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Transformation of Accounting Education through Game-Based Learning: Implementation of Quizizz at SMK Negeri 1 Surakarta

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A B S T R A C T

Accounting learning in Vocational High Schools (SMK) often faces challenges such as low student motivation, monotonous teaching methods, and suboptimal integration of digital media. This study aims to describe the implementation of Quizizz digital learning media in accounting subjects at SMK Negeri 1 Surakarta. The research employed a qualitative approach with a case study design. Subjects consisted of accounting teachers and students from grades X and XI. Data collection techniques included observation, interviews, and documentation, while data analysis used interactive analysis comprising data reduction, data presentation, and conclusion drawing. The findings indicate that Quizizz implementation was carried out systematically through planning, implementation, and evaluation stages. In planning, teachers prepared varied questions aligned with learning objectives. During implementation, students actively engaged through their digital devices, creating an interactive and enjoyable game-based learning atmosphere. In evaluation, Quizizz functioned as a formative assessment tool providing immediate real-time feedback. Student responses were generally positive, as Quizizz enhanced learning motivation, participation, and material comprehension. However, several challenges were encountered, including limited internet connectivity, time management issues, and constraints in presenting practical accounting materials. In conclusion, Quizizz can serve as an effective alternative digital learning medium to improve accounting instruction quality, provided that proper management and adequate facilities are ensured.

1. Introduction

The development of information and communication technology in the 21st century has brought significant changes in various aspects of life, including

education. Digital transformation encourages the world of education to adapt by utilizing technology as an integral part of the learning process. Learning is no longer teacher-centered but has shifted to student-centered learning with the support of digital technology. Recent studies confirm that the implementation of student-centered learning models in vocational schools significantly improves student engagement and teacher effectiveness (Putri et al., 2024). In the digital era, the development of game-based interactive media has also been proven to significantly accelerate students' learning motivation and mastery of concepts (Fajira et al., 2025). In this context, teachers are required not only to master teaching materials but also to be able to develop learning innovations through the use of interactive, engaging, and digitally appropriate media that suit the characteristics of today's digital generation (Pulungan, 2021). The use of technology in learning has become one of the key strategies to improve the quality of education, as it makes the learning process more flexible, participatory, and digitally based (Subhan et al., 2025). This is supported by research showing that blended learning combining face-to-face and digital learning is more effective than conventional or purely online learning, as it increases learning flexibility and provides faster feedback to students (Mustofa & Riyanti, 2019). This is also in line with the demands of the 21st century, which require students to have critical thinking, collaboration, communication, and digital literacy skills (Kusuma et al., 2025).

In the context of vocational education such as Vocational High Schools (SMK), the use of learning technology becomes even more important because students are required to balance academic competence with practical skills. One subject that requires both conceptual understanding and practical skills is accounting. However, in practice, many students still consider accounting learning difficult and boring (Amri & Shobri, 2020). This is due to monotonous teaching methods, where teachers often rely on lectures and Q&A sessions without varying the use of engaging media (Zebua, 2020). To address this pedagogical monotony, recent scholarship in vocational accounting demonstrates that shifting toward interactive web-based applications can substantially mitigate student disengagement by visually breaking down dense commercial accounting structures (Wardana & Sitorus, 2025). This condition affects students' low interest and participation in the learning process.

To overcome these problems, teachers need to present learning models and media that can stimulate students' interest and activeness. The use of interactive learning media can create a more engaging learning atmosphere and motivate students to actively participate (Munawir et al., 2024). Further research emphasizes that digital-based interactive learning media, when designed with game-based approaches, significantly enhance students' interest and learning outcomes compared to conventional methods (Simanjuntak et al., 2025). One form of innovation aligned with the demands of digitalized learning is the use of interactive, easily accessible digital applications such as Quizizz. Quizizz is a game-based learning platform that combines gaming elements with interactive questions and provides immediate feedback (Irwan et al., 2019; Pitoyo et al., 2020).

Previous studies have shown the effectiveness of using Quizizz in learning. Quizizz is considered easy to operate and makes practice exercises more enjoyable (Sagala, 2023). The platform also helps students review learning materials and increases their interest in studying accounting. In addition, Quizizz can enhance students' enthusiasm and learning outcomes, as seen from their active involvement during lessons, more participatory classroom atmosphere, and improved test scores (Wahyuni, 2025). However, most of these studies still focus on the influence of Quizizz on learning outcomes or students' interest in learning.

On the other hand, research that comprehensively examines the implementation of Quizizz in the learning process, especially in accounting subjects at vocational schools, remains limited. Studies covering planning, implementation, evaluation, student responses, and challenges faced by teachers and students in its application have not been widely conducted. This indicates a research gap that needs to be explored further to provide a more complete picture of the use of digital learning media in practice. Recent studies highlight the importance of examining not only learning outcomes but also the development and implementation process of digital media, including student responses and motivation, particularly in vocational education contexts (Fajira et al., 2025).

SMK Negeri 1 Surakarta is one of the leading vocational schools in Surakarta City, offering several areas of expertise such as Accounting and Finance (AKL), Marketing (PM), Office Management and Services (MPLB), and Visual Communication Design (DKV). As a vocational school that promotes the use of technology in learning, various digital media have begun to be introduced in teaching and learning activities. Based on initial observations at SMK Negeri 1 Surakarta, it was found that accounting teachers in grades X and XI have started using Quizizz in learning. However, its implementation has not been consistent or comprehensive. Some teachers are still unfamiliar with using digital media, so the potential of Quizizz to increase student engagement and interest has not been fully realized. This condition shows a gap between the potential of digital media and its practical application in the classroom. Based on this description, the main problem in this study is the suboptimal implementation of Quizizz digital learning media in accounting learning at vocational schools. Therefore, research on the implementation of digital learning media is important to support the improvement of innovative learning quality in line with the demands of 21st-century education.

This study aims to describe the implementation of Quizizz digital learning media in accounting subjects at SMK Negeri 1 Surakarta. In addition, it also aims to examine student responses and identify the strengths and challenges faced by teachers and students in using Quizizz. The results of this study are expected to contribute to the development of more effective, innovative digital learning strategies that suit the characteristics of vocational school students.

Literature Review

Digital Learning Media

Digital learning media refers to all forms of instructional aids that utilize information and communication technology to deliver material to students interactively and effectively (Shoffa et al., 2023). Digital learning media can integrate various forms of information such as text, images, audio, and video into a single platform, creating an interactive, flexible, and easily accessible learning environment. This makes the learning process more engaging and increases student involvement. This aligns with the theory of multimedia learning, which states that the simultaneous use of visual and auditory elements can enhance students' retention and understanding (Mayer & Fiorella, 2022).

The use of digital media in learning supports the creation of student-centered learning, where students play an active role in the learning process. Moreover, digital media provides opportunities for students to learn independently, collaboratively, and to improve digital literacy skills, which are essential in the 21st century. Thus, digital learning media functions not only as a tool for delivering material but also as a means to create meaningful, participatory learning experiences that align with technological developments (Daryanto, 2016).

Accounting Learning in Vocational High Schools

Accounting learning in Vocational High Schools (SMK) is characterized by its emphasis on balancing conceptual understanding and practical skills. As a vocational subject, accounting requires students to master basic concepts while also applying them in preparing financial reports. However, students' conceptual understanding remains relatively low (Nurwan et al., 2026).

In practice, accounting learning is often perceived as difficult and monotonous by students (Mariati, 2023). This is largely due to conventional teaching methods such as lectures and practice exercises without the use of engaging media. Such conditions result in low student interest and participation in the learning process. Therefore, innovation in accounting learning is necessary, particularly through the use of digital learning media that can enhance conceptual understanding and actively involve students in the learning process. Furthermore, integrating realistic platforms within accounting education has a cumulative positive effect on professional readiness, allowing students to develop sharper business literacy and financial critical thinking side-by-side (Thohiri et al., 2026).

Game-Based Learning in Education

Game-Based Learning is a learning approach that integrates game elements into the learning process to increase student motivation and engagement. According to Ula et al. (2025), game-based learning fosters participatory learning that helps simplify concept comprehension, enhances student participation, and creates a more engaging and enjoyable learning atmosphere. The use of games in learning has also been shown to increase students' intrinsic motivation, as it incorporates elements of healthy competition, challenges, and rewards provided during the learning process (Lorenza et al., 2025). Furthermore, game-based learning helps students understand material in a more contextual and applicable manner. Thus, the

application of game-based learning serves as an innovative solution to create interactive and non-monotonous learning, especially in subjects perceived as difficult, such as accounting.

Quizizz as a Learning Medium

Quizizz is an online assessment tool that can be used as an interactive classroom learning activity, allowing students to practice together using devices such as computers, smartphones, and iPads (Mei et al., 2018). According to Zhao (2019), Quizizz is a game-based learning application that provides multiplayer activities, making the learning process interactive and engaging. Quizizz serves as an alternative medium to assess students' conceptual understanding in an interactive and flexible manner (Yana et al., 2019).

Quizizz enables teachers to present questions in an engaging format with features such as leaderboards, timers, and instant feedback. These features make Quizizz a learning medium that fosters student interest and participation. Additionally, Quizizz provides teachers with real-time evaluation tools, allowing them to directly assess students' level of understanding (Rizkullah et al., 2025). Another advantage of Quizizz is its accessibility and ease of use for both teachers and students. The platform can be accessed via smartphones, tablets, or computers, supporting flexibility in the learning process. With these advantages, Quizizz has become an effective digital learning medium for creating participatory, enjoyable learning environments that enhance student engagement (Asy'ari & Indrakurniawan, 2025).

Learning Implementation

Learning implementation refers to the process of applying a previously designed learning plan into classroom teaching activities. It consists of three main stages: planning, implementation, and evaluation (Saroh et al., 2023). The planning stage includes preparing instructional tools such as lesson plans (RPP), selecting methods, and determining the media to be used. The implementation stage involves the core classroom activities, where teachers apply the strategies and media that have been planned. The evaluation stage assesses the effectiveness of the learning process and students' understanding of the material taught. In the context of digital learning media, implementation focuses not only on the use of the media itself but also on how it is optimally integrated into each stage of learning. Therefore, examining implementation is crucial to determine the extent to which digital learning media such as Quizizz can be effectively utilized in the learning process.

2. Methodology

This study employed a qualitative approach with a case study design. A qualitative approach focuses on understanding social phenomena and human behavior by presenting a comprehensive and in-depth description. The results are conveyed in the form of narrative descriptions that reflect detailed perspectives of the informants, conducted within natural contexts or situations (Walidin et al., 2015).

The case study design was chosen because this research specifically and thoroughly analyzes the implementation of Quizizz as a digital learning medium in accounting instruction (Poltak, 2024). The research was conducted at SMK Negeri 1 Surakarta, located at Jl. Sungai Kapuas No. 28, Kedung Lumbu, Ps. Kliwon District, Surakarta City, Central Java. The study took place during the even semester of the 2025/2026 academic year, from February to April 2026.

The research subjects consisted of two accounting teachers and twelve students from the accounting expertise program. The criteria for informants included: (1) teachers who had used Quizizz in teaching, and (2) students who had participated in learning activities using Quizizz. The selection of two teachers and twelve students was based on the need for in-depth data in qualitative research. The two teachers were chosen from grade X and grade XI to obtain a broader picture of Quizizz implementation across different grade levels, thereby producing more varied and comprehensive data. Differences in grade levels allowed the researcher to examine how Quizizz was applied to students with distinct characteristics in terms of conceptual understanding and learning experiences. Meanwhile, the twelve students six from grade X and six from grade XI were selected to represent learning experiences from each grade level. This number was considered sufficient to explore data in depth through interviews and observations, fulfilling the principle of data saturation in qualitative research. Thus, the composition of research subjects was expected to provide rich, diverse, and relevant information aligned with the research objectives. The object of this study was the implementation of Quizizz as a digital learning medium, encompassing the stages of planning, implementation, and evaluation.

Data collection techniques included observation, interviews, and documentation. Semi-structured interviews were conducted to obtain information regarding the application, responses, advantages, and challenges of using Quizizz. Direct observation was carried out to examine the learning process and student engagement. Documentation was used to complement the data, including learning activities, student work, and relevant visual evidence. The research instruments consisted of observation sheets, interview guidelines, and documentation records.

Data validity was tested using methodological triangulation and source triangulation. Methodological triangulation was performed by comparing data obtained from observation, interviews, and documentation Fauziyah (2015), while source triangulation was conducted by comparing information from different informants to test data consistency (Wahyuni, 2025). Data analysis employed Miles & Huberman's (2014) interactive analysis model, which includes three stages: data reduction, data display, and conclusion drawing/verification. Data reduction was carried out by filtering and focusing data according to the research objectives. Data display was presented in descriptive narratives and tables to facilitate understanding of relationships among data. Finally, conclusions were drawn through continuous interpretation and verification of the analyzed data to ensure the validity of the research findings.

3. Results and Discussion

Implementation of Quizizz by Teachers in Accounting Learning

The implementation of Quizizz as a game-based digital learning medium in accounting instruction at SMK Negeri 1 Surakarta was carried out systematically to transform the learning process from teacher-centered to student-centered, interactive, and enjoyable. Based on findings from observations, interviews, and documentation, the implementation process consisted of four main integrated stages: (a) learning planning, (b) preparation of Quizizz media, (c) classroom implementation, and (d) evaluation of student learning outcomes. These stages are described in detail below.

a. Planning Stage

The planning stage of accounting instruction demonstrates that teachers at SMK Negeri 1 Surakarta did not use Quizizz spontaneously, but rather through a structured and systematic process. Planning began with the preparation of teaching modules that outlined learning objectives, materials, and activity steps. These modules served as the primary guide in determining the direction of instruction, ensuring that the content delivered was aligned with the competencies to be achieved in both grade X and grade XI. Teachers then adjusted the material to the learning objectives and designed the media to be used. The selected media were varied, including Canva for material presentation, Microsoft Excel for accounting practice, and Quizizz as a digital evaluation tool. This selection was made in advance to match the characteristics of the material and the needs of students, thereby making the learning process more interactive and well-directed.

The next step was the preparation of evaluation questions. Teachers first analyzed the material that had been taught, then developed questions in various formats and levels of difficulty, including Higher Order Thinking Skills (HOTS)-based questions. The questions were initially drafted in Word and subsequently uploaded into the Quizizz platform. Thus, before Quizizz was used in class, it had already undergone a planning process that included the preparation of teaching modules, alignment of material with learning objectives, selection of media, and design of evaluation questions.

This systematic planning aligns with digital learning media theory, which emphasizes that effective technology integration requires intentional design rather than spontaneous use (Daryanto, 2016; Shoffa et al., 2023). According to Mayer's Cognitive Theory of Multimedia Learning (2022), learning is optimized when visual and verbal information are presented simultaneously, allowing students to process information through dual channels. Quizizz implements this principle by combining text-based questions with visual elements (colorful backgrounds, memes, progress bars) and auditory signals (sound effects for correct answers). Furthermore, the planning stage reflected pedagogical alignment. a core principle stating that technology should be selected based on learning objectives, not merely for novelty. Teachers demonstrated this by using Quizizz specifically for formative evaluation and ensuring questions matched material characteristics, such as adjusting time limits for calculation-based accounting questions.

This intentional planning distinguishes effective digital media implementation from superficial technology use.

"I adjust the material that students have already studied, then prepare the questions in Word before uploading them into Quizizz." (Teacher A)

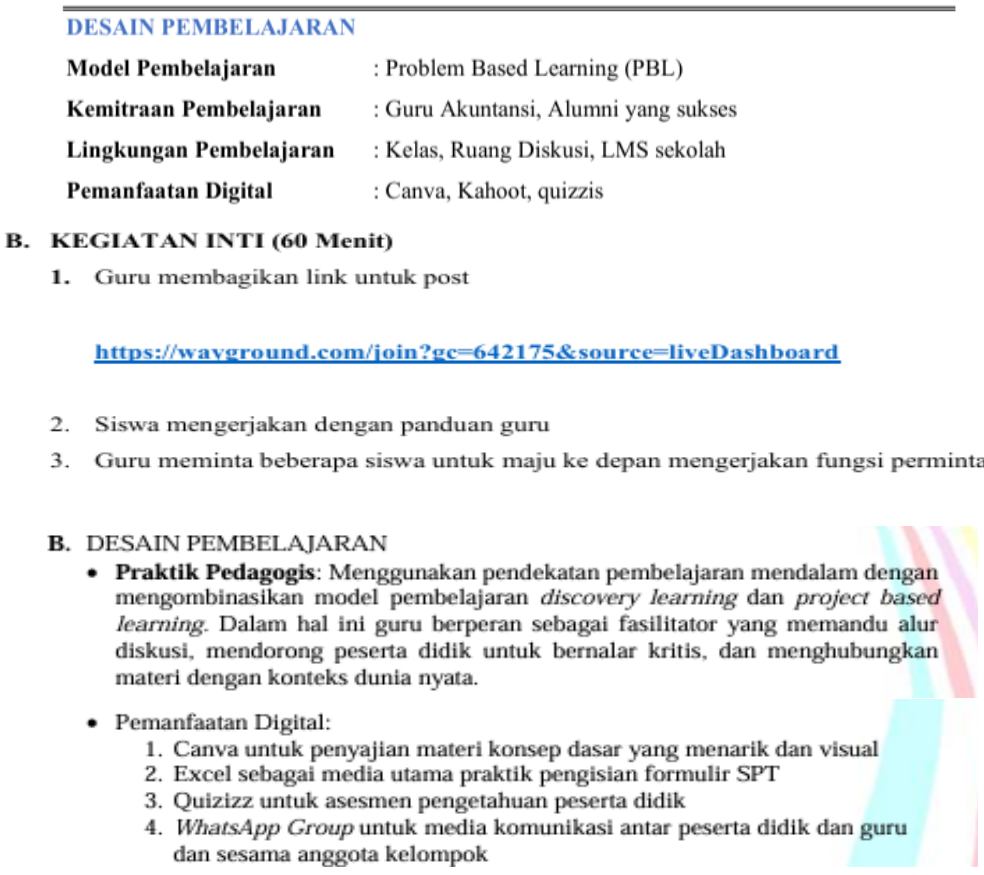
"I align the questions with the material that has been delivered, prepare them in various formats including HOTS questions, and adjust the time allocation." (Teacher B)

From the students' perspective, this planning ensured that the questions in Quizizz were consistent with the material taught:

"The questions matched the material we had learned, so they were useful for practice and helped us understand better." (RD, Grade XI AKL 1)

"Quizizz was used to review the material already taught, so it helped us practice before the test." (HF, Grade XI AKL 1)

Including learning objectives, material summaries, and formative assessment structures. As shown in Figure 1, the teaching modules were designed to integrate face-to-face and digital activities seamlessly.



DESAIN PEMBELAJARAN

Model Pembelajaran	: Problem Based Learning (PBL)
Kemitraan Pembelajaran	: Guru Akuntansi, Alumni yang sukses
Lingkungan Pembelajaran	: Kelas, Ruang Diskusi, LMS sekolah
Pemanfaatan Digital	: Canva, Kahoot, quizzis

B. KEGIATAN INTI (60 Menit)

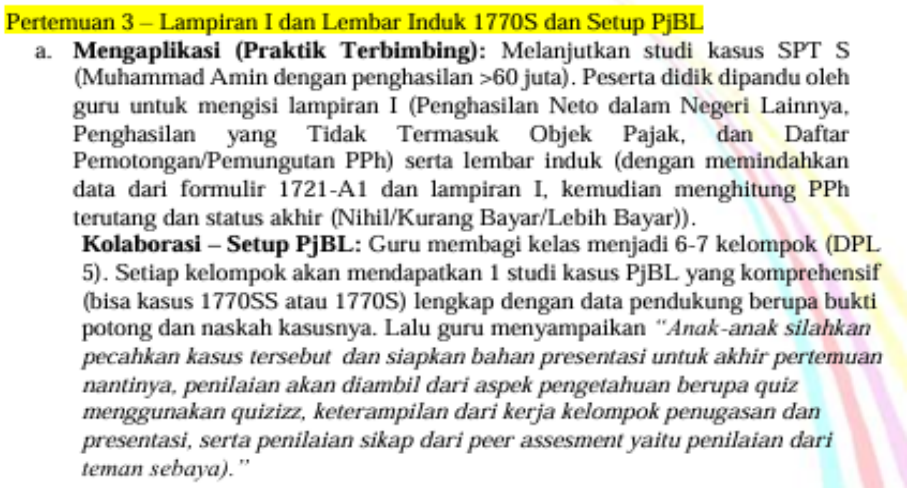
1. Guru membagikan link untuk post

   https://wayground.com/join?gc=642175&source=liveDashboard

2. Siswa mengerjakan dengan panduan guru
3. Guru meminta beberapa siswa untuk maju ke depan mengerjakan fungsi permintaan

B. DESAIN PEMBELAJARAN

- **Praktik Pedagogis**: Menggunakan pendekatan pembelajaran mendalam dengan mengombinasikan model pembelajaran *discovery learning* dan *project based learning*. Dalam hal ini guru berperan sebagai fasilitator yang memandu alur diskusi, mendorong peserta didik untuk bernalar kritis, dan menghubungkan materi dengan konteks dunia nyata.
- Pemanfaatan Digital:
  1. Canva untuk penyajian materi konsep dasar yang menarik dan visual
  2. Excel sebagai media utama praktik pengisian formulir SPT
  3. Quizizz untuk asesmen pengetahuan peserta didik
  4. *WhatsApp Group* untuk media komunikasi antar peserta didik dan guru dan sesama anggota kelompok


Pertemuan 3 – Lampiran I dan Lembar Induk 1770S dan Setup PjBL

a. **Mengaplikasi (Praktik Terbimbing):** Melanjutkan studi kasus SPT S (Muhammad Amin dengan penghasilan >60 juta). Peserta didik dipandu oleh guru untuk mengisi lampiran I (Penghasilan Neto dalam Negeri Lainnya, Penghasilan yang Tidak Termasuk Objek Pajak, dan Daftar Pemotongan/Pemungutan PPh) serta lembar induk (dengan memindahkan data dari formulir 1721-A1 dan lampiran I, kemudian menghitung PPh terutang dan status akhir (Nihil/Kurang Bayar/Lebih Bayar)).

Kolaborasi – Setup PjBL: Guru membagi kelas menjadi 6-7 kelompok (DPL 5). Setiap kelompok akan mendapatkan 1 studi kasus PjBL yang komprehensif (bisa kasus 1770SS atau 1770S) lengkap dengan data pendukung berupa bukti potong dan naskah kasusnya. Lalu guru menyampaikan *"Anak-anak silahkan pecahkan kasus tersebut dan siapkan bahan presentasi untuk akhir pertemuan nantinya, penilaian akan diambil dari aspek pengetahuan berupa quiz menggunakan quizizz, keterampilan dari kerja kelompok penugasan dan presentasi, serta penilaian sikap dari peer assesment yaitu penilaian dari teman sebaya)."*

Figure 1. Teaching Modules for Grade X & XI – Digital Utilization Section

Based on Figure 1, it can be seen that the teaching modules prepared by teachers explicitly included Quizizz as a digital learning medium as well as an evaluation tool. In the digital utilization section, Quizizz was designated as an assessment medium, while in the instructional steps, Quizizz was used at the evaluation stage after the delivery of material. Documentation also showed that in the core learning activities, teachers incorporated Quizizz as an evaluation or practice tool to measure students' understanding after the material was presented. This confirms that the use of Quizizz was planned from the outset and systematically integrated into the overall learning process.

Overall, the planning stage of instruction at SMK Negeri 1 Surakarta was carried out systematically, beginning with the preparation of teaching modules, alignment of material with learning objectives, design of questions, and determination of digital evaluation media. This careful planning supported the achievement of learning objectives and ensured that the instructional process was well-directed. These findings are consistent with Fitri et al. (2025), who state that the planning stage of instruction includes the preparation of instructional tools, determination of objectives, and selection of methods and media to be used in the learning process. Furthermore, Shoffa et al. (2023) emphasize that the use of digital learning media must be designed from the outset to be effectively integrated into the instructional process.

b. Implementation Stage

At the implementation stage, the use of Quizizz takes place in a structured manner and is integrated into the classroom learning flow. This begins after the teacher delivers the material, where Quizizz is utilized as both an evaluation tool and practice exercises to measure students' understanding. In Grade X, Quizizz was applied to the topic of Basic Banking, while in Grade XI it was used in the Tax Administration subject, specifically on Income Tax Article 21.

The process starts with the teacher preparing access to Quizizz, then opening the quiz session by giving initial instructions to students regarding the use of the platform. Access is provided through a barcode, game code, or link displayed via the projector screen. At this stage, students prepare their devices, such as smartphones, to join the quiz, while the teacher ensures that all students can access Quizizz properly so that no one is left behind in the initial process.

Once all students have successfully joined Quizizz, the teacher does not immediately start the quiz but first ensures the overall readiness of the class. Students wait for further instructions while observing the screen that shows the number of participants who have joined. This stage is important as it reflects learning readiness before the core activity begins. The teacher then starts the quiz once all students are ready and connected to the system. During the core stage, students work on Quizizz questions individually using their own devices. The questions are in multiple-choice format, aligned with the material previously taught. Throughout the process, the classroom atmosphere becomes more lively and interactive due to Quizizz features such as instant scoring and real-time leaderboard updates. These features indirectly create a competitive environment among students, motivating them to answer quickly and accurately. Students appeared more focused and enthusiastic compared to conventional evaluation methods.

After the allotted time ends, Quizizz automatically displays the results obtained by each student. The teacher then presents these results to the class as immediate feedback. Through this, students can see their scores and rankings compared to their peers. In some cases, students also have access to explanations of the questions, helping them understand mistakes made. The teacher acts as a facilitator, providing reinforcement and clarification on material that students have not yet mastered. Classroom observations revealed that all stages of Quizizz implementation ran according to plan. Teachers were actively involved in giving instructions at the beginning, monitoring student engagement during the quiz, and presenting results as evaluation. Meanwhile, students were actively engaged from the login process to completing all the questions. The interactions during learning also indicated a shift toward a more dynamic and participatory classroom atmosphere. This was reinforced through teacher interviews:

"Initially, since we used Google Classroom, the Quizizz link was shared through Google Classroom. But now, since classes are face-to-face, I directly share the link or barcode, and students can access it." (Teacher A)

"For Quizizz, I usually apply it individually. Students use their own gadgets. My role here is to guide them to join Quizizz via the web, then share the code or link I prepared. Once they start working, I only monitor their progress. After the time ends, I display the Quizizz results. This is very helpful for learning and also engaging for students." (Teacher B)

From the students' perspective, interviews showed that they could follow the steps of using Quizizz quite easily, starting from entering with a code or barcode, waiting for the quiz to begin, and then working independently. Students expressed that Quizizz provided a more engaging and challenging learning experience. This was evident from statements such as:

"I like learning with Quizizz because it feels challenging. At the end, the score and ranking appear immediately, so it feels like an adrenaline rush that makes me more motivated." (HS, XI AKL 1)

Another student added:

"Quizizz is more challenging because the score appears right away at the end, so we can immediately know the results and feel more motivated to work on the questions." (NA, XI AKL 1)

Nevertheless, some students reported obstacles such as signal disruptions, limited internet quota, and unsupported devices. Despite these challenges, most students still considered Quizizz helpful in understanding the material, as it could be used for practice and review. This initial setup is crucial to ensure that all students are connected and ready simultaneously. The visual documentation of students engaging with the platform via their smartphones is presented in Figure 2. Documentation of the learning process further supports these findings.

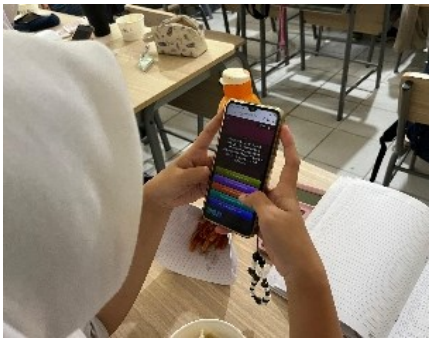


Figure 2. Students Working on Quizizz Questions

Figure 2 shows students actively engaged in learning using Quizizz, particularly during the question-solving stage, where they individually accessed the platform via smartphones. Most students appeared focused on their screens, indicating high concentration in answering the questions. The classroom atmosphere was conducive, with students actively participating without significant distractions, ensuring an orderly learning process. Meanwhile, the teacher was positioned at the front of the class, acting as a facilitator who monitored the activity and ensured all students could participate. This condition illustrates that Quizizz not only supports individual engagement but also fosters a more interactive, independent, and student-centered learning environment.

Based on these findings, it can be concluded that the implementation of Quizizz in learning successfully creates a more interactive, participatory, and enjoyable classroom atmosphere. The teacher acts as a facilitator, while students become more active in the learning process. This demonstrates a shift from teacher-centered to student-centered learning. Furthermore, the game-like elements such as competition, challenge, and instant feedback through scores and rankings enhance students' learning motivation. These findings align with the concept of game-based learning, which suggests that game elements can increase motivation and student engagement (Lorenza et al., 2025; Ula et

al., 2025), and are supported by previous studies showing that Quizizz fosters interactive, enjoyable, and non-monotonous learning (Amri & Shobri, 2020; Sagala, 2023).

c. Evaluation Stage

At the evaluation stage, Quizizz is employed as a formative assessment tool following the delivery of learning material. Overall, this evaluation serves not only to measure student learning outcomes but also as a means of reflection on their level of understanding. Once students complete the quiz, the Quizizz system automatically displays various result indicators, such as scores, rankings, the number of correct and incorrect answers, and the percentage of accuracy. This information is accessible to both teachers and students in real time. Teachers use these results to observe overall student achievement, identify areas of the material that remain difficult to grasp, and determine appropriate follow-up actions. For students, the displayed results provide immediate feedback that helps them gauge their mastery of the subject matter. Thus, evaluation through Quizizz extends beyond grading, becoming part of a continuous and reflective learning process.

Observations revealed that after the quiz activity concluded, teachers immediately presented the Quizizz results to the class. The display included student rankings (leaderboard), scores obtained, and item analysis in the form of accuracy percentages. Teachers were seen examining these results to understand the distribution of student performance, while students paid attention to their respective positions. Furthermore, through the item analysis feature, teachers could easily identify questions that were frequently answered incorrectly, which then served as the basis for re-explaining certain topics. This condition demonstrates that the evaluation process occurs in real time, is transparent, and provides comprehensive information for both teachers and students. Interviews with teachers confirmed that Quizizz was used specifically for formative evaluation:

"Quizizz is used for formative evaluation per topic after learning, not for final assessment." (Teacher A)

"The use of Quizizz is only for formative evaluation. It is usually conducted after each topic as a form of review." (Teacher B)

In addition, regarding the utilization of evaluation results, teachers explained that Quizizz helps in monitoring learning achievement and increasing student engagement. This aligns with Teacher B's statement:

"One of the success criteria is that students feel enjoy learning. Moreover, the results are immediately visible, for example when a student achieves first place. During Quizizz, rankings can change dynamically, which makes students more enthusiastic and eager to answer correctly."

From the students' perspective, interviews indicated that they benefited from the feedback provided by Quizizz, particularly in helping them understand the material.

Several students stated that the score and ranking features motivated them further, as expressed in the following remarks:

"It is very helpful because there is an explanation of the answers." (RD, XI AKL 1)
"It helps me understand because it reviews the material." (HS, XI AKL 1)
"I feel very motivated because of the ranking." (ZN, XI AKL 1)

Nevertheless, students also reported several challenges during the evaluation process, such as signal disruptions, limited internet quota, and time constraints for certain questions. Despite these obstacles, students generally considered Quizizz effective as an evaluation medium because it provides results quickly and in an easily understandable format. The immediate feedback framework of this platform allows teachers to assess classroom performance instantly. This transparency not only helps in tracking conceptual comprehension but also fosters a healthy competitive drive among students to improve their scores. The real-time evaluation dashboard showing the final distribution of student achievements is displayed in Figure 3. Documentation of the learning process further supports these findings.

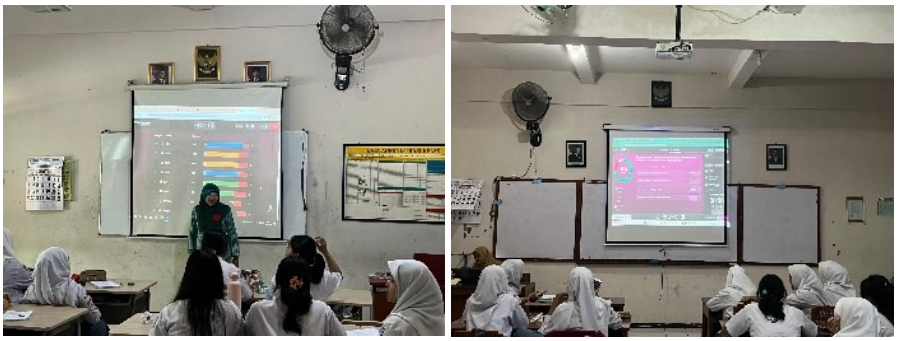


Figure 3. Display of Quizizz Evaluation Results (Student Scores and Rankings)

Figure 3 illustrates the evaluation results presented immediately after students complete the quiz, showing scores and rankings in the form of a leaderboard. The ranking displays students' positions based on their scores, from highest to lowest, reflecting each student's level of mastery of the material. This display not only provides rapid information on learning outcomes but also fosters a competitive atmosphere that motivates students to engage more actively in learning. In addition, the results allow teachers to easily observe the overall distribution of student performance, serving as a basis for instructional reflection.

Based on the overall findings, it can be concluded that the use of Quizizz as a formative evaluation tool supports a more effective, reflective, and continuous learning process. Evaluation functions not merely as an assessment instrument but also as a feedback mechanism that assists both teachers and students in improving the quality of learning. These findings are consistent with Rizkullah et al. (2025), who argue that the use of digital media in learning evaluation enhances efficiency and provides real-time feedback to students.

Student Responses to the Use of Quizizz in Accounting Learning at SMK Negeri 1 Surakarta

The use of the digital learning platform Quizizz in Accounting classes at SMK Negeri 1 Surakarta has had a significant impact on student responses during the learning process. In general, students demonstrated positive reactions, marked by increased interest, engagement, and enthusiasm in participating in lessons. This is closely related to the characteristics of Quizizz, which integrates game elements into learning, such as scores, rankings, and visually appealing displays. In practice, students were not merely passive recipients of material but actively engaged in the learning process through direct interaction with digitally presented questions.

Furthermore, Quizizz provided a different learning experience compared to conventional methods. Students perceived the lessons as more varied, less monotonous, and more enjoyable due to the competitive elements that encouraged active participation. At the same time, Quizizz supported comprehension, as the questions functioned both as practice and reinforcement of previously taught material. Thus, student responses were evident not only in terms of enjoyment but also cognitively, through improved understanding of the subject matter. Nevertheless, some students encountered technical challenges, such as unstable internet connections, limited devices, and insufficient time for certain questions, which affected their learning experience. In addition, a small number of students expressed that direct teacher explanations remained necessary for deeper understanding of complex topics.

Observations reinforced these findings, showing that students were more active and enthusiastic during Quizizz-based lessons. They appeared focused while answering questions and displayed varied reactions such as curiosity, excitement, and competitiveness when viewing real-time ranking changes. The classroom atmosphere became more dynamic compared to conventional learning, as students interacted not only with the content but also with the platform itself. Engagement was evident not only during the quiz but also while awaiting results and comparing scores with peers. This indicates that Quizizz successfully fostered interactive and participatory learning. These observations were further supported by student interviews, which highlighted the enjoyable and beneficial aspects of Quizizz in enhancing comprehension:

"What I like about Quizizz is that the game is fun and helps me understand the material more easily. The features are enjoyable because we can compete with friends." (RD, XI AKL 1)

"Quizizz features are interesting and make learning more fun." (AN, XI AKL 1)

"I feel motivated to study with Quizizz because it is more fun and engaging than just writing in a notebook, which can be boring." (AU, X AKL 1)

"I personally understand better when using Quizizz." (HS, XI AKL 1)

"Quizizz is very helpful. Usually, after the teacher explains, we get a quiz on Quizizz, which makes me understand better." (SB, X AKL 1)

These positive student responses are consistent with previous research on Quizizz implementation. Sagala (2023) found that Quizizz increased student interest in online accounting learning because the platform made practice exercises more enjoyable and

less stressful compared to traditional worksheets. Similarly, Amri and Shobri (2020) reported that students perceived Quizizz as an effective tool for reviewing accounting materials, with the instant feedback feature helping them identify misconceptions before final examinations. In the context of vocational education, Wahyuni (2025) documented that Quizizz enhanced student enthusiasm and learning outcomes, with students showing active involvement and improved test scores. Zhao (2019) specifically examined Quizizz in accounting classrooms and concluded that the multiplayer, game-based format increased participation rates compared to paper-based quizzes, as students were motivated by the social comparison enabled by leaderboards. Students also emphasized that features such as scores and rankings were key motivators, encouraging them to strive for better results. However, some reported challenges, including signal disruptions, limited internet quota, and inadequate devices, which occasionally hindered the learning process. From the teachers' perspective, student responses were considered indicators of successful Quizizz implementation. Teacher A stated:

"The criteria are that students can access easily, feel happy, and become more active in learning."

Teacher B added:

"One of the success criteria is that students enjoy learning. Moreover, the results are immediately visible, for example when a student achieves first place. During Quizizz, rankings can change dynamically, which makes students more enthusiastic and eager to answer correctly."

These findings were also supported by documentation in the form of Quizizz reports, including scores, rankings, and item analyses. The data showed that students actively participated and completed quizzes successfully. The variation in results reflected diverse levels of understanding, further confirming that Quizizz positively influenced student motivation and engagement. In conclusion, the use of Quizizz elicited positive responses from most students, both in terms of motivation, engagement, and comprehension. This was evident in their heightened enthusiasm, competitive spirit, and improved understanding through interactive practice. However, challenges such as technical issues, limited devices, and time constraints remained, and some students still required direct teacher explanations for deeper comprehension. Therefore, Quizizz can be considered effective in enhancing motivation and engagement in Accounting learning, but it should be combined with direct instructional methods to optimally meet students' learning needs. These findings align with learning motivation theory, which suggests that game elements can enhance students' intrinsic motivation through competition and rewards (Lorenza et al., 2025), and are supported by Abdillah et al. (2024), who argue that digital learning media can improve conceptual understanding through active student interaction.

Advantages and Challenges of Using Quizizz

a. Advantages

The use of Quizizz in Accounting learning at SMK Negeri 1 Surakarta provides several advantages experienced by both teachers and students. Overall, Quizizz creates a more engaging, interactive, and less monotonous learning atmosphere compared to

conventional methods. This is largely due to the integration of game elements into the learning process, such as attractive visual displays, scoring systems, and leaderboards that encourage students to participate more actively. In addition, Quizizz serves as an effective practice tool, enabling students to review previously learned material in a more enjoyable way. From a pedagogical perspective, Quizizz impacts not only affective aspects such as interest and motivation but also cognitive aspects, particularly in improving comprehension of the subject matter.

Observations showed that during Quizizz sessions, students appeared more active, enthusiastic, and directly engaged in the learning process. The classroom atmosphere became livelier due to student interaction with the platform and the competitive spirit triggered by real-time ranking changes. Teachers also benefited, as students remained focused on their tasks, making classroom management easier. These findings were reinforced by interviews with teachers and students. Teacher A stated:

"The criteria are that students can access easily, feel happy, and become more active in learning."

Teacher B emphasized:

"One of the success criteria is that students enjoy learning. Moreover, the results are immediately visible, for example when a student achieves first place. During Quizizz, rankings can change dynamically, which makes students more enthusiastic and eager to answer correctly."

Students also expressed positive responses, highlighting the motivational and cognitive benefits of Quizizz:

"What I like about Quizizz is that the game is fun and helps me understand the material more easily." (RD, XI AKL 1)

"I feel motivated to study with Quizizz because it is more fun and enjoyable than just writing in a notebook." (AN, X AKL 1)

"Quizizz is very helpful. Usually, after the teacher explains, we get a quiz on Quizizz, which makes me understand better." (SB, X AKL 1)

Supporting documentation, such as Quizizz reports on scores, rankings, and accuracy rates, confirmed that most students completed quizzes successfully. The data reflected active student participation and varied learning outcomes, indicating different levels of comprehension. In summary, the main advantages of Quizizz lie in its ability to enhance motivation, engagement, and create an interactive, enjoyable learning environment. These findings are consistent with previous studies that highlight Quizizz as an effective evaluation tool capable of increasing student participation (Amri & Shobri, 2020; Masnu'ah et al., 2024).

b. Challenges

Despite its advantages, the use of Quizizz in learning also presents several challenges for both students and teachers. Generally, these challenges are related to technical factors and the characteristics of accounting material. From the students' perspective, the most dominant issue is limited internet connectivity, which hampers access and quiz

completion. Some students also faced device-related problems, such as slow smartphones or limited internet quota. In addition, time constraints were reported, particularly for calculation-based questions, where students felt the allotted time was insufficient. Observations confirmed these issues, showing that some students experienced unstable connections or delays in accessing questions, preventing them from completing quizzes optimally. Teachers also needed to adjust quiz duration to match classroom conditions. Student interviews further highlighted these challenges:

"Signal and device lag." (AZ, X AKL 1)
"Poor signal and limited time." (DN, X AKL 1)
"Network issues and slow phone." (RD, XI AKL 1)
"Signal and quota." (ZN, XI AKL 1)

Differences in perception regarding quiz duration also emerged: students felt the time was too short, while teachers argued that duration should be adjusted to the level of question difficulty. From the teachers' perspective, another challenge was Quizizz's limited ability to present practical accounting tasks. Both Teacher A and Teacher B noted that Quizizz was less effective for complex problems requiring calculations or preparation of financial reports. Supporting documentation, such as student performance data, showed variations in scores and instances where students did not complete quizzes due to technical issues. This reinforced the conclusion that internet connectivity and device limitations were the primary obstacles.

In conclusion, the main challenges in using Quizizz include technical factors such as dependence on internet connectivity, device limitations, and constraints in presenting practical accounting material. Therefore, Quizizz should be combined with other teaching methods to achieve optimal learning outcomes. These findings are consistent with previous studies, which identified the limitations of Quizizz as reliance on internet connection and time management for question completion (Asy'ari & Indrakurniawan, 2025; Damayanti & Asmawan, 2024; Jatmika et al., 2022; Wahyuni, 2025; Yulianti et al., 2025).

4. Conclusions

This study aimed to describe the implementation of Quizizz as a game-based digital learning medium in accounting subjects at SMK Negeri 1 Surakarta, as well as to examine student responses and identify the advantages and challenges of its use. The findings indicate that Quizizz was implemented systematically through the stages of planning, implementation, and evaluation. Teachers prepared questions aligned with learning objectives, students actively engaged through digital devices in an interactive and enjoyable game-based atmosphere, and Quizizz functioned as a formative assessment tool providing real-time feedback.

The study confirms that Quizizz enhances student motivation, participation, and comprehension, with students responding positively due to game elements such as leaderboards, timers, and instant scoring. However, several challenges remain, including limited internet connectivity, time constraints for calculation-based

questions, and difficulties in presenting practical accounting materials. These findings imply that while Quizizz is effective for formative assessment and engagement, it should be combined with direct instruction for procedural accounting tasks. Based on the findings, the following suggestions are offered: (1) teachers should combine Quizizz with other teaching methods for procedural content; (2) schools should improve internet facilities and provide digital media training; and (3) future researchers should involve larger samples and longer study periods to obtain more comprehensive insights.

References

Abdillah, M. I., Hunaida, W. L., & Muqit, A. (2024). Implementasi Game Edukasi Untuk Meningkatkan Pemahaman Siswa Dalam Pembelajaran PAI Di Era Digital. *Al-Mau'izhoh*, 6(2), 1099–1107. https://doi.org/10.31949/am.v6i2.12294

Amri, M., & Shobri, Y. A. (2020). Persepsi Mahasiswa Terhadap Penggunaan Quizizz Dalam Pembelajaran Akuntansi Konsolidasi Bank Syariah Di IAIN Ponorogo. *Jurnal Teknologi Informasi Dan Pendidikan*, *13*(1), 128–138. https://doi.org/10.24036/tip.v13i1.301

Asy'ari, N., & Indrakurniawan, M. (2025). Persepsi peserta didik terhadap pemanfaatan Quizizz sebagai alat evaluasi hasil belajar di SDN Wonokasian 2 Sidoarjo. *Jurnal Edukasi*, 12(2), 711–723. https://doi.org/10.31316/esjurnal.v12i2.4499

Damayanti, D. I., & Asmawan, M. C. (2024). Inovasi Teknologi 4.0 dalam Pembelajaran Akuntansi di SMAN 1 Banyudono. *Owner: Riset & Jurnal Akuntansi*, *8*(2), 1385–1393. https://doi.org/10.33395/owner.v8i2.1932

Daryanto. (2016). *Media pembelajaran : peranannya sangat penting dalam mencapai tujuan pembelajaran*. Gava Media.

Fauziyah, N. R. (2015). Efektivitas Penggunaan Alat Bantu Reaksi Gerakan Tangan Bagi Kaum Disabilitas. *UPI Repository*, 33–34. http://repository.upi.edu/20109/6/S_TE_1102479_Chapter3.pdf

Fajira, I., Ahyar, & Hakim, A. R. (2025). Development of Interactive Learning Media using Scratch to Increase Students' Motivation to Learn. Journal of Educational Sciences, 9(1), 11–22. https://jes.ejournal.unri.ac.id/index.php/JES/article/view/1133

Fitri, M., Junaidi, R., Nasution, A. R., & Kristanti, E. (2025). Perencanaan Pengembangan Media Pembelajaran Interaktif untuk Meningkatkan Pemahaman Materi Pendidikan Agama Islam (PAI). *Journal on Education*, *07*(02), 10841–10854. https://doi.org/10.31004/joe.v7i2.7683

Irwan, I., Luthfi, Z. F., & Waldi, A. (2019). Efektifitas Penggunaan Kahoot! untuk Meningkatkan Hasil Belajar Siswa. *Pedagogia : Jurnal Pendidikan*, *8*(1), 95–104. https://doi.org/10.21070/pedagogia.v8i1.1866

Jatmika, S., Rahayu, R. P., & Karima, M. (2022). Manfaