Scientific Journal of Elementary School Teacher Education
Oktober 2025, XI (2), 1 - 15
P-ISSN: 2085 – 4048
https://journal.unj.ac.id/unj/index.php/pgsd/

Implementation of Quizizz as a Means of Technology Adaptation in the Learning of Elementary School Negeri 2 Semat Students

Lathifatul Qolbi1, Risqi Ayu Lestary2, Dhela Fitri Yana3, Putra Dewa Maulana4, Olyvia Revalita Candraloka5
1,2,3,4,5 Islamic University Nahdlatul Ulama Jepara, Jepara, and Indonesia

Abstract

This study aims to explore the application of the Quizizz learning application as a technological tool in the teaching and learning process for grade IV students at Elementary School *2 Semat. The foundation of this research focuses on the demands of 21st century education which requires a transformation in learning that is more interactive, effective, and fun through the use of technology. The method used in this study is a qualitative approach with a descriptive method involving observation, interviews, and document analysis. The findings of this study show that the implementation of the Quizizz learning application is carried out in stages, starting with learning planning, the provision of tools such as devices and internet connections, the creation of evaluation questions, the preparation and delivery of learning materials, and the implementation of interactive educational quizzes. The use of Quizizz has been proven to increase student motivation and participation through gamification elements such as points, leaderboards, and avatars. The research data showed that students' average scores increased from 78 to 88 after three sessions of using Quizizz. Teachers also benefit from learning evaluation with fast and accurate grade reports. Overall, the educational app Quizizz has proven to be effective in facilitating the adaptation of technology in elementary schools.*

Keywords: Technological adaptation; Gamification; Interactive Learning

(*) Corresponding Author: 221330001083@unisnu.ac.id

Received: 09-03-2025 Revised: 02-10-2025 Accepted: 14-10-2025

How to Cite: *Lathifatul Qolbi, Risqi Ayu Lestary, Dhela Fitri Yana, Putra Dewa Maulana, Revalita Candraloka. (2024). Implementation of Quizizz as a Means of Technology Adaptation in the Learning of Elementary School Negeri 2 Semat Students Scientific Scientific Journal of Elementary School Teacher Education, XI (2):1- 15*

INTRODUCTION

Education has a very significant role in human life. Through education, we can educate the generation, build a dignified society, and produce quality individuals. One of the positive impacts of quality education is the improvement of welfare both socially and economically (Salsabilah et al., 2021). Therefore, it is disappointing to improve the quality of education in Indonesia needs to be done in a sustainable manner, one of which is through innovation. The three main aspects that need to be considered in the educational innovation process are the curriculum, the quality of learning, and the effectiveness of the methods used.

In the industrial era 4. 0 Currently, technological advances have a great impact on education. Digital transformation in the field of education not only changes the way material is delivered, but also creates a more dynamic interaction pattern between teachers and students. Thus, improving the quality of education must be done in tandem with the use of technology to create a more innovative learning experience through collaboration between education and technology. Therefore, technology plays an important role in supporting the education system and teaching and learning process (Ghaniy, 2023). The use of digital technology is currently one of the main strategies in learning to provide a more fun and interactive learning atmosphere, so that teaching and learning activities can be carried out not only in the classroom but also online (Novela et al., 2024).

Although digital technology has great potential to improve the quality of learning, its implementation at Elementary School Semat faces a number of challenges. The main obstacle lies in the limited facilities and infrastructure, where not all classrooms are equipped with adequate supporting equipment such as projectors, computers, or internet access. In addition, many students do not have personal devices, so the use of digital learning applications cannot be felt evenly. From a teacher's perspective, digital skills pose its own challenges because not all teachers are familiar with online platforms like Quizizz. A common obstacle is an unreliable internet connection, so the app-based learning experience is often affected. In addition, schools also do not have clear and systematic instructions to encourage the integration of technology in the learning process. Thus, the use of digital media in schools is still highly dependent on the initiative of each teacher. This situation shows that despite efforts to apply technology, its implementation at Elementary School Semat still needs improvement to be truly optimal and provide optimal benefits for students. Monotonous traditional teaching also makes students feel bored and less motivated in participating in learning activities, which has an impact on their low learning achievement.

One of the innovations in the use of educational technology is the application of gamification, which is the use of game elements in the learning process. This method has been proven to increase student motivation, engagement, and learning achievement at various levels of education. At the elementary school level, gamification can help students focus more because the learning process is presented in a fun way. This method is also in line with the theory of constructivism which prioritizes the active role of students in building knowledge. Thus, the use of gamification-based media is the right choice to be applied in the classroom. Quizizz is one of the gamification applications that is currently widely used in the field of education. The app offers interactive quiz features that are presented like games and can be accessed by students and teachers through digital devices. Various studies show that the use of Quizizz is able to increase the enthusiasm for learning, strengthen the understanding of concepts, and provide direct feedback to students. Quizizz provides opportunities for students to compete with each other, making them more motivated to actively participate during the learning process.

When quizzes are administered in class, all students can work on the questions together while seeing their position on the leaderboard in real-time. Teachers can also monitor the course of the quiz and download the results afterwards as assessment materials. The use of this application has been proven to be successful in attracting interest and increasing students' attention while

participating in learning. On the other hand, this application also makes it easier for teachers to evaluate learning more quickly and effectively. With these various advantages, Quizizz has great potential as a medium for technology adaptation in the elementary school environment.

The use of technology at Elementary School Semat is an important need in supporting the implementation of a curriculum that focuses on 21st century competencies. It is hoped that the use of Quizizz as a learning medium in this school can increase student motivation and learning outcomes. With the support of competent teachers in managing digital-based learning, Quizizz can be an alternative to overcome students' boredom with conventional learning methods. This study aims to analyze and describe the application of Quizizz as a form of technological adaptation in the teaching and learning process at SD Negeri 2 Semat. In particular, this study aims to: (1) describe the steps of implementing Quizizz in learning in grade IV of Elementary School Semat; (2) analyze student and teacher responses to the use of Quizizz as a learning medium; and (3) identify the impact of the use of Quizizz on student motivation and learning outcomes.

Based on the background and objectives that have been explained, the research questions asked are: What are the stages in the application of the Quizizz application as a tool to adapt technology in learning activities in grade IV of SD Negeri 2 Semat? How do students and teachers respond to the use of the Quizizz application in the teaching and learning process? What is the effect of the use of Quizizz on the motivation and learning outcomes of students in grade IV of Elementary School Semat?

The innovation of this research lies in its focus which analyzes the application of Quizizz as a tool to adapt technology in a comprehensive way in an elementary school environment that has limited infrastructure. Unlike previous research that only assessed the effectiveness of Quizizz in achieving learning outcomes, this study investigated in detail all phases of implementation, starting from planning, infrastructure preparation, preparation of learning materials, to implementation and evaluation.

In addition, this study also reviews adaptive strategies applied by teachers to overcome the limitations of devices and internet connections, such as pairing device learning and the use of asynchronous modes. The practical contribution of this study is to offer a model of the implementation of Quizizz that can be applied by other elementary schools with similar infrastructure conditions, as well as provide policy suggestions for schools in integrating learning technologies systematically and sustainably.

METHODS

Approaches and Types of Research

This study was carried out with a qualitative approach using descriptive methods and literature review. The qualitative approach was chosen because it can produce data in the form of in-depth descriptions, be it written, verbal, or observed behaviors (Safarudin et al., 2023). The descriptive method is used to present a

systematic and factual picture of the application of Quizizz as a tool for technological adaptation in the learning process at Elementary School 2 Semat.

Research Subject and Location

The subjects of this study consisted of grade IV students at Elementary School 2 Semat, with a total of 28 students, and involved grade IV homeroom teachers and school principals. This research took place at Elementary School 2 Semat, located in Tahunan District, Jepara Regency, Central Java, in the even semester of the 2024/2025 school year. This research focuses on studying how to apply Quizizz as a medium for technology adaptation in the learning process at the elementary school level.

