# Enhancing Students' Fiction Analysis Skills through Quizizz Media in a Problem-Based Learning Model

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| ARTICLE INFO | ABSTRACT |
|---|---|
| | **Purposes**—This study aims to increase students' fiction analysis by integrating Quizizz media into the Project-Based Learning model. It explores how this combination fosters engagement, critical thinking, and literary comprehension, particularly in analyzing the main elements, such as plot, theme, setting, and moral/ message.<br><br>**Methodology-** This study used mixed-method approaches, combining quantitative analysis and test results, a questionnaire, and qualitative knowledge from interviews with the teacher. This study was conducted in SMP Negeri 4 Palu, involving 32 students from the eighth grade. The students are selected from stratified random sampling. The data-collecting instrument consisted of a fiction test analysis, a questionnaire, and a Likert scale on engagement and motivation. In contrast, a semi-structured questionnaire was given to the teachers, and an expert and statistical analysis assessment confirmed the validity and reliability of the test.<br><br>**Findings-** Integrating quizzes in the PBL framework significantly increases the students' comprehension of fictional analysis, with an average score of 91,94%, which is categorized as high competency. The highest proficiency level score belongs to theme (100%) and morel/message (100%), meanwhile plot (84%) and characterization (81%) pose a bigger challenge. Teacher interviews highlight the variability of students' comprehension, engagement disparity, and resource accessibility problems as influencing factors. Quizizz gamified games, instant feedback, competitive quizzes, and interactive engagement were found to motivate students and improve their understanding of the literary concept.<br><br>**Significance**—This study bridges the gap in the research by evaluating the empirical integration of gamification and PBL in literary education. This finding contributes to the pedagogical improvement of digital learning, showing how interactive and student-centered approaches can improve high-level thinking skills in fraction analysis. This study also highlights the importance of teachers' facilities, fair technology access, and strategic guidance instruments in maximizing learning outcomes. |

## INTRODUCTION

Fiction plays a vital role in education by growing empathy, critical thinking, and understanding that enrich various perspectives. By fiction, students can use their imagination to explore complex social issues and human experiences by growing empathy, critical thinking, and understanding, enriched by diverse perspectives. By fiction, students are invited to explore complex social issues and human experiences in a safe chamber and imaginative environment, enabling them to understand different points of view and grow a global perspective (Gouthro, 2019). Fiction provides a platform for students to be involved in "complicated problems" – problems that refuse direct solvency -  that enhance their problem-solving and ethical reasoning (Gouthro, 2019; Lyngfelt et al., 2023). Besides, fiction is a strong professional education resource, fostering students to imagine innovative steps to overcome challenges and grow creative problem-solving (Jarvis, 2019; Jarvis & Gouthro, 2019). These multifaceted benefits highlight the important role of fiction in preparing the student to think and make nuanced decisions in an increasingly complex world.

Technology integration in education has been a foundation in the modern learning environment, offering transformative opportunities in creating a more interactive, stimulating, and accessible learning process. Digital tools, such as computers, mobile devices, and educational software, facilitate a variety of learning activities, increasing student learning outcomes and fostering active learning by providing adaptive resources and context-aware study (Andoniou, 2024; Laine & Nygren, 2016; Mustapha, 2018).

Furthermore, technology enhances student engagement by motivating them to actively participate in their education, increasing accessibility by enabling learning anytime and anywhere, and fostering the importance of 21st-century skills, including problem solving, critical thinking, and digital literacy (Islam Sarker et al., 2019). This also supports high-order thinking skills that enable students to overcome complex challenges and engage in critical analysis (Lachner et al., 2024).

However, this benefit depends on the effectiveness of the implementation, which obligates the educators to carefully balance technology and pedagogy to ensure that the digital tools can enhance rather than disturb the learning process (Andoniou, 2024). Utilizing tools such as Quizizz in a learning model of Project-Based Learning (PBL) is a promising solution that combines technology's potential for interactive learning with a pedagogic strategy designed to foster critical thinking and creativity. By combining this approach, the teacher will create a dynamic learning environment in facing the complexity of the 21st century.

Problem-based learning (PBL) is a student-centered teaching approach in which students gain knowledge and skills by solving an open-ended real-world problem. This method prioritizes active participation, critical thinking, collaboration, and self-learning, making it a powerful pedagogical tool for enhancing self-competence in the important 21st-century competencies (Akcay et al., 2020; Gómez & Freire, 2022).

Despite these benefits, the implementation based on the scenario faced challenges, such as the need for a well-structured and group dynamic potential problem, including the conflict with the troopers. These challenges underscored the importance of careful planning, guided facilities, and teachers supported to maximize the effectiveness of PBL (Bender et al., 2023; Thomassen & Stentoft, 2020). By integrating PBL and digital tools such as Quizizz, the educators can enhance students' engagement and create a structured environment that solves these challenges; therefore, it would enable students to implement critical thinking and collaborative skills to analyze complex topics, such as fiction elements. This study explores the potential integration to enhance the skills of fiction analysis students. At the same time, overcoming the practical challenges in implementing PBL is necessary. Analyzing fiction in the frame of PBL offered the students dynamic steps to get involved in the narrative and complex theme, which grew their analytic and interpretative skills. This approach fosters students to explore diverse perspectives and improve their skills in interpreting and criticizing literary works. Through the process of PBL, students actively deconstruct literary elements, such as plot, character, and theme, developing a deep understanding of the elements and enhancing critical thinking and communication skills. Furthermore, the emphasis on collaborative problem-solving in PBL helps students articulate their interpretation coherently, enabling them to connect the literary analysis

with the broader real-world context.

