyze student learning outcome data.

The implementation stage involved a trial of the developed evaluation instrument. Before using Quiz, students were given a pre-test to measure their initial abilities. After students have taken part in learning using Quiz, a post-test is given to see if there is an increase in understanding. At this stage, an analysis of the pre-test and post-test results is carried out to determine the increase in student understanding after using Quiz-based evaluation media. The following is the calculation of the average pre-test and post-test scores obtained:

$$\text{Average} = (\Sigma\text{Student Score}) / n$$

$$\text{Pretest average} = 1505 / 30 = 50$$

$$\text{Post-test average} = 2440 / 30 = 82$$

where:

ΣStudent Score is the total score of all students

N is the number of students

This calculation shows an average increase of 31.16 points from the pre-test to the post-test, which indicates that the use of Quiz-based evaluation media has a positive impact on students' understanding of the material being taught.

Evaluation Stage

The evaluation stage is the final step of the ADDIE model which aims to assess the effectiveness of Quiz-based evaluation media in learning. In this study, the evaluation was carried out using several methods, namely analysis of pre-test and post-test results, validation from experts, and student responses through questionnaires.

Analysis of Pre-test and Post-test Results

The pre-test was conducted before the Quiz evaluation media was used to determine students' initial understanding, while the post-test was conducted after using Quiz to see the increase in students' understanding. The average pre-test score was 50, while the average post-test score was 80. With an average increase of 30 points, this shows that the Quiz-based evaluation media has a positive impact on students' understanding. The student who experienced the most significant increase was Giovan Markus Nababan with an increase in score of 60 points, which emphasizes that interactive media such as Quiz are effective in facilitating deeper learning.

Learning Completion Percentage

Learning completion is calculated based on the Minimum Completion Criteria (KKM) that has been set, which is 70. From the pre-test results, only 60% of students achieved scores above KKM.

After using Quiz, the percentage of completion increased to 85%, which shows an increase of 25%. This shows that most students are helped by the use of Quiz media in achieving or exceeding the set standards.

Student Responses to the Use of Quiz

In addition to the pre-test and post-test results, student responses were also collected through a questionnaire to find out how they assessed the use of the Quiz media. From the questionnaire, it was found that most students gave positive responses, especially in terms of interestingness, ease of use, and motivation. The average questionnaire score was on a scale of 4 to 5, indicating that students felt motivated and helped by this media.

Conclusion of Evaluation Phase

From the results of the pre-test and post-test analysis, as well as student response data, it can be concluded that Quiz-based evaluation media is effective in improving student understanding and learning completeness. Quiz not only succeeded in improving academic grades, but also increased student interest and involvement in learning. With attractive interactive and visual features, this media can be considered for continuous use in the learning process.

Validation Test Results

The validation process is an important stage to ensure that the Quiz-based evaluation media developed meets the eligibility criteria in terms of material, language, and appearance. This validation was carried out by Muhammad Isa Siregar, S.Si., M.Pd., a lecturer at the Faculty of Mathematics and Natural Sciences, State University of Medan. He acted as the main validator to assess the media from two main aspects: material and language aspects, as well as presentation and visual appearance aspects. Based on the validation sheet that was filled in, the following are the results obtained.

Validation of Material and Language Aspects

Evaluation experts assessed several aspects related to the material and language used in the Quiz media, namely:

1. Suitability of Material with Core Competencies and Learning Objectives: The questions presented in Quiz are in accordance with the Core Competencies and learning indicators set. With an average score of 5, the validator assessed that the content developed was relevant and on target in supporting the learning objectives of Grade IV elementary school students.
2. Clarity of Language and Use of Appropriate Rules: In terms of language, the validator gave an average score of 4, indicating that the language used is quite appropriate for elementary school students. The validator gave suggestions to simplify some words and terms to make them easier for students to understand, especially in some questions that use terms that are less familiar to

elementary school students. The validator also assessed that the use of language was in accordance with PUEBI rules, although some minor improvements could still be applied.

3. Presentation and Question Structure: The question structure was considered quite good and followed a regular format. The validator provided input to add real context to some questions, which allowed students to relate the questions to their everyday situations. Thus, students not only answered the questions, but also developed critical thinking skills that were linked to their experiences.

Based on the validation results of the material and language aspects, the Quiz media received an average score of 4.4, indicating that this media has met good eligibility standards with some minor improvement suggestions. The validator recommends adding context to certain questions to make them more applicable to students.

