

USE OF THE QUIZIZZ PAPER MODE APPLICATION AS A MEDIA IN BIOLOGY LEARNING EVALUATION

Katharina Gai Elu^{1*}, Florentiana Ermelinda Jawa², Veronika P. Sinta Mbia Wae³,
Juliana Mode⁴

^{1,2,3}Biology Education Study Program, Faculty of Teacher Training and Education, University of Flores,
Ende, NTT, Indonesia

⁴Alsiora Private High School, Ende, NTT, Indonesia

*Correspondence writer, email: katharinagay70@gmail.com

Received: 30/05/2025

Revised: 29/07/2025

Accepted: 04/08/2025

Abstract. Learning evaluation is the primary activity used to measure the achievement of abilities possessed by students. This action is important because it can function as a basis for determining subsequent learning policies. Evaluation has a different meaning from assessment and measurement. Evaluation is preceded by assessment, which in turn is preceded by measurement. Measurement can be interpreted as an activity to compare the results of observations or information on the characteristics of an object. Therefore, assessment is the most important process in determining the results of learning evaluation. To measure how well students' understanding and learning outcomes are, an effective tool is needed to carry out evaluations. The media that can be used for learning evaluation is Quizizz Paper mode, a technology-based application for carrying out learning evaluations. Quizizz with paper mode uses QR codes on sheets of paper that can be applied in offline learning, aiming to support teachers and students in creating creative face-to-face learning experiences through interactive quizzes, which are effective and efficient. This evaluation also indicates an increase in student participation due to the competitive and fun elements provided by Quizizz, even in paper format. This study proposes that the use of Quizizz in various modes can increase the effectiveness and participation of students in learning evaluations. Implementation of learning evaluation with the Quizizz application has proven to be easier, so that the evaluation process becomes more efficient and effective. This activity was carried out at Alsiora Ende Private High School with the aim of finding out the application of Quizizz in paper mode in biology learning as an evaluation medium.

Keywords: quizizz paper mode, learning evaluation

Abstrak. Evaluasi pembelajaran adalah aktivitas utama untuk mengukur seberapa besar pencapaian kemampuan yang di miliki oleh peserta didik. Tindakan tersebut penting karena dapat berfungsi sebagai dasar dalam menentukan kebijakan pembelajaran berikutnya. Evaluasi memiliki makna yang berbeda dengan penilaian dan pengukuran. Evaluasi didahului dengan penilaian (assessment), sedangkan penilaian didahului dengan pengukuran. Pengukuran dapat diartikan sebagai kegiatan membandingkan hasil pengamatan atau informasi karakteristik suatu objek. Oleh karena itu, penilaian menjadi proses terpenting dalam menentukan hasil evaluasi pembelajaran. Untuk mengukur seberapa baik pemahaman dan hasil belajar siswa, diperlukan sebuah alat yang efektif dalam melaksanakan evaluasi. Media yang dapat dimanfaatkan untuk evaluasi pembelajaran adalah Quizizz Paper mode, sebuah aplikasi berbasis teknologi untuk melaksanakan evaluasi pembelajaran. Quizizz dengan mode kertas memakai kode QR pada lembaran kertas yang dapat diterapkan dalam pembelajaran offline, bertujuan untuk mendukung guru dan siswa dalam menciptakan pengalaman belajar tatap muka yang kreatif melalui kuis interaktif, yang efektif dan efisien. Evaluasi ini juga mengindikasikan adanya peningkatan partisipasi siswa karena elemen kompetitif dan menyenangkan yang disediakan oleh Quizizz, meskipun dalam format kertas. Studi ini mengusulkan bahwa pemanfaatan Quizizz dalam berbagai mode dapat meningkatkan efektivitas serta partisipasi siswa dalam evaluasi pembelajaran. Implementasi evaluasi pembelajaran dengan aplikasi Quizizz terbukti lebih mudah, sehingga proses evaluasi menjadi lebih efisien dan efektif. Kegiatan ini dilaksanakan di SMA Swasta Alsiora Ende dengan tujuan untuk mengetahui penerapan Quizizz dalam mode kertas pada pembelajaran biologi sebagai media evaluasi.

Kata Kunci: quizizz mode kertas, evaluasi pembelajaran

How to Cite: Elu, K. G., Jawa, F. E., Wae, V. P. S. M. & Mode, J. (2025). USE OF THE QUIZIZZ PAPER MODE APPLICATION AS A MEDIA IN BIOLOGY LEARNING EVALUATION. *Mitra Mahajana: Jurnal Pengabdian Masyarakat*, 6(2) 268-274. doi: <https://doi.org/10.37478/mahajana.v6i2.5818>

INTRODUCTION

Learning is an activity carried out in the classroom specifically designed to develop knowledge, mastery of skills, or attitudes in a field of knowledge through the assistance of an



Copyright (c) 2025 Katharina Gai Elu, Florentiana Ermelinda Jawa, Veronika P. Sinta Mbia Wae, Juliana Mode, This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

educator to students (Lorensius et al., 2022). Learning aims to help students acquire knowledge, master skills, and develop attitudes and beliefs. Learning is a deliberate effort by educators that can lead students to engage in learning activities (Sirait et al., 2024). These learning activities will produce learning outcomes with the hope of good learning outcomes (Kang & Kim, 2021). Learning outcomes are observable and measurable changes in student behaviour in the form of knowledge, attitudes, and skills after students undergo a series of learning processes or a series of training processes (Kumar et al., 2024). As can be seen from the description, learning outcomes are the learning outcomes achieved by students after a series of learning processes based on learning objectives set by the teacher (Adijaya et al., 2023). To determine the extent of student learning outcomes, learning evaluation activities are necessary, which are important activities in learning (Wekerle et al., 2022).

Learning evaluation helps monitor student progress, development, and success after the learning process over a certain period. Evaluation results can be used to improve student learning through remediation or enrichment activities (Wahyu et al., 2021). Educational institutions can use evaluation results as a consideration in student graduation decisions (Assi et al., 2024). Learning evaluations should be implemented optimally and efficiently to produce optimal evaluation activities. To conduct an evaluation, an assessment activity is required, which will later be interpreted as student learning outcomes. Assessment activities are the process of collecting and processing information to measure student achievement. A concrete example that can be used in technology-based interactive learning evaluation activities in evaluation activities can use Quizz paper mode media (Damayanti & Rahmadonna, 2025).

Quizizz is a learning media with interesting features that can motivate students in the learning process in the classroom and make participants more enthusiastic in participating in learning (Rulismi et al., 2024). Quiz media makes students compete with each other in learning so that their grades increase significantly. Students are more focused and pay attention to questions when using Quizizz. The use of quizzes will stimulate and make students satisfied in the learning process (Suwarni et al., 2023). Quizizz is a web application program that makes it easy for teachers to create evaluation tools in the form of quizzes. In Quizizz, the results of each question that has been worked on by students are displayed through a ranking display based on the number of correct answers (Munawir & Hasbi, 2021). One of the advantages of this application is that it makes it easier for teachers, because reviews of answers from students can be seen and downloaded in Excel format. The Quizizz application also makes students challenged and able to compete with other students. This is because the assessment results and rankings are immediately displayed on the leaderboard, so it can motivate students in learning and can improve grades or learning outcomes (Zhang & Crawford, 2024).

Quizizz is a game-based learning medium that provides multiplayer class activities to make the learning process more fun and interactive, while also preventing students from getting bored during class (Nurfadilah et al., 2024). Therefore, teachers must be able to select learning materials that enable students to play an active role in solving problems and increase student motivation so that students do not feel bored or tired during the learning process. Quizizz can be used to complete practice questions submitted by students in class and automatically provides results or rankings to students as they answer the questions (Munuyandi et al., 2021). This motivates students to be more active and also improves their concentration during the learning process, especially when working on practical problems in biology topics (Tung & Alissa, 2021).

METHOD

The teaching assistantship program aims to prepare students, supervising lecturers, and mentor teachers for active involvement, particularly in teaching and mentoring. This program was held at Alsiora Private High School, Ende, from September 9 to December 17, 2024. The program also aimed to determine how the Quizizz Paper Mode would be applied in evaluating biology learning, specifically on the circulatory system and the skeletal system. Before the program, students underwent several initial stages: briefing, observation, focus group

discussions (FGDs), and program planning. The teaching assistantship program was implemented in stages, encompassing preparation, implementation, and closing.

Preparation Stage: During this stage, students received a briefing on the activities to be carried out. Then, the students and their supervising lecturers obtained permission from the principal to conduct the teaching assistantship program at Alsiora Private High School, Ende, for approximately four months.

Implementation Stage: During the initial activity, students conducted interviews to determine how biology teachers at Alsiora Private High School conducted learning evaluations during their teaching sessions. In this stage, students begin observing and implementing the Quizziz paper mode application after teaching biology (Aldevella & Utami, 2025).

Closing Stage: In this stage, students and their mentor teachers evaluate the learning outcomes of the Quizziz paper mode application and compare the before and after implementation (Aldevella & Utami, 2025).