Quizizz, as a gamified learning tool, integrates game elements such as a leaderboard, memes, and instant feedback to create an exciting and interactive learning environment. This online platform enables students to participate in individual or collaborative quizzes, changing traditional classroom activities into fun and competitive experiences (Pham, 2023; Saleh & Sulaiman, 2019; Yunus & Hua, 2021). By increasing student engagement, Quizizz motivates active participation and overall learning experiences (Cheong et al., 2013; Saleh & Sulaiman, 2019). Meanwhile, instant feedback mechanisms help students identify and correct their errors immediately, strengthening the learning process and contributing to better academic performance (Maraza-Quispe et al., 2024b; Pham, 2023). Studies have shown that the students who use Quizizz, for example, in grammatical practices, surpass those who use traditional methods, highlighting the effectiveness in increasing learning outcomes (Pham, 2023).

If applied in fiction analysis, Quizizz offers an opportunity to make quizzes interactive and focus on literary, thematic, and self-development elements. This situation not only strengthens students' understanding and memory of literary concepts, but also aligns with the principle of collaborative learning. In the group environment, Quizizz fosters discussion and teamwork; the main component is the approach to Project-Based Learning. Educators can combine the gamified platform elements by integrating Quizizz in the frame of PBL and increase the students' analytics skills and involvement in literary study (Indrasvari et al., 2021). This study explores the potential of the integration, aiming to show how the technology analytic experiences move the gamified learning.

Students always face significant challenges in analyzing fiction, hindering their in-depth understanding of literary texts. One of the main difficulties lies in their basic understanding, because there are more difficulties in identifying the main information, determining the main idea, and recognizing the supporting details of a narration (Murphy et al., 2016). These fundamental problems make it even more difficult for students to engage in higher analytics tasks. Besides, the lack of critical thinking skills further weakens their skills in interpreting and analyzing text effectively. Hence, it limits their capacity to form logical arguments based on their reading (Murphy et al., 2016; Yamin et al., 2023). The other important factor is the issue of engagement and motivation, particularly among the reluctant readers who are less confident with their analytical skills (Rahman et al., 2016; Rakhshani et al., 2021). (Hossain, 2024; Rahman et al., 2016) . This lack of motivation further hinders the development of their critical thinking skills, which are needed for literary analysis. To overcome this challenge, an innovative learning strategy is needed. The strategy is enhancing the fundamental understanding, growing analytical thinking, and fostering active engagement with the literary text.

In the context of SMP Negeri 4 Palu, the urgency of improving students' fiction analysis is proven by the class observation and teacher feedback, highlighting persistent challenges in students' ability to engage critically in literary texts. Many students struggle to move beyond summarizing the basic plot and face difficulties in identifying the depth of thematic elements and character development, limiting their depth of analysis (Morgan & DeFrancesco, 2022; Robinson, 2022). These challenges are worsening due to varying motivation levels, and students with weaker basic skills often demonstrate lower engagement and confidence in literary discussions. Meanwhile, the traditional teaching method is heavily dependent on teacher-centered explanation and textbook-based tasks, which have been observed to contribute to the passive learning habit. Therefore, it is more difficult for students to develop critical thinking (Ågerup, 2024). To overcome this problem, this research integrates Quizizz as a gamified learning tool in the Project-Based Learning (PBL) model, which aims to create a more interactive and student-centered learning environment. Gamification elements, such as instant feedback, competitive quizzes, and adaptive difficulty levels, increase student engagement and motivation in the learning process (Maraza-Quispe et al., 2024a; Pham, 2023). Furthermore, the PBL model provides a structured opportunity but flexibility for students to analyze fiction collaboratively, which enables them to address the complex literary elements through real-world problem-solving scenarios (Gómez & Freire, 2022; Ureña-Villamizar et al., 2024). This combining approach is expected to bridge the gap between passive learning and active engagement to develop literary, grow high-order thinking skills, and improve students' skills in effectively interpreting and critiquing fiction.

Although Project-Based Learning (PBL) is widely recognized as able to foster critical thinking, collaboration, and problem-solving secara luas diakui dapat mendorong pemikiran kritis, kolaborasi, dan pemecahan masalah (Pilcher, 2014; Reed et al., 2021; Zhang et al., 2022), the study that examines its integration with gamified tools such as Quizizz is limited. The previous study showed that Quizizz could increase student engagement and critical thinking when used in PBL (Nashar et al., 2021). However, further comprehensive investigation into the effectiveness of this combination is rarely found, particularly in the context of literary study. There was supporting proof on the role of technology in improving PBL results (Ureña-Villamizar et al., 2024). However, the specific impact of Quizizz in the framework was not explored.

This study provides a new approach by integrating Quizizz as a gamified learning tool in the Problem-Based Learning (PBL) model to improve students ' analysis skills of 8th-grade fiction. This area has not been specifically explored. The previous study by Ulva et al. (2023) and Amin et al. (2023) investigated the use of Quizizz in PBL but mainly focused on the learning outcome in procedural text and language study, rather than the fiction analysis. Aditya et al. (2024)  study on developing a Quizizz-based learning model for literature; however, this study focuses more on developing the model than evaluating its effectiveness in improving student fiction analysis skills. Similarly, Hamdani (2024) explored using Quizizz in language study in general, and Aurelia and Permana (2024) investigated the impact on expository writing skill, without discussing literary analysis. This study fills the academic gap by examining the effectiveness of Quizizz in improving the fiction analysis in the frame of PBL, which supports critical thinking and literary understanding. Quizizz is widely known for its user-friendliness, motivational impact, and effectiveness in education, although its influence on academic achievement varies (Yaşlak, 2024).