Data Collection Techniques

The observation process was carried out to directly observe the application of Quizizz in learning in grade IV. The researcher monitors all stages of implementation, activities carried out by students and teachers, and challenges faced during learning. Observations were carried out three times to obtain comprehensive data. Semi-structured interviews were conducted with grade IV homeroom teachers and principals to explore information about planning, implementing, and evaluating the use of Quizizz. In addition, interviews were also conducted with several students to find out their responses and experiences when using the Quizizz application. Documentation is carried out to summarize data in the form of notes from teachers, student quiz results, screenshots from the Quizizz application, learning photos, and school documents related to technology-based learning activities. The documentation aims to complement and reinforce the data obtained from observations and interviews. Literature studies are carried out by analyzing various written sources relevant to the research theme, information obtained from books, e-books, academic journals, final reports, and related websites (Septiana & Khoiriyah, 2024). The literature review aims to strengthen the theoretical foundation and compare the research findings with the results of previous research.

Research Instruments

The observation guide covers elements that will be considered throughout the learning process, including: the implementation stage of Quizizz, activities carried out by students and teachers, the use of devices and internet connections, and the challenges faced. This guide serves to provide a structure for more focused and systematic observations. The interview guide contains a list of key questions or issues to be discussed with teachers, principals, and students. These questions are prepared to dig deeper information about learning planning, infrastructure preparation, Quizizz implementation, user reactions, and learning evaluation. This guide serves as a framework for researchers to question relevant and in-depth matters according to the focus of the research (Jailani, 2023). The documentation guidelines contain the types of documents to be collected, data collection tactics, and factors that must be considered when analyzing documents. The documents collected include the learning implementation plan, student evaluation results, screenshots from the application, and photos of learning activities.

Data Analysis Techniques

The data that has been collected is then analyzed and understood in depth, including theoretical aspects and examples of its application. Data analysis is carried out in a descriptive way through the following stages:

1. Data Reduction: Data obtained through observation, interviews, and documentation is selected, focused, and simplified according to the research objectives. Irrelevant information is removed, while significant information is retained.
2. Data Presentation: Filtered data is presented in the form of descriptive narratives, tables, and images to facilitate understanding and decision-making.
3. Conclusion Drawn: Based on the data presented, the researcher drew conclusions regarding the use of Quizizz as a tool to adapt technology in the learning process at Elementary School Semat.

Data Validity

To ensure the validity of the data, the researcher applied triangulation techniques, namely source triangulation (comparing information from teachers, students, and principals) and triangulation methods (comparing data from observations, interviews, and documentation).

RESULTS & DISCUSSION

Implementation of Quizizz in Learning

Based on assessments and discussions with grade IV teachers at Elementary School Semat and related parties in schools, the application of Quizizz educational game technology is carried out through six systematic steps that are well arranged and regular.

Learning Planning Stage

The initial step begins with developing a comprehensive learning plan, which includes the objectives to be achieved, the material to be taught, the teaching methods used, and the method of evaluation to be carried out. This plan serves as the main guideline in carrying out learning activities, to ensure that each activity carried out is focused on achieving the basic competencies that have been determined. Careful planning is the key to success in the implementation of technology in learning, as has been revealed in previous research that a good plan will make it easier for teachers to incorporate technology into the teaching and learning process.

Preparation of Facilities and Infrastructure

In the second step, preparations are made for assistive devices such as laptops and internet access. In carrying it out, teachers work with students involved in Real Work Lectures to provide tools and ensure a smooth internet connection. This collaboration is a solution to the limited ownership of students' personal devices. The availability of adequate technology infrastructure is the main requirement in

the implementation of digital-based learning, especially in areas with limited access to technology.

Preparation of Evaluation Instruments

The third stage includes the development of questions using the Quizizz platform. The questions are designed by paying attention to the suitability of the learning material and the level of difficulty that matches the characteristics of grade IV students of Elementary School 2 Semat. The selection of interactive question formats has two objectives: to increase students' interest in learning and to make it easier for teachers to carry out learning evaluations effectively. An interesting and interactive question design can increase students' motivation to learn, as the learning process is presented in a varied and fun way.