Media Expert Validation

In addition to the material aspect, the validator also provides an assessment of the presentation and visual appearance aspects which aim to assess the attractiveness of the media and its ease of use by students.

1. Visual Appearance and Use of Color: The validator gave the highest score for visual appearance, which is 5, indicating that the colors used are quite attractive for elementary school students. However, it is recommended that a wider variety of colors be used to maintain students' interest during the evaluation process.
2. Practicality and Navigation: Practicality of use was assessed with an average score of 5, indicating that Quiz is quite intuitive and easy to use by elementary school students. The validators also considered the navigation of this media to be quite good, with easy-to-understand buttons and clear instructions. To improve clarity, it is recommended that the navigation buttons on the evaluation screen have larger icons and brighter colors.

The average score for the presentation and visual appearance aspect is 4.6. The validator gave a high score for the visual and ease of use aspects, acknowledging that this media has met the requirements as an effective and interesting learning media for students. Suggestions for improvement include the use of more varied colors and improving visual navigation to help students use the media more easily.

Validation Result Conclusion

Based on the Validation Certificate, the validator stated that the Quiz-based evaluation media is suitable for use with some minor revisions. The recommendations for improvement provided are aimed at perfecting this media to better suit the characteristics and needs of elementary school students. The validator recommends:

1. Increased Color Variety: Colors in some parts of the media can be more varied to increase appeal.

2. Language Simplification: Use of simpler language in some questions to make them easier for students to understand.
3. Adding Context to Questions: Adding more realistic context to some questions so that students can relate the learning material to everyday life.

Overall, the Quiz-based evaluation media is declared feasible to use with minor revisions. This media is not only visually appealing, but also effective in supporting learning objectives in an interactive manner and in accordance with the needs of elementary school students.

Results of Implementation in the Field

Descriptive Analysis of Pre-Test and Post-Test Values

The results of implementation in the field show a significant increase in student understanding, with the results in the following table.

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test score	30	35.00	75.00	50.1667	9.32954
Post test score	30	70.00	95.00	81.3333	6.14948
Valid N (listwise)	30				

Source: Data processed using SPSS 27 (2024)

Based on the results of descriptive statistics, the pre-test score data from 30 students had a minimum score of 35 and a maximum score of 75, with an average (mean) of 50.17. This shows that students' initial understanding of the material before using the Quiz media was at a fairly low average level. The standard deviation for the pre-test score was 9.33, indicating a fairly large variation in scores among students, with some students having scores far above or below the average.

After using the Quiz media, there was a significant increase in the post-test score. The average post-test score increased to 81.33, with a minimum score of 70 and a maximum score of 95. This shows that after the implementation of the Quiz media, all students achieved scores above the minimum standard set (KKM). The standard deviation on the post-test was 6.15, which was smaller than the pre-test, indicating that students' scores tended to be more consistent and closer to the average after using the Quiz media. Overall, the average increase from 50.17 to 81.33 indicates that the use of the Quiz media has a significant positive impact on students' understanding.

N-Gain Analysis

The N-Gain method is used in this analysis to evaluate the increase in student understanding aft

er the implementation of technology-based learning media. N-Gain allows a comparison between the initial value (pre-test) and the value after learning (post-test), so that it can show the impact of learning on students quantitatively (Djiwandono, 2019). This method is important to identify the level of improvement achieved by students and can help determine whether the learning intervention has succeeded in achieving the expected goals.

The formula used in the N-Gain method is as follows:

$$\mathbf{N-Gain} = \frac{\mathbf{Post\ Test - Pre\ Test}}{\mathbf{Maximum\ Score - Pre\ Test}}$$

This formula allows the calculation of proportional improvement to the maximum score, producing a relative value in the range of 0 to 1 (Purwanto & Yusup, 2020). The use of N-Gain is effective in seeing how much improvement is produced by learning because the results show the level of effectiveness of learning on student understanding directly. In this formula, the pre-test score shows the level of student understanding before the intervention, while the post-test score reflects student understanding after participating in the technology-based learning that is applied. N-Gain allows us to change the difference between the pre-test and post-test scores into a relative value that shows the level of improvement in student understanding on a scale between 0 and 1. This makes N-Gain very useful for analyzing effectiveness proportionally, compared to just looking at the difference in raw scores between students.

The results of the N-Gain calculation are then categorized based on the following levels:

- Height: N-Gain > 0.7
- Medium: 0.3 ≤ N-Gain ≤ 0.7
- Low: N-Gain < 0.3

This classification helps provide a more detailed interpretation of learning effectiveness (Haryanto, 2021). Students in the "High" category indicate that the learning media is very effective for them, while students in the "Low" category may need additional approaches or assistance in order to achieve more optimal understanding.

The results of the N-Gain value analysis show that most students are in the "Medium" category, which indicates that the learning applied is quite effective in improving student understanding. With the majority of students in this category, it can be concluded that the learning method has a positive impact, but still has room for improvement to be more optimal. In the "Medium" category, students experienced a significant increase in understanding, but have not yet reached maximum effectiveness. This may indicate that the learning method needs a little adjustment to provide a higher impact for some students.

On the other hand, there were some students who showed very high increases in understanding, falling into the N-Gain category of "High." These students appeared to respond very well to the learning method, showing significant increases in understanding from pre-test to post-test. They may have had a better fit with the learning method applied, or they may have had a strong initial foundation, allowing them to absorb the material more optimally than other students. This increase in the "High" category indicates that the learning method has the potential to be very effective for some students, especially if the method can be tailored to meet more personalized learning needs.

The absence of students in the "Low" category is also a positive indicator that the learning method has succeeded in meeting the minimum standard of understanding for all students. This means that all students experienced adequate improvement in understanding, and none were significantly left

behind in the learning process. Thus, the method used can be considered successful in providing a strong basic understanding.

Overall, the learning method applied is quite effective, but some adjustments can still be made to encourage students who are in the "Moderate" category to the "High" category. Improvements to this method can be in the form of using a more interactive approach or additional guidance for students who are still at the lower limit of the "Moderate" category. With a more personalized strategy, it is hoped that all students can achieve more optimal improvements in learning in the future.

Discussion

Relevance of Results to Learning Theory

The results of the study showed that the use of Quiz as an evaluation medium had a positive impact on student understanding, as reflected in the N-Gain value of most students in the "Medium" to "High" category. This finding is relevant to the theory of digital learning and gamified learning, which states that a game-based learning approach can increase student motivation and engagement (Deterding et al., 2011; Hamari et al., 2014). In the context of learning, gamification refers to the application of game elements in non-game activities to encourage student motivation and active participation. By using Quiz which presents evaluation materials in the form of interactive Quizes like games, students are more motivated and involved, so that their understanding increases more significantly.

In addition, this study also supports the concept of technology-based formative assessment outlined in a recent study by Shute and Rahimi (2021). They stated that technology allows for immediate feedback to be provided to students, which can accelerate the learning process and allow students to correct mistakes immediately after the evaluation takes place. In this study, Quiz provided instant feedback on each answer chosen by students, so they could immediately see and understand the mistakes that occurred, which further encouraged increased understanding.

Practical Implications in Classroom Learning

The results of this study provide several practical implications that can be applied in the classroom learning process. First, the use of Quiz as an interactive evaluation tool shows that technology can be used as an alternative or complement to traditional evaluation. Classroom learning will be more interesting and relevant to the interests of students, who are currently very familiar with digital technology. Teachers can use applications such as Quiz to create more dynamic and diverse evaluations so that students do not feel bored or stressed.

Second, the integration of technology in evaluation allows teachers to save time in correcting evaluation results, because the results are automatically saved and can be easily accessed. Thus, teachers can focus their time and energy on in-depth analysis of evaluation results and the development of more appropriate learning strategies according to the results obtained.

Implications for Teachers and Students

The impact of using technology-based evaluation media for teachers is the need to improve digital literacy and skills in using educational technology. Teachers need to understand how applications such as Quiz work in order to optimally utilize their features. Thus, teachers are not only teachers, but also facilitators who utilize technology to create more innovative and effective learning.

For students, the use of interactive media such as Quiz increases learning motivation, considering that this method is more in line with the characteristics of the digital generation. Students become more active in learning and feel more challenged to compete positively. In addition, with direct feedback, students can identify areas that need to be improved immediately after the evaluation, so that the learning process becomes more adaptive and responsive to individual needs.

Conclusion

This study shows that the use of technology-based evaluation media, especially the Quiz application, has a positive impact on improving student understanding. Based on the N-Gain analysis, the majority of students are in the "Medium" to "High" category, which indicates a significant increase in understanding the material after the evaluation was carried out using this method. These results are in line with the theory of gamified learning, which states that the integration of game elements in learning can increase student engagement and motivation, thus having a positive impact on understanding the material.