Meanwhile, some studies show that Quizizz can maintain student engagement, but the direct impact on performance remains uncertain (Lim & Yunus, 2021). Therefore, this study not only strengthens the role of gamification in education literacy but also gives educators practical knowledge for designing learning strategies that enhance students' literary analysis skills through technology.

## METHODOLOGY

This study uses a mixed-method approach to ensure alignment between the methods and collected data through tests, interviews, and questionnaires. A quantitative approach is applied to analyze the student test results taken from Quizizz and questionnaire data, while a qualitative approach is applied to analyze the teacher interview data.

This study was conducted in SMP Negeri 4 Palu, chosen purposively based on the availability of technology infrastructure and supporting the used of Quizizz and also the implementation of relevant curriculum with fiction analysis. An eighth-grade student is chosen as a participant based on their cognitive abilities, as they can engage in critical thinking and analytics, which aligns with the study's purpose. There were 32 students selected using stratified random sampling from the population of 120 eighth-grade students to ensure the representation of both genders and academic performance.

The instrument of this study consists of a test, an interview, and a questionnaire. The test designed to measure students' competency in analyzing fiction elements in this study was developed by the researcher based on the Indonesian language standard of the curriculum. This test covers the main elements of fiction, including plot, theme, setting, characterization, and moral values. The validity of the test was evaluated through expert assessment involving two Indonesian language lecturers and one senior teacher, resulting in a very high construct and content validity. The test reliability was measured using Cronbach's Alpha, resulting in a coefficient of 0,87, indicating high reliability. The questionnaire used a four-point Likert scale to measure motivation, engagement, and student perception toward the learning process. The expert also validated the questionnaire, with a reliability coefficient of 0,83. The semi-structured interview was conducted with three Indonesian language teachers with at least 5 years of teaching experience, focusing on teaching strategy, the challenges in implementing PBL, and the impact of Quizizz on the student learning outcome.

The data were analyzed using various techniques based on their type. Test data were analyzed quantitatively using frequency distribution and descriptive statistics, while questionnaire data were processed

using frequency analysis to describe response patterns. Interview data were analyzed thematically to identify recurring themes and factors that influence the effectiveness of the learning model. Frequency distribution was calculated using the formula:

$$P = \frac{f}{N} \times 100\%,$$

Where
*P* = Percentage
*ƒ* = Frequency
*N* = total number of data points.

Scores and categorization are calculated using a standard statistical formula. The average score is determined using the formula:

$$\text{Average Score} = \sum \frac{(\text{Individual Scores})}{\text{Number of Students}}$$

The table below shows the score ranges and corresponding competency levels:

**Table 1.** Student Competency Score Ranges

| Score ranges | Competency level |
|---|---|
| 90–100 | High Competency |
| 80–89 | Medium Competency |
| <80 | Low Competency |

**Table 2.** Proficiency Category Based on Score Ranges of Fiction Elements

| Score Ranges (%) | Proficiency Category | Proficiency Description |
|---|---|---|
| 90–100 | Very High | Shows an excellent understanding of fiction story elements |
| 80–89 | High | Shows a high level of understanding with minor areas to improve |
| 70–79 | Middle | Reflects an adequate level of understanding, but not fully satisfied |
| < 70 juta | Low | Shows insufficient understanding of the fiction story element. |

This systematic analysis comprehensively understood how Quizizz is integrated into the PBL frame, supporting students' fiction analysis skills.

**FINDING**

This study examined using Quizizz media in a Problem-Based Learning (PBL) model to improve student competency in analyzing fiction factors in the VIII grade of SMP Negeri 4 Palu. The study's results are divided into two main aspects: (1) Student performance in analyzing the fiction elements using Quizizz, and (2) the factors that influence student performance.

This study reveals the real improvement of students' skills in analyzing fiction elements when using Quizizz as a learning medium that integrates with the PBL model. The scores in Table 1 resulted from a test designed to assess student competency in analyzing fiction, which Quizizz gave. Every score reflects a student's level of understanding of the main elements of literature, including plot, theme, settings, characterization, and moral values. The test was scored on a scale of 0-100, where the higher score shows a higher competency level.

**Table 3.** Student competency level in analyzing fiction elements using Quizizz

| Score ranges | Number of students | Percentage |
|---|---|---|
| 100 | 17 | 53,13% |

| | | |
|---|---|---|
| 90 | 7 | 21,88% |
| 80 | 5 | 15,63% |
| 70 | 3 | 9,38% |

Average score: 91,94% (categorized as high competency)

Based on the calculation, the average score is 91,94, which is categorized as "high competency". Classification of "high competency level" based on the assessment scale determined by this study. The distribution above shows that most students have a high level of competency, with 75% getting 90 or higher. This supports the argument that Quizizz can be combined with PBL, fostering an interactive and interesting learning environment that facilitates a deeper understanding of its fictional elements.