Delivery of Learning Materials

The fourth stage is when the teacher delivers the learning material. The teacher explains the gist of the material so that students can build an initial understanding before they engage in the interactive quizzes. This explanation serves as an introduction that prepares students mentally and emotionally to take the quiz. This approach reflects the application of powerful learning principles, where students are expected to have basic knowledge before facing evaluation.

Game Code Distribution

In the fifth stage, the teacher gives the game code to the students. With that code, students can access the Quizizz platform using a pre-set device. Observations show that students show high enthusiasm when they enter the game code and prepare to take part in learning activities. This positive response shows that the use of game-based platforms is able to increase students' interest and involvement in the learning process.

Implementation and Evaluation

The final stage is the implementation of interactive quizzes that drastically change the atmosphere of the classroom. Classes become more dynamic with the active participation of students in answering questions. Students show great enthusiasm to obtain the highest score and enjoy the learning process presented in the game format. This incident shows that learning gamification has succeeded in changing students' views of evaluation, which were previously considered scary to something fun.

Meanwhile, teachers can monitor students' answers and evaluate their learning outcomes directly using the reporting feature on the Quizizz platform. This feature makes it easier for teachers to conduct formative assessments and recognize students' learning difficulties quickly and accurately. The data produced can be used as a basis for remedial or enrichment according to the needs of each student.

Figure 1. Ice Breaking Before Learning Materials

Picture 2. Quizizz Code Sharing

The results of the research show that the use of the Quizizz application in the teaching and learning process has a positive effect on students' interest and motivation to learn. Important findings suggest a significant change in students' perceptions of learning activities. Before using Quizizz, students often felt bored due to monotonous assignments and not optimal understanding of the material. This situation creates psychological obstacles in learning which affects the low involvement of students in learning activities.

After the implementation of Quizizz, there was a striking transformation in student learning behavior. Students show greater enthusiasm when working on practice questions. The app supports a more organized and thorough practice process, which ultimately contributes to improved understanding of concepts and strengthening students' memory. The repetition of material through interactive quizzes has been shown to be effective in strengthening long-term memory imprints, in line with the principle of diffusion effect in cognitive theory.

From an educational point of view, teachers use Quizizz as a form of adaptation to the changing educational technology that is developing. This decision is not only a trend but also supported by strategic considerations regarding the flexibility and various functions of the application. Quizizz can be used at various stages of learning, ranging from pre-tests to assess students' initial knowledge, post-tests as final evaluations, practice questions to reinforce concepts, remedial programs for students who need additional help, to intensive learning for exam preparation. The ease of access to application through smartphone devices further supports its implementation, considering that smartphone penetration among students has reached a very high level.

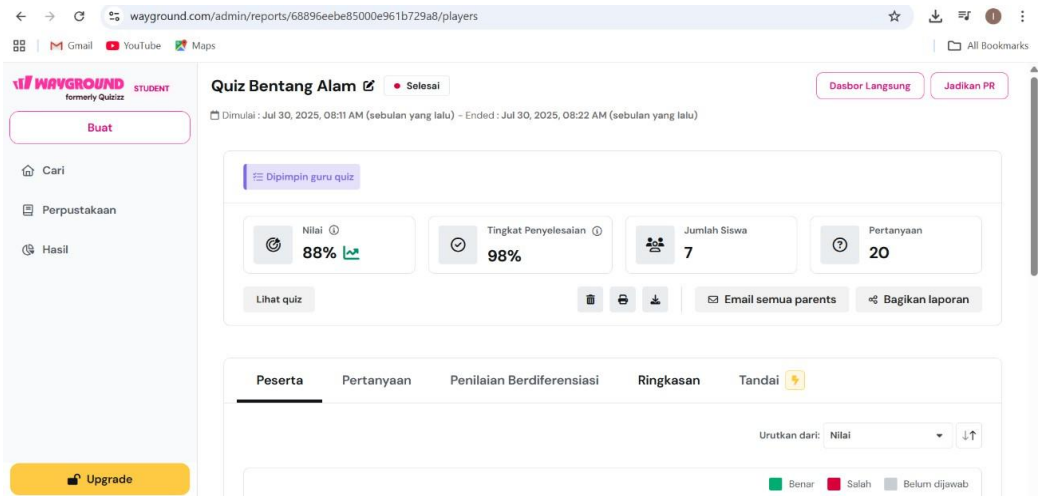

Figure 3. Quizizz Work Results

Student Responses to the Use of Quizizz

The students' response to the use of Quizizz was excellent. The research data showed that students had a positive view of the use of the Quizizz web-based application as a means of learning. This positive outlook of students can be seen from their increased participation in class, such as the excitement in answering questions and participating in discussions.