In practical terms, the results of this study provide implications that the integration of technology in learning evaluation can be an effective alternative to conventional methods. The use of applications such as Quiz not only helps teachers in time efficiency and ease of evaluation, but also increases student motivation and involvement in the learning process. For teachers, this study shows the need for good digital literacy in order to utilize technology optimally, while for students, technology-based evaluation media provides a more dynamic and interactive learning experience.

Overall, this study confirms that technology-based evaluation media such as Quiz are effective tools for improving student understanding, providing a more engaging learning experience, and assisting teachers in implementing more efficient evaluations.

References

Akbar, Sa'dun. (2015). Instrumen Perangkat Pembelajaran, Bandung: UniversitasPendidikan Indonesia.

Arifin, Z. (2016) Evaluasi Pembelajaran (P. Latifah. (dkk.)). Remaja Rosdakarya. Arikunto, Suharsimi. (2016). Dasar-Dasar Evaluasi Pendidikan. Jakarta: Bumi Aksara.

Anjani, D., Putra, W. S., & Yunita, A. (2023). Evaluasi Kebijkan Pendidikan. Journal of International Multidisciplinary Research, 1(2), Article 2. https://doi.org/10.62504/z262a840

Basuki, Y., & Hidayati, Y. (2019). Kahoot or Quiz: the students Perspectives. Proccedings of the Proccedings of the 3rd English Languange and Literature International Conference, ELLIC, 27th April 2019,Semarag, Indonesia.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining

"gamification." Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments, 9–15.

Dimyanti and Mujiono. (2013). Belajar dan Pembelajaran. Jakarta: Rineka Cipta Fauziah, Aina. (2021). "Pegembangan Evaluasi Pembelajaran Quiz pada Tema 3 Subtema 2 di kelas IV SD Negeri 057201 Kab. Langkat T.A 2020/2021".

Skripsi. Medan: Universitas Negeri Medan Haryanto. (2020). Evaluasi Pembelajaran (I). UNY Press.

Fransiska, Diana Karitas. (2017). Tema 6 Panas dan Perpindahannya TematikTerpadu Kurikulum 2013: Buku Guru untuk SD/MI kelas V – edisi revisi. Jakarta: Kementrian Pendidikan dan Kebudayaan

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work?--a literature review of empirical studies on gamification. 2014 47th Hawaii International Conference on System Sciences, 3025-3034.

Ngalimun. (2018). Evaluasi dan Penilaian Pembelajaran. Yogyakarta ParamaIlmu.

Majid, Abdul. (2014). Pembelajaran Tematik Terpadu. Bandung: RemajaRosdakarya

Pebriana dkk. (2017). Jurnal Pemikiran dan Pengembangan Sekolah Dasar. Malang:Program Studi Pendidikan Guru Sekolah Dasar Universitas Muhammadiyah Malang.

Purba, L. S. L. (2020) The effectiveness of the Quiz interactive uiz media as anonline learning online evaluation of physics chemistry 1 to improve student learning outcomes.

Putra, W. S. (2020). Pengembangan Media Video Animasi 2D pada Mata Pelajaran IPS di Sekolah Dasar Negeri 028227 di Kota Binjai. JURNAL NAGUR, 1(2), 56-62.

Putra, W. S., & Wanda, K. (2023). Transformasi Pendidikan: Merdeka Belajar dalam Bingkai Pendidikan Indonesia di Era Society 5.0. MODELING: Jurnal Program Studi PGMI, 10(4), Article 4. https://doi.org/10.69896/modeling.v10i4.2191

Setyosari, P. 2013). Metode Penelitian Pendidikan dan Pengembangan. Jakarta:Prenada Media Group

Shute, V. J., & Rahimi, S. (2021). Review of Computer-Based Assessment for Learning in Elementary and Secondary Education. Journal of Educational Psychology, 113(2), 254–273.

Sugiyono. (2013). Metode Penelitian Pendidikan Penelitian Kuantitatif. Kualitatif, dan R&D. Alfabeta.

Undang-Undang Republik Indonesia NO. 14 Tahun 2005 Tentangg Guru danDosen.

Wanda, K., & Putra, W. S. (2021). Application of learning strategy provide opportunities for success to increase learning motivation in elementary school teacher education students.

Yulia Isratul Aini. (2019). Pemanfaatan Media Pembelajaran Quiz UntukPembelajaran Pendidikan Dasar Dan Menengah Di Bengkulu.

Yunita, A., Putra, W. S., & Anggreny, D. (2023). Konsep Dasar Kebijakan Pendidikan. 1(2).