This category is based on the general principle of education assessment, which is used to classify the score according to the level of performance to clarify the competency. The range score is adjusted explicitly to align with the study's purpose and context. For further justification, the categorization aligns with standard academic assessment as mentioned in Smith & Brown (2021) and supported by the Indonesian National Curriculum guide (Kemdikbud, 2022)

**Fiction Elements Analysis**

Table 3 analyzes students' understanding of the fiction element based on the test of story understanding. It measures their understanding of main narrative aspects, including plot, theme, setting, character, and moral/value (Kennedy et al., 2019). The results were analyzed using three indicators:

The results were analyzed using three indicators: the percentage of correct answers (%), calculated by comparing the number of correct responses with the total number of questions for each element; average scores, obtained by dividing the total score of students for each element by the number of test participants. The proficiency category, where each element is classified into a specific level of proficiency, such as high or very high proficiency, based on score ranges that have been determined (Brookhart & Nitko, 2019)as seen in Table 4. This analysis gives comprehensive knowledge of the student's skill to understand every element of fiction analysis.

**Table 4.** The summary of performance, based on fictional elements

| Fiction Elements | Correct Answers (%) | Average score (%) | Category |
|---|---|---|---|
| Planning | 84.38 | 84 | High Proficiency |
| Theme | 100 | 100 | Very High Proficiency |
| Setting (Time) | 93.75 | 94 | High Proficiency |
| Setting (Place) | 96,88 dan 90,63 | 91 | High Proficiency |
| Main Character | 87.5 | 88 | High Proficiency |
| Supporting Character | 93.75 | 94 | High Proficiency |
| Characterization (Main) | 81.25 | 81 | High Proficiency |
| Characterization (Support) | 90.63 | 91 | High Proficiency |
| Moral Message | 100 | 100 | Very High Proficiency |

The analysis of fiction elements shows the variety of students' proficiency levels in plot, theme, background, character, characterization, and moral/message. Plot analysis shows an accuracy of 84,38%, with an average of 84%, even though some students had difficulty connecting events. The theme was the strongest area, with 100% of students achieving a perfect score, highlighting the clarity of content and Quizizz.

In the setting, students were accurate at 93,75% in identifying time and averaged 91% for place, showing ease in using spatial and temporal cues. In analyzing character, 87,5% accurately identify the main character (average score 88%), while 93,75% analyze the supporting character correctly (average score 94%). Characterization shows a little drop, with the accuracy 81,25% for the main character characterization (average score 81%) and 90,63% for the supporting character (average score 91%), which reflects challenges in interpreting the nuanced traits.

Moral elements/message gained a perfect score, with 100% of students identifying the main lesson accurately, which underlined the candor and engagement. Overall, students show high proficiency, especially in the theme and moral/message, meanwhile, the challenges in the plot and characterization highlight the areas that need to be improved. The integration of Quizizz in the PBL model effectively supports literary analysis that involves students and guides their understanding

**Performance Influential Factors**

The teacher's interview, which was conducted with an Indonesian language teacher in SMP Negeri 4 Palu, revealed the main challenges faced by the students in understanding the fiction elements. The teacher noted significant variability in students' levels of understanding, which influenced their ability to interpret complex aspects such as plot relationships and character traits. Some students easily understand the relationship between plot and character, while others find identifying basic elements such as the central theme challenging. This gap was impacting their overall performance," the teacher explained. Besides, students with stronger basic knowledge were more engaged and confident, while those with a weaker understanding often struggled and showed degrading motivation. As emphasized by teachers, "Students with strong basics in reading usually have more confidence and motivation. However, those who have difficulties, this is not only about understanding; they lose most of their interest when they face a challenge." This was highlighted as an important internal factor that influences the overall performance.

The student questionnaire supports this observation by giving the student quantitative and qualitative feedback. The questionnaire response analysis revealed differences in accessing resources as an external factor. Although Quizizz runs effectively in the class, students who do not have a qualified gadget or internet at home cannot use the platform outside the classroom. Quizizz is very good at involving students in the classroom. However, not everyone can access stable gadgets or the internet at home. It disadvantages half of the students, limiting their opportunity to practice,".

Furthermore, the questionnaire highlights the variation in student motivation. Although most students enjoy the gamification of quizzes, others are not interested in external influences. For example, one student said, "At home, I cannot always join, because I share the phone with my sibling, and we do not always have internet." The other student added, "If my parents help me study or support me, I can enjoy the lesson. However, they do not understand this kind of lesson. The factors underscore the role of external challenge and parent support in shaping the engagement and performance of the students.

Insight from the class observation made the finding stronger. During the lesson, students with a higher understanding level participate actively in discussion and dominate in the group setting of PLB, benefiting from collaborative learning partners. As the teacher observed during one session," Look how the student from the third group is involved in the discussion of plot structure. They offer questions and collaborate very well." Besides, less motivated students always need additional support to be involved meaningfully. After the class, the teacher ponders, "Students like (Siswa X) need more guidance. They do not contribute much to group discussions and depend on others to finish the task." Observation also highlights the teacher's role in guiding the group activity, ensuring all students benefit from the PBL framework, particularly the teacher's readiness to develop during this research. At the beginning, they were not used to Quizizz, the teacher said, "At the beginning, I did not know how to use Quizizz effectively, but by practicing, I have learned how to integrate it very well in my lesson. The students gave very positive responses when I was using it now." This improvement significantly enhances the lesson delivery and engagement, showing the importance of teacher adaptability in utilizing digital tools to maximize learning outcomes.

**DISCUSSION**

This study found that integrating Quizizz in a problem-based learning model significantly improves students' skills in analyzing fiction elements. This part discusses the implications of the findings by connecting the relevant theories and contemporary research, highlighting the contribution to the education field, and providing an analytical point of view for the following interpretation.