1. Increased Learning Motivation: Gamification features such as points, leaderboards, and timers arouse curiosity, as well as create a positive competitive atmosphere, making learning activities more enjoyable. Students show greater interest when taking interactive quizzes than traditional evaluation methods. The use of avatars and interesting music also makes students more enthusiastic in the learning process.
2. Improved Learning Outcomes
   Evaluation data showed significant progress in academic achievement. Before implementing Quizizz, the average score of students' daily exams was at 78. After using Quizizz in three meeting sessions, the average score increased to 88. This 10-point increase shows that the use of Quizizz not only increases the enjoyment of learning, but also has a positive impact on improving student learning outcomes.
3. Improved Understanding of Concepts
   Before using the Quizizz app, students often felt bored when faced with many tasks that they did not fully understand. With Quizizz, students can practice doing problems with more focus, improving their understanding and memory. Additionally, students receive feedback directly after answering each question, allowing them to immediately know any mistakes made.
4. Challenges in Adaptation
   Although the feedback was generally positive, some students initially faced difficulties in using the device or accessing the internet. This is in line with research conducted by Rizky et al. (2022) which states that elementary school students are more motivated and focused when learning using Quizizz thanks to interesting game elements, but require initial guidance so

that the transition from traditional to digital learning occurs gradually and inclusively.

Teachers' Responses to the Use of Quizizz

For teachers at Elementary School Semat, the implementation of Quizizz has been proven to improve efficiency in the evaluation process. Some specific findings regarding teacher responses are:

1. Learning Evaluation Efficiency: Evaluation results can be obtained quickly through clear and thorough data analysis. With the application, teachers can immediately find out the student's learning achievements and respond to them with remedial programs if needed. These findings are in line with a study conducted by Narpila et al. (2023) which confirms that Quizizz is very useful in formative assessments because it can produce thorough reports.
2. Ease of Formulating Questions
   Teachers find it helpful with the various features available in Quizizz, such as access to a question bank that can be modified according to their needs. Teachers can also use different types of questions and include pictures to make the questions more interesting and easy for students to understand.
3. Learning Flexibility
   Teachers can use Quizizz not only for final evaluation, but also for pre-test, post-test, practice questions, material reinforcement, remedial programs, and deep learning. Teachers can set quizzes in synchronous (direct) or asynchronous (homework) mode based on conditions and needs in the learning process.
4. Implementation Challenges
   In its implementation, there are still some challenges, especially related to device limitations and uneven internet access. To overcome this problem, teachers are required to be creative, for example with a pair of devices (students learning in pairs) or utilizing asynchronous mode (homework) so that the learning process can continue to take place according to existing conditions.

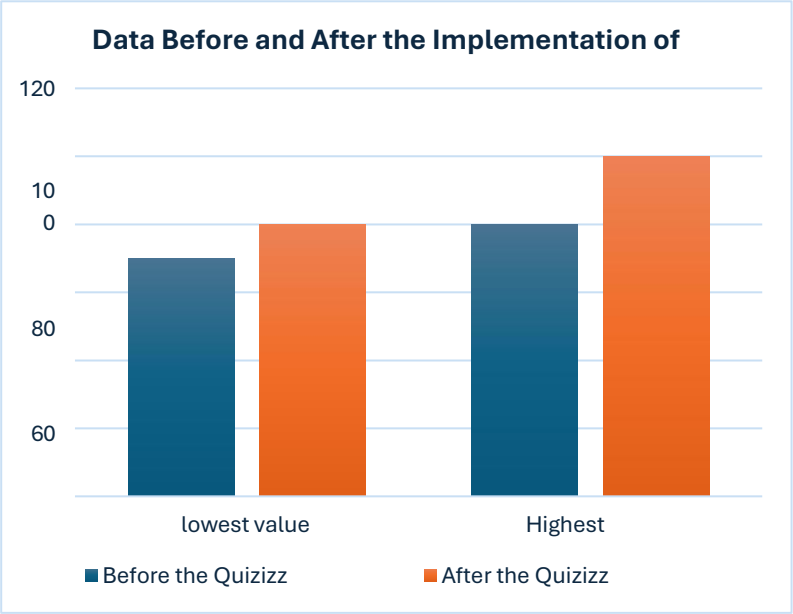

Figure 2. Recapitulation before and after Learning with Implementing *Quizizz*

The response of Elementary School Semat students to the use of Quizizz is generally positive, as can be seen from the enthusiasm when participating in interactive quizzes. Gamification features (points, rankings, avatars) make students feel more fun learning than conventional tests. This is in line with research (Rizky et al., 2022) which found that elementary school students are more focused and motivated when learning with Quizizz because of the engaging game elements. However, as part of technological adaptation, some students initially still had difficulty operating gadgets or accessing the internet network. Teachers need to help so that the transition from conventional to digital-based learning takes place gradually and inclusively.

Figure 4. Student Responses to the Use of Quizizz

For teachers at Elementary School Semat, the use of Quizizz has been proven to support efficiency in the evaluation process, because results can be obtained quickly with clear data analysis. Through the application, teachers can immediately find out the learning outcomes of students and follow up with remedial programs if necessary. These findings are in line with research (Narpila et al., 2023)

which confirms that Quizizz provides great benefits in formative assessments because it is able to present comprehensive reports. However, in practice, there are still challenges, especially related to device limitations and uneven internet access. To overcome this, teachers are required to be creative, for example with a pairing device strategy (students learn in pairs) or utilizing asynchronous mode (homework mode) so that learning can continue to run according to conditions in the field.

Figure 5. Documentation with Elementary School Semat Students

DISCUSSION

The results of the research indicate that the implementation of Quizizz at Elementary School 2 Semat is very effective in improving the quality of learning. This effectiveness can be seen from a number of aspects, including: (1) increasing student motivation to learn, (2) improving student learning achievement, (3) efficiency in assessing learning outcomes, and (4) creating a more interactive and fun learning atmosphere. Quizizz is an application based on gamification elements that can change the learning atmosphere to be more interesting and interactive. This application is interactive and can be used for various purposes, such as pre-test, post-test, practice questions, material reinforcement, remedial programs, and intensive learning. In addition, Quizizz can be accessed easily via smartphone, making it more practical for teachers and students. With a game-like appearance, this application is able to attract students' attention because practicing questions becomes more fun. Learning media such as Quizizz is perfect for the characteristics of the digital generation who are familiar with the internet, online games, and similar technologies. Quizizz is present as one of the solutions in the use of information technology-based assessment media and computer-assisted learning.

This application not only serves as a means of evaluation, but can also be used in the teaching and learning process.

One of the main advantages of Quizizz is the use of gamification elements that can increase students' interest in learning. The gamification elements present in Quizizz include: Points and ranking system: students earn points for each correct answer, with points displayed on the leaderboard directly. This creates healthy competition among students and encourages them to try better. Avatars and personalization: students can choose avatars that reflect themselves in the game, so they feel more emotionally involved in the learning process. The existence of a time limit for each question makes students more focused and encouraged to answer quickly and precisely. Direct feedback students receive feedback immediately after answering a question, allowing them to know the correct answer and improve their understanding faster. These findings are in line with constructivist theories that emphasize the importance of active learning from students in building understanding. With gamification, students not only passively receive information, but also actively participate in the learning process through competition, exploration, and reflection.

An increase in students' average scores from 78 to 88 after three meetings using Quizizz showed a significant positive impact. This improvement can be outlined through several factors: More engaging learning, with an engaging game format, students are more motivated to learn and understand the material. Students no longer feel pressured by the evaluation task, but rather enjoy the process as part of the game. With repetitive exercises, teachers can easily provide varied practice questions through Quizizz, giving students more opportunities to practice and deepen their understanding of the material. Constructive feedback, with direct feedback, students can immediately realize their mistakes and improve their understanding of concepts that are still weak. This is different from traditional evaluations where students only know the results after a few days, Increased concentration, competition elements and timers encourage students to focus and concentrate more when solving problems, thus reducing errors due to lack of precision. These findings are in line with the research of Aditiyawarman et al. (2022) which shows that the use of Quizizz can improve student learning outcomes through the creation of a more interactive and fun learning atmosphere.

One of the main obstacles in the implementation of Quizizz at Elementary School Semat is the limited device and internet access. To deal with this problem, teachers apply various adaptive strategies, Learning in pairs, students who do not have devices can share with friends next to them. This approach not only addresses the issue of device availability, but also encourages collaboration and discussion among students. Utilizing asynchronous mode, for materials that do not require direct supervision, teachers can apply homework mode where students can work on quizzes at home using their own or family-owned devices. In collaboration with community service program students, community service program students aid in providing additional devices and ensuring that the internet connection runs properly during the lesson. This collaboration also provides support to teachers in assisting

students who face technical problems. Flexible scheduling, teachers schedule the use of Quizizz at specific times when the internet connection tends to be more stable, thus reducing technical distractions during learning. These strategies show that despite infrastructure constraints, the application of technology in learning can still be done with a creative and adaptive approach.

The Role of Teachers in Learning Technology Adaptation. Teachers play a crucial role in the successful implementation of Quizizz as a learning tool. Some of the important roles of teachers in this technology adjustment process include: Learning designer, Teachers are responsible for designing effective learning by utilizing Quizizz, from material selection, question preparation, to setting the right learning strategy. Learning facilitators, teachers function as facilitators who guide students in using the Quizizz application, especially for those who are still not familiar with digital technology. Motivators, teachers encourage students to actively engage in Quizizz-based learning and create a positive and healthy competitive atmosphere. Evaluators, teachers use data and reports from Quizizz to assess student learning achievement and plan appropriate learning follow-ups. Teachers' digital skills are an important component in the successful application of this technology. Therefore, the development of teachers' digital competencies through training and mentoring needs to be continued so that the integration of technology in learning can run optimally.

Implications for School Policy. The findings of this study have significant implications for school policies in integrating technology in learning. Some of the policy recommendations that can be implemented include; To provide adequate infrastructure, schools need to allocate funds for the procurement of digital devices and improve the quality of internet access so that technology-based learning can take place optimally. Teacher Digital Competency Development, schools need to hold regular training and workshops to improve teachers' digital skills in utilizing various learning applications. Preparation of technical guidelines, schools must prepare technical guidelines for the use of technology in learning, including standard operating procedures in the implementation of applications such as Quizizz. Monitoring and evaluation, schools need to monitor and evaluate the application of technology in learning periodically to ensure the effectiveness and sustainability of the program. With the implementation of targeted and planned policies, the incorporation of technology in the teaching and learning process no longer depends only on the efforts of each teacher, but becomes an organized and sustainable educational program.

CONCLUSION

This research makes a significant contribution to the advancement of learning methods that use technology at the basic education level, especially in terms of technological adjustment considering the existence of infrastructure constraints. Quizizz can function as an efficient learning medium in improving the

quality of learning, enthusiasm for learning, and student achievement in the digital age.

REFERENCES

Aditiyawarman, M. A., Sondang, M., Hanifah, L., & Kusumayati, L. D. (2022). The Use of the Quizizz Application as a Media to Carry Out Learning Evaluation. Journal of Research, 7(1), 24-36.

Chou, P. N., & Feng, S. T. (2019). Using a Tablet Computer Application to Advance High School Students' Laboratory Learning Experiences: A Focus on Electrical Engineering Education. Sustainability, 11(2), 381. https://doi.org/10.3390/su11020381

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. https://doi.org/10.1145/2181037.2181040

Ghaniy, G. (2023). Implementation of the Teaching Campus Program in Technology Adaptation through the Quizizz Application at SD Negeri 1 Paras. Thesis. Semarang State University.

Hakeu, F., Pakaya, I. I., & Tangkudung, M. (2023). The Utilization of Gamification-Based Learning Media in the Learning Process at the Al-Azhfar Integrated MIS. Awwaliyah: Journal of Madrasah Ibtidaiyah Teacher Education, 6(2), 154-166. https://doi.org/10.58518/awwaliyah.v6i2.1876

Jailani, M. S. (2023). Data Collection Techniques and Educational Scientific Research Instruments on Qualitative and Quantitative Approaches. IHSAN: Journal of Islamic Education, 1(2), 1-9. https://doi.org/10.61104/ihsan.v1i2.57

Kapp, K. M. (2012). Gamification of Learning and Instruction: Game-based Methods and Strategies for Training and Education. San Francisco: Pfeiffer.

Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students' Perception of Kahoot!' s Influence on Teaching and Learning. Research and Practice in Technology Enhanced Learning, 13(1), 1-23. https://doi.org/10.1186/s41039-018-0078-8

Mulyati, S., & Evendi, H. (2020). Mathematics Learning through Quizizz Game Media to Improve Mathematics Learning Outcomes of SMP 2 Bojonegara. Journal of Mathematics Education, 3(01), 64-73. https://doi.org/10.33474/jpm.v3i01.2827

Narpila, S. D., Wahyuni, S., Elfina, H., & Nasution, S. A. (2023). The Effectiveness of Quizizz Application as a Learning Evaluation Instrument Towards 5.0 Society Era in the Set and Logic Course. Proceedings of the 7th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2022), *285-290. https://doi.org/10.2991/978-2-38476-020-6_20

Novela, D., Suriani, A., & Nisa, S. (2024). Implementation of Innovative Learning through Digital Media in Elementary Schools. Journal of Practice Learning and Educational Development, 4(2), 100-105. https://doi.org/10.58737/jpled.v4i2.153

Pratama, L. D., & Lestari, W. (2020). The Influence of Information Technology Utilization, Tax Socialization, and Taxpayer Perception of Sanctions on Individual Taxpayer Compliance. Nominal: Barometer of Accounting and Management Research, 9(1), 88-105. https://doi.org/10.21831/nominal.v9i1.30427

Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. On the Horizon, 9(5), 1-6. https://doi.org/10.1108/10748120110424816

Rizky, M. R. F., Marhaeni, N. H., & Budiningsih, V. A. (2022). Analysis of Student Responses to the Use of Quizizz Educational Games in Mathematics Learning. Paedagoria: Journal of Educational Studies, Research and Development, 13(2), 146-152. https://doi.org/10.31764/paedagoria.v13i2.8484

Safarudin, R., Zulfamanna, Z., Kustati, M., & Sepriyanti, N. (2023). Qualitative Research. Innovative: Journal Of Social Science Research, 3(2), 9680-9694. https://doi.org/10.31004/innovative.v3i2.2139

Salsabilah, A. S., Dewi, D. A., & Furnamasari, Y. F. (2021). The Role of Teachers in Realizing Character Education. Journal of Tambusai Education, 5(3), 7158-7163. https://doi.org/10.31004/jptam.v5i3.1802

Secha, M. N., Setyowati, S., & Darmanto, E. (2024). Implementation of Quizizz in Learning. Scientific Journal of Educational Vehicles, 10(18), 637-643. https://doi.org/10.5281/zenodo.13358227

Septiana, N. N., & Khoiriyah, Z. (2024). Case Study Research Methods in a Qualitative Approach. Didactic: PGSD Scientific Journal STKIP Subang, 10(04), 233-243. https://doi.org/10.36989/didaktik.v10i04.1308

Vygotsky, L. S. (1978). Mind in Society: The Development of Higher Psychological Processes. Cambridge, MA: Harvard University Press.

Zhao, F. (2019). Using Quizizz to Integrate Fun Multiplayer Activity in the Accounting Classroom. International Journal of Higher Education, 8(1), 37-43. https://doi.org/10.5430/ijhe.v8n1p37

Zichermann, G., & Cunningham, C. (2011). Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps. Sebastopol, CA: O'Reilly Media.