RESULTS AND DISCUSSION

Biology is a natural science discipline that studies living things. Biology is a very broad and extensive field due to the diversity of life found on Earth, so biologists typically focus on specific areas (Nanglu et al., 2023). These areas are categorised based on the scale of life or the type of organism studied. To determine learning outcomes in biology, learning evaluation is necessary. According to the results of interviews conducted with teachers, it was revealed that previous biology learning evaluation activities were carried out conventionally, such as completing a worksheet (LKPD) from a worksheet book or questions prepared by the teacher. The results of these questions would be processed into a final grade that was used as a measure of student learning outcomes. The teacher explained that such evaluation activities were often carried out repeatedly. Conventional evaluation activities often encountered obstacles, such as students working on questions carelessly and lacking enthusiasm when carrying out the evaluation activities. This resulted in less-than-optimal student answers. This is an important note for teachers regarding evaluation activities that have been carried out so far. In the current digital era, various technology-based tools and platforms have developed to assist teachers in conducting assessments, one of which is Quizizz (Arifin & Setiawan, 2022). Quizizz is an interactive learning platform often used to create online quizzes (Anak Yunus, & Hua 2021). However, in addition to the online mode, Quizizz also offers a "paper mode," which allows quizzes to be printed and used in a traditional format.



Figure 1. *Explanation to students regarding the use of paper mode on Quizizz.*

At this stage, students compile and develop a learning plan. In addition, students will prepare assessments and quiz papers before taking action. At this stage, students play an important role as teachers (Rahmah & Lubis, 2024). Next, students demonstrate and explain biology learning in the material of the blood regulation system and skeletal system. Students explain how to use Quizizz Paper Mode to students correctly, distribute Quizizz Paper Mode sheets, and then provide an initial simulation as an example of using Quizizz Paper Mode (Heriyawati & Elfiyanto, 2023). After students have understood how to use Quizizz Paper Mode, students give quiz questions to each other. After that, students take turns answering student questions together and lifting paper showing codes A, B, C, D as answers and students scan to ensure correct or incorrect answers.



Figure 2. *Student enthusiasm in using Quiziz paper mode*

After students understood how to use Quizizz Paper Mode, students gave quiz questions to each other. After that, students took turns answering students' questions together and holding up paper showing barcodes A, B, C, D as answers, and students scanned using their mobile phones to confirm whether the answers were correct or incorrect. This stage showed that students were very enthusiastic about using Quizizz Paper Mode. This stage showed that the indicator of student enthusiasm increased, as seen from the activeness and focus of students in mastering the material on the blood circulation system and the skeletal system (Zainudin & Zulkipli, 2023). In addition, students appeared active and involved in learning norms and values using Quizizz Paper Mode. Students were highly motivated and enthusiastic about learning norms and values using paper mode (Fadhilawati, 2024). The use of media has a very positive impact on students because it increases student knowledge and motivation, especially in the material on the blood circulation system and the skeletal system (Puriadi & Surnjono, 2024). In the final stage of using the Quizizz paper mode application, based on the results of the implementation of the Quizizz Paper Mode media applied to class XI IPA at Alsiora Ende Private High School on the material of the blood circulation system and skeletal system in biology lessons. Students found an increase in student enthusiasm and student knowledge regarding the material of the blood circulation system and skeletal system. This is seen from the use of this paper method, which is suitable for application in class because the teacher only needs to prepare paper containing a barcode, which then only needs to be scanned using a cellphone to collect answers from students then the questions are displayed using a projector connected to a teacher's laptop.



Figure 3. *The final result of using the Quizizz paper mode application*

The use of Quizizz paper mode in learning evaluation at the school level offers several advantages (Balqis & Andriani, 2024). First, this method provides teachers with flexibility in choosing an assessment format that suits the students' circumstances and needs (Wanner et al., 2024). Second, paper mode allows students to take quizzes more familiarly, especially for those who may be less accustomed to or lack access to digital devices. Based on result, it was found that using Quizizz Paper Mode, students' enthusiasm for the material taught by the researcher was increased. This indicates that some students fun and the enthusiasm and concentration to pay attention to the teacher's explanations (Daulay et al., 2023). Furthermore, the initial observation data will serve as the basis for investigating how to improve students' enthusiasm in mastering the circulatory system and skeletal system material in biology using technology-based evaluation media, namely Quizizz Paper Mode.

CONCLUSION

The implementation of technology-based evaluation activities using the Quizizz application in Biology lessons at Alsiora Private High School in Ende was highly effective and efficient, proven to generate enthusiasm and enthusiasm among students in completing evaluation questions. For teachers, the Quizizz application significantly assisted them in conducting evaluation activities, as it accelerated the evaluation process. Several conclusions emerged from the student activities: Students were able to implement technology-based evaluation media, namely Quizizz paper mode, in Biology lessons. The implementation phases included planning, action, observation, and reflection. Furthermore, student enthusiasm for the material was also increased. Before the use of Quizizz Paper Mode, student enthusiasm for the material was low. After implementation, there was a significant increase. The results showed that students were more active, focused, and motivated in learning the skeletal system and circulatory system using this media. Furthermore, the results of this community service program also demonstrated the effectiveness and efficiency of Quizizz paper mode, where the evaluation process was deemed effective and efficient. Quizizz Paper Mode can help increase the speed of evaluation implementation without the need for manual correction, as well as create a fun and enthusiastic learning atmosphere.

REFERENCE

- Adijaya, M. A., Widiani, I. W., Parwata, I. G. L. A., & Antara, I. G. W. S. (2023). Bloom's taxonomy revision-oriented learning activities to improve procedural capabilities and learning outcomes. *International Journal of Educational Methodology*, 9(1), 261-270. <https://doi.org/10.12973/ijem.9.1.261>
- Aldevella, K., & Utami, R. D. (2025). Application of quizziz paper mode in learning evaluation increases students' learning enthusiasm. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia*, 11(1), 128-134. DOI : <https://doi.org/10.29210/1202525575>
- Anak Yunus, C. C., & Hua, T. K. (2021). Exploring a gamified learning tool in the ESL classroom: The case of Quizizz. *Journal of Education and e-learning Research*, 8(1), 103-108. <https://eric.ed.gov/?id=EJ1289663>
- Arifin, Z., & Setiawan, B. (2022). Utilising Gamification for Online Evaluation through Quizizz: Teachers' Perspectives and Experiences. *World Journal on Educational Technology: Current Issues*, 14(3), 781-796. <https://eric.ed.gov/?id=EJ1355916>
- Assi, P. N., Bassey, E. E., Atsu, J. U., Ibok, E. E., Nnaji, E. S., Ugbe, B. A., & Amadigwe, S. C. (2024). Multi-Criteria Decision Making for Determining Critical Success Factors in Achieving Top University Graduation. *European journal of pure and applied Mathematics*, 17(3), 1959-1981. DOI: <https://doi.org/10.29020/nybg.ejpam.v17i3.5149>
- Balqis, A. S., & Andriani, A. E. (2024). Development of Learning Evaluation Based on Automatic Assessment through Quizizz Paper Mode to Improve Students' Natural and Social Sciences Learning Outcomes. *Jurnal Penelitian Pendidikan IPA*, 10(6), 3357-3366. <https://doi.org/10.29303/jppipa.v10i6.7251>
- Damayanti, I., & Rahmadonna, S. (2025). Integrating Quizizz and Google Classroom: A Case Study of the ASSURE Model in Science Learning for Fifth-Grade Digital Classrooms. *AL-ISHLAH: Jurnal Pendidikan*, 17(2), 3040-3056. DOI: <https://doi.org/10.35445/alishlah.v17i2.6800>
- Daulay, S. H., Ramadhan, A., & Wahyuni, S. (2023). Quizizz Application in Students Learning Outcomes: Teachers and Students Perception. *Modality Journal: International Journal of Linguistics and Literature*, 3(2), 125-133. DOI: <https://doi.org/10.30983/mj.v3i2.6719>
- Fadhilawati, D. (2024). Unleashing the Power of Quizizz Paper Mode to Refine Senior High School Students' Islamic Vocabulary Mastery. *Jurnal Komunikasi Pendidikan*, 8(1), 12-24. DOI: <https://doi.org/10.32585/jurnalkomdik.v8i1.4847>
- Heriyawati, D. F., & Elfiyanto, S. (2023). QUIZIZZ PAPER MODE IS NEW: STUDENTS' PERCEPTION OF USING E-TOOL OF LANGUAGE ASSESSMENT IN EFL CLASS. *Celtic: A Journal of Culture, English Language Teaching, Literature and Linguistics*, 10(2), 121-137. DOI: <https://doi.org/10.22219/celtic.v10i2.28528>
- Kang, H. Y., & Kim, H. R. (2021). Impact of blended learning on learning outcomes in the public healthcare education course: a review of flipped classroom with team-based learning. *BMC Medical Education*, 21(1), 78. <https://doi.org/10.1186/s12909-021-02508-y>
- Kumar, K. A., Worku, B., Hababa, S. M., & AY, P. (2021). Outcome-based education: A case study on course outcomes, program outcomes and attainment for big data analytics course. *Journal of Engineering Education Transformations*, 35(2), 63-72. DOI: <https://doi.org/10.16920/jeet/2021/v35i2/153364>
- Lorensius, L., Anggal, N., & Lugan, S. (2022). Academic supervision in the improvement of teachers' professional competencies: Effective practices on the emergence. *EduLine: Journal of Education and Learning Innovation*, 2(2), 99-107. <https://doi.org/10.35877/454RI.eduline805>

- Munawir, A., & Hasbi, N. P. (2021). THE EFFECT OF USING QUIZIZZ TO EFL STUDENTS' ENGAGEMENT AND LEARNING OUTCOME. *English Review: Journal of English Education*, 10(1), 297-308. DOI: <https://doi.org/10.25134/erjee.v10i1.5412>
- Nanglu, K., et al. (2023). The nature of science: The fundamental role of natural history in ecology, evolution, conservation, and education. *Ecology and Evolution*, 13(10), e10621. <https://doi.org/10.1002/ece3.10621>
- Nurfadila, M. Y., Hajar, S., & Arsyad, N. F. (2024). Utilizing quizizz for game-based learning in elementary science education. *Journal of Education and Computer Applications*, 1(1), 12-19. DOI: <https://doi.org/10.69693/jeca.v1i1.2>
- Puriadi, P. G., & Surnjono, H. D. (2024). Development of Interactive Learning Multimedia for Biology Subjects on the Human Blood Circulation System Material to Improve Motivation and Learning Outcomes in High School. *Jurnal Penelitian Pendidikan IPA*, 10(12), 10410-10416. DOI: 10.29303/jppipa.v10i12.9311
- Rahmah, S., & Lubis, A. H. (2024). Problem Posing as a Learning Model to Improve Primary School Students' Mathematics Learning Outcomes in Gayo Lues. *Journal of Indonesian Primary School*, 1(4), 93-104. DOI: <https://doi.org/10.62945/jips.v1i4.409>
- Rulismi, D., Sahil, A., & Dali, Z. (2024). Effectiveness of the Use of Quizizz Media on Students' Learning Interest. *Futurity Education*, 4(2), 245-262. DOI: <https://doi.org/10.57125/FED.2024.06.25.13>
- Sirait, A. A., Basri, H., & Ab Rahman, Z. (2024). The Concept of Merdeka Curriculum Implementation: Realising Humanistic Islamic Education Learning. *Educative: Jurnal Ilmiah Pendidikan*, 2(1), 1-10. DOI: <https://doi.org/10.37985/educative.v2i1.210>
- Suwarni, S., Lubna, L., Aimang, H. A., Cakranegara, P. A., & Pratama, D. (2023). Quizizz gamification of student learning attention and motivation. *Al-Ishlah: Jurnal Pendidikan*, 15(2), 1369-1376. DOI: <https://doi.org/10.35445/alishlah.v15i2.3215>
- Tung, K. Y., & Alissa, A. (2021). Flipperentiated learning in biology class to improve cognitive learning outcomes, problem-solving skill, and motivation. *International Journal of Education and Literacy Studies*, 9(1), 183-190. DOI: <https://doi.org/10.7575/aiac.ijels.v.9n.1p.183>
- Wahyu, S., Rizal, F., & Syah, N. (2021). Teacher performance analysis in the learning process. *Journal of Education Research and Evaluation*, 5(1), 67-75. DOI: <https://doi.org/10.23887/jere.v5i1.30758>
- Wanner, T., Palmer, E., & Palmer, D. (2024). Flexible assessment and student empowerment: advantages and disadvantages—research from an Australian university. *Teaching in Higher Education*, 29(2), 349-365. <https://doi.org/10.1080/13562517.2021.1989578>
- Wekerle, C., Daumiller, M., & Kollar, I. (2022). Using digital technology to promote higher education learning: The importance of different learning activities and their relations to learning outcomes. *Journal of Research on Technology in Education*, 54(1), 1-17. <https://doi.org/10.1080/15391523.2020.1799455>
- Zainudin, Z. A., & Zulkipli, N. (2023). Gamification in learning: Students' motivation and cognitive engagement in learning business using Quizizz. *Asian Journal of University Education (AJUE)*, 19(4), 823-833. <https://ir.uitm.edu.my/id/eprint/111998/>
- Zhang, Z., & Crawford, J. (2024). EFL learners' motivation in a gamified formative assessment: The case of Quizizz. *Education and Information Technologies*, 29(5), 6217-6239. <https://doi.org/10.1007/s10639-023-12034-7>