**The effectiveness of Quizizz in improving fiction analysis skills**

The high proficiency students achieved in most of the fiction elements underscores the effectiveness of Quizizz as a digital learning medium. This is in line with the theory of Constructivism (Piaget, 1970), which states that the most effective lesson is when the student actively builds knowledge from interactive experiences. The Quizizz gamification features foster engagement, autonomy, and active participation, which enable students to explore and embody the fiction elements in an interactive and stress-free environment.

The fact that 100% of students identified the theme and moral/message correctly highlights the platform for simplifying the complex literary concept through the structured quiz (Nuraisyah et al., 2021). This observation is consistent with the current study, such as Tiana et al. (2021), found that the gamified learning platform, such as Quizizz, improved student understanding and motivation in language and literary context. According to Li et al. (2024), the platform effectively improves the competition and helps students to master the literary concept. Meanwhile, the interactive and independent character grows motivation through the sensation of autonomy and attachment, which aligns with self-determination theory.

However, the performance is slightly lower in analyzing the plot (84%) and characterization (81%), which shows the need for additional guidance in interpreting the complex narrative. This is in line with Vygotsky's Zone of Proximal Development, which emphasizes the importance of teacher guidance and helping students master tasks beyond their current abilities (Lasmawan & Budiarta, 2020). Quizzes can be improved or developed with additional materials or a pre-class to support handling the physical aspects.

**The Impact of Problem-Based Learning on Collaboration and Critical Thinking**

The PBL model provides a collaborative framework to foster critical thinking and problem-solving. The student actively participated in group discussion to analyze the fiction elements, showing the principle of social constructivism by Vygotsky, where the lesson was mediated through social interaction. This is consistent and relevant to the research of Narsa (2021), which highlights that PBL improves students' ability to analyze the literature critically by encouraging group-peer learning and discussion.

The collaborative dynamic that is of interest in this study, particularly benefits students with lower understanding, because the interaction among peers clarifies the complex concept. This finding aligns with the principle of practical lesson Rosenshine (2012), which emphasizes guidance practice and collaborative lessons as the strategy to enhance the student's understanding. However, the success of the PBL model depends on the teacher facilitation skills and the balanced composition of groups, as an imbalanced composition can limit its effectiveness.

**The influence of internal and external factors on learning outcomes.**

This study identifies several internal and external factors that influence performance. Internally, student understanding and motivation variability appear as the primary determinant of success. This finding aligns with the theory of motivational learning, especially the ARCS model (Lutfi et al., 2023), that underscores the importance of attention, relevancy, confidence, and satisfaction in fostering student engagement. The character of gamified Quizizz effectively draws student attention. Meanwhile, the other interactive format makes the content more relevant and accessible (Adawiyah et al., 2023).

Externally, the lack of access to resources such as gadgets and the internet becomes a significant barrier. This finding is in line with digital gap research (Dijk, 2020), which highlights how the gap in technology limits the opportunity to study. Overcoming this problem involves several resources provided by the school or compatible equipment provided by the sponsored or society.

**The teacher's preparedness and Adaptability**

Teacher preparedness and Adaptability are highly demanded in determining the success of integrating digital tools like Quizizz in the Problem-Based Learning (PBL) model. In this study, the teacher's unfamiliarity at the beginning with Quizizz presents a challenge; however, through continuous use and self-directed learning, the teacher, through the process, will be able to develop confidence and expertise in using the platform features. This evolution underscores the dynamic role of the teacher in digital learning environments,

where continuous professional development is significant. As the framework TPACK suggested by (Putri et al., 2024), the interaction among technology users, pedagogic, and content enables educators to design and implement effective learning suitable for the students' needs.

Moreover, the teacher's Adaptability influences lesson delivery and fosters a more engaging and inclusive classroom environment. The gamification of Quizizz required the teachers to innovate in teaching strategy, as adapting the quiz to suit the student's ability and combining direct feedback to reinforce the learning process. These practices align with the principle of teaching Rosenshine (2012), especially in guided practice and routine feedback, which is crucial in building student understanding (Hamad & Abdala, 2021). However, to sustain this improvement, a structured support system, such as professional training, workshops, and peer guidance, is needed to empower teachers to explore the full pedagogical potential of emerging technologies. By investing in teacher development, schools can ensure a more seamless integration of digital tools, ultimately improving student outcomes and fostering a sustainable culture of improvement.

**Comparison with previous studies**

The findings of this study are consistent with the previous research on gamified learning and PBL. For example, a study by Citra and Rosy (2020) shows that quiz-based games improve student understanding and retention in language subjects. Similarly, Aini (2019) found that Quizizz facilitates personalized learning experiences, enabling students to move forward at their own pace. This study contributes to the growing body of research that shows the combination of Quizizz and PBL further enhances literary analysis skills through collaborative and interactive learning. However, the study also highlights challenges, such as the gap in digital learning and varying student motivation, which were less emphasized in previous research. Improving interventions in diverse educational settings is important to overcome the challenge.

**Implications for Practice and Policy**

This study's findings have practical implications for educators and policymakers. Integrating digital tools such as Quizizz in the PBL framework can improve student engagement and develop critical thinking skills in the literature. Policymakers should prioritize equitable technology access and train teachers in digital pedagogy to ensure effective implementation. Additionally, incorporating hybrid strategies, such as combining Quizizz with traditional teaching methods, may address student understanding and motivation gaps.

**CONCLUSION**

Integrating Quizizz media within Problem-Based Learning (PBL) significantly improves student fiction analysis skills by fostering engagement and critical thinking. This study shows the high proficiency in literary elements such as theme and moral message, although the challenges exist in analyzing the story plot and character traits. The finding underscores the importance of teacher facilities, equitable access to resources, and structural support in gamified learning and a collaborative environment. This study contributes to the growing proof of the transformative role of technology in education while highlighting areas for improvement, such as resource accessibility and nuanced guidance for complex tasks.

**REFERENSI**

Adawiyah, R., Kholizah, S., & Harahap, R. D. (2023). *Literature Study : Utilization of Audio-Visual Media in Science Subject Matter for Junior High Sch ool Students*. May, 68–72.

Aditya, P., Mimin, S., Fauzi, A., & Senny, S. (2024). Pengembangan Model Pembelajaran Berbasis Aplikasi Quizizz Sebagai Upaya Pengembangan Pembelajaran Sastra. *Semantik*, *13*(1), 115–132. https://doi.org/10.22460/semantik.v13i1.p115-132

Ågerup, K. (2024). In What Society Do Fictional Characters Speak? Identifying and Discussing Theoretical Challenges in Sociolinguistic Analyses of Literature. *Metacritic Journal for Comparative Studies and Theory*, *10*(2), 150–168. https://doi.org/10.24193/mjcst.2024.18.07

Aini, Y. I. (2019). Pemanfaatan Media Pembelajaran Quizizz Untuk PembelajaranJenjang Pendidikan Dasar

Dan Menengah di Bengkulu. *Kependidikan*, 2(25), 1–6.

Akcay, H., Kapici, H. O., & Akcay, B. (2020). Analysis of the representations in turkish middle school science textbooks from 2002 to 2017. *Participatory Educational Research*, 7(3), 192–216. https://doi.org/10.17275/per.20.42.7.3

Amin, Y. F., Saputra, H. J., Prajabatan, P. P. G., Semarang, U. P., Lontar, J., & Semarang, N. (2023). Penerapan Model Pembelajaran Problem Based Learning Berbantuan Media Quizizz Dalam Meningkatkan Hasil Belajar Siswa Kelas II Sd Negeri 1 Jeketro. *Seminar Nasional PPG UGRIS 2023*, 25–33.

Andoniou, C. (2024). Technology Integration and Digital Transformation in Post-COVID-19 Hybrid Education. In *Technical and Vocational Education and Training* (Vol. 38, pp. 303–315). Springer. https://doi.org/10.1007/978-981-99-6909-8_27

Aurelia, F., & Permana, A. (2024). *Kemampuan Menulis Teks Eksposisi Pada Siswa Kelas X Sma Attaqwa 02 Kabupaten Bekasi*. 4(1), 83–93.

Bender, C., Cichosz, S. L., Telléus, P. K., & Hejlesen, O. K. (2023). Introducing a Problem Analysis Tool Implies Increasement in Understanding Problem Analysis Among Students: a PBL Case. *Journal of Problem Based Learning in Higher Education*, 11(3), 74–89. https://doi.org/10.54337/ojs.jpblhe.v11i3.7792

Brookhart, S. M., & Nitko, A. J. (2019). Educational assessment of students. In *Pearson* (Eighth edi). Pearson.

Cheong, C., Cheong, F., & Filippou, J. (2013). Quick quiz: A gamified approach for enhancing learning. *Proceedings - Pacific Asia Conference on Information Systems, PACIS 2013*.

Citra, C. A., & Rosy, B. (2020). Keefektifan Penggunaan Media Pembelajaran Berbasis Game Edukasi Quizizz Terhadap Hasil Belajar Teknologi Perkantoran Siswa Kelas X SMK Ketintang Surabaya. *Jurnal Pendidikan Administrasi Perkantoran (JPAP)*, 8(2), 261–272. https://doi.org/10.26740/jpap.v8n2.p261-272

Dijk, J. van. (2020). *The digital divide*. Polity.

Gómez, V. J. G., & Freire, E. E. E. (2022). Problem-Based Learning For The Teaching-Learning Process. *Aprendizaje*, 14(2), 124–131.

Gouthro, P. (2019). Educating Professionals to Think Critically and Creatively: Using Fiction to Teach in Professional Studies. In *Professional Education with Fiction Media: Imagination for Engagement and Empathy in Learning* (pp. 183–204). Springer International Publishing. https://doi.org/10.1007/9783030176938-9

Hamad, A. I., & Abdala, A. (2021). Scaffolding Strategy and Customized Instruction Efficiency in Teaching English as a Foreign Language in the Context of Saudi Arabia. *Journal of Literature, Languages and Linguistics*, April. https://doi.org/10.7176/jlll/77-05

Hossain, K. I. (2024). Literature-based language learning: Challenges, and opportunities for English learners. *Ampersand*, 13, 100201. https://doi.org/10.1016/j.amper.2024.100201

Indrasvari, M., Harahap, R. D., & Harahap, D. A. (2021). Analysis of the Impact of Smartphone Use on Adolescent Social Interactions During COVID-19. *Jurnal Penelitian Pendidikan IPA*, 7(2), 167–172. https://doi.org/10.29303/jppipa.v7i2.622

Islam Sarker, M. N., Wu, M., Cao, Q., Alam, G. M. M., & Li, D. (2019). Leveraging Digital Technology for Better Learning and Education: A Systematic Literature Review. *International Journal of Information and Education Technology*, 9(7), 453–461. https://doi.org/10.18178/ijiet.2019.9.7.1246

Jarvis, C. (2019). The Educational Power of Fiction—An Interdisciplinary Exploration. In *Professional Education with Fiction Media: Imagination for Engagement and Empathy in Learning* (pp. 1–26). Springer International Publishing. https://doi.org/10.1007/9783030176938-1

Jarvis, C., & Gouthro, P. (2019). Professional Education with Fiction Media: Imagination for Engagement and Empathy in Learning. In *Professional Education with Fiction Media: Imagination for Engagement and Empathy in Learning*. Springer International Publishing. https://doi.org/10.1007/978-3-030-17693-8

Kemdikbud, B. S. K. dan A. P., Anggraena, Y., Ginanto, D., Felicia, N., Andiarti, A., Herutami, I., Alhapip, L., Iswoyo, S., Hartini, Y., & Mahardika, R. L. (2022). Panduan Pembelajaran dan Asesmen. In *Badan Standar, Kurikulum, Dan Asesmen Pendidikan Kementerian Pendidikan, Kebudayaan, Riset, Dan Teknologi Republik Indonesia*.

Kennedy, J. (X. J. ., Gioia, D., & Stone, D. (2019). Literature: an introduction to fiction, poetry, drama, and writing. In *Pearson* (Fourteenth). Pearson.

Lachner, A., Backfisch, I., & Franke, U. (2024). Towards an Integrated Perspective of Teachers' Technology Integration: A Preliminary Model and Future Research Directions. *Frontline Learning Research*, 12(1), 1–

15. https://doi.org/10.14786/flr.v12i1.1179

Laine, T. H., & Nygren, E. (2016). Active and passive technology integration: a novel approach for managing technology's influence on learning experiences in context-aware learning spaces. *Technology, Pedagogy and Education*, 25(1), 19–37. https://doi.org/10.1080/1475939X.2014.945475

Lasmawan, I. W., & Budiarta, I. W. (2020). Vygotsky's Zone Of Proximal Development and The Students' Progress in Learning (A Heutagogcal Bibliographical Review). *JPI (Jurnal Pendidikan Indonesia)*, 9(4), 545. https://doi.org/10.23887/jpi-undiksha.v9i4.29915

Li, L., Hew, K. F., & Du, J. (2024). Gamification enhances student intrinsic motivation, perceptions of autonomy and relatedness, but minimal impact on competency: a meta-analysis and systematic review. In *Educational Technology Research and Development* (Vol. 72, Issue 2). Springer US. https://doi.org/10.1007/s11423-023-10337-7

Lim, T. M., & Yunus, M. M. (2021). Teachers' perception towards the use of Quizizz in the teaching and learning of English: A systematic review. *Sustainability (Switzerland)*, 13(11). https://doi.org/10.3390/su13116436

Lutfi, A., Gufron, A. M., & Wijayanti, D. (2023). ARCS Learning Model With Safety Education As A Learning Solution For The New Normal Era. *Jurnal Ilmiah Didaktika*, 23(2), 155–164.

Lyngfelt, A., Sporre, K., Lifmark, D., Lilja, A., Osbeck, C., & Franck, O. (2023). Bridging 'as is' and 'as if' by reading fiction in ethics education. *Cambridge Journal of Education*, 53(1), 63–77. https://doi.org/10.1080/0305764X.2022.2075323

Maraza-Quispe, B., Traverso-Condori, L. C., Torres-Gonzales, S. B., Reyes-Arco, R. E., Tinco-Túpac, S. T., Reyes-Villalba, E., & Carpio-Ventura, J. D. R. (2024a). Impact of the Use of Gamified Online Tools: A Study with Kahoot and Quizizz in the Educational Context. *International Journal of Information and Education Technology*, 14(1), 132–140. https://doi.org/10.18178/ijiet.2024.14.1.2033

Maraza-Quispe, B., Traverso-Condori, L. C., Torres-Gonzales, S. B., Reyes-Arco, R. E., Tinco-Túpac, S. T., Reyes-Villalba, E., & Carpio-Ventura, J. del R. (2024b). Impact of the Use of Gamified Online Tools: A Study with Kahoot and Quizizz in the Educational Context. *IJIET-International Journal of Information and Education Technology*, 14(1), 132–140. https://doi.org/10.18178/ijiet.2024.14.1.2033

Morgan, D. N., & DeFrancesco, J. (2022). Supporting Students' Construction of Themes When Reading. *Reading Teacher*, 76(3), 357–361. https://doi.org/10.1002/trtr.2138

Murphy, P. K., Firetto, C. M., Wei, L., Li, M., & Croninger, R. M. V. (2016). What REALLY Works: Optimizing Classroom Discussions to Promote Comprehension and Critical-Analytic Thinking. *Policy Insights from the Behavioral and Brain Sciences*, 3(1), 27–35. https://doi.org/10.1177/2372732215624215

Mustapha, A. (2018). The importance of technology in teaching and learning. In *Teaching with Technology: Perspectives, Challenges and Future Directions* (pp. 51–55). Nova Science Publishers, Inc.

Narsa, I. K. (2021). MENINGKATKAN HASIL BELAJAR BAHASA INDONESIA PADA MATERI MENULIS TEKS CERITA FANTASI MELALUI PENERAPAN MODEL PEMBELAJARAN PROBLEM BASED LEARNING. *Journal of Education Action Research*, 5(2). https://doi.org/10.23887/jear.v5i2.33269

Nashar, Nurhasanah, A., & Fauzan, R. (2021). The Effectiveness of Critical Thinking Ability on the Basis of Quizizz Application Viewed from Problem Based Learning Model in History Learning of Senior High School. In S. null (Ed.), *IOP Conference Series: Earth and Environmental Science* (Vol. 747, Issue 1). IOP Publishing Ltd. https://doi.org/10.1088/1755-1315/747/1/012046

Nuraisyah, S., Harahap, R. D., & Harahap, D. A. (2021). Analysis of Internet Media Use of Student Biology Learning Interest During COVID-19. *Jurnal Penelitian Pendidikan IPA*, 7(2), 213–217. https://doi.org/10.29303/jppipa.v7i2.624

Pham, A. T. (2023). The impact of gamified learning using Quizizz on ESL learners' grammar achievement. *Contemporary Educational Technology*, 15(2). https://doi.org/10.30935/cedtech/12923

Piaget, J. (1970). Science of education and the psychology of the child. Trans. D. Coltman. In *Science of education and the psychology of the child. Trans. D. Coltman.* (p. 186). Orion.

Pilcher, J. (2014). Problem-based learning in the NICU. *Neonatal Network*, 33(4), 221–224. https://doi.org/10.1891/0730-0832.33.4.221

Putri, A. D., Juandi, D., Jupri, A., Indonesia, U. P., & Turmudi, T. (2024). Mastering the TPACK framework : Innovative approaches by mathematics teachers. *Jurnal Elemen*, 10(3), 582–594. https://doi.org/10.29408/jel.v10i3.26311

Rahman, M. A., Azmi, M. N. L., Wahab, Z. B., Bin Abdullah, A. T. H., & Azmi, N. J. B. (2016). The impacts of 'problem-based learning' approach in enhancing critical thinking skills to teaching literature. *International Journal of Applied Linguistics and English Literature*, *5*(6), 249–258. https://doi.org/10.7575/aiac.ijalel.v.5n.6p.249

Rakhshani, E., Naveh, I. M. H., Mehrjerdi, H., & Pan, K. (2021). An optimized LQG servo controller design using LQI tracker for VSP-based AC/DC interconnected systems. *International Journal of Electrical Power and Energy Systems*, *129*, 106752. https://doi.org/10.1016/j.ijepes.2020.106752

Reed, S. S., Mullen, C. A., & Boyles, E. T. (2021). Bringing Problem-Based Learning to Elementary Schools to Benefit Children's Readiness for a Global World. In *Springer International Handbooks of Education: Vol. Part F1629* (pp. 837–864). Springer Nature. https://doi.org/10.1007/978-3-030-35858-7_128

Robinson, O. C. (2022). Conducting Thematic Analysis on Brief Texts: The Structured Tabular Approach. *Qualitative Psychology*, *9*(2), 194–208. https://doi.org/10.1037/qup0000189

Rosenshine, B. (2012). Principles of Instruction: Research-based strategies that all teachers should know. *American Educator*, 12–20.

Saleh, S. M., & Sulaiman, H. (2019). Gamification in T&L of mathematics: Teacher's willingness in using Quizizz as an additional assessment tool. In Y. Y.M., A. S., I. M.T., A. M.K.M., R. R.A., S. H., R. N., A. N.A., & A. F.A. (Eds.), *AIP Conference Proceedings* (Vol. 2184). American Institute of Physics Inc. https://doi.org/10.1063/1.5136373

Thomassen, A. O., & Stentoft, D. (2020). Educating students for a complex future: Why integrating a problem analysis in problem-based learning has something to offer. *Interdisciplinary Journal of Problem-Based Learning*, *14*(2 Special Issue), 1–10. https://doi.org/10.14434/ijpbl.v14i2.28804

Tiana, A., Sagita Krissandi, A. D., & Sarwi, M. (2021). Peningkatan Motivasi dan Hasil Belajar Siswa Melalui Media Game Quizizz pada Mata Pelajaran Matematika. *Jurnal Pendidikan Indonesia*, *2*(06), 943–952. https://doi.org/10.59141/japendi.v2i06.189

Ulva, H., Arina, R., & Arif, S. (2023). Peningkatan Hasil Belajar Materi Teks Prosedur Melalui Aplikasi Quizizz Di Kelas 4 Dalam Merdeka Belajar. *ALPEN: Jurnal Pendidikan Dasar*, *7*(2).

Ureña-Villamizar, Y. C., Henao-Gómez, M. A., Vargas-Velásquez, O. A., Ramírez-Ramírez, J. R., & Fernández-Nieto, E. L. (2024). Ma-Tecn: Innovative model to promote logical-mathematical competencies. *Aibi, Revista de Investigacion Administracion e Ingenierias*, *12*(2), 63–74. https://doi.org/10.15649/2346030X.3781

Yamin, M., Setiawan, S., & Anam, S. (2023). Enhancing critical thinking to foster students' analytical capacity in academic writing. *International Journal of Language Studies*, *17*(1), 53–70. https://doi.org/10.5281/zenodo.7513369

Yaşlak, B. (2024). Gamification in planning education: Impacts on academic achievement. *A/Z ITU Journal of the Faculty of Architecture*, *21*(3), 671–685. https://doi.org/10.58278/0.2024.66

Yunus, C. C. A., & 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://doi.org/10.20448/JOURNAL.509.2021.81.103.108

Zhang, F., Wang, H., Bai, Y., & Zhang, H. (2022). A Bibliometric Analysis of the Landscape of Problem-Based Learning Research (1981–2021). *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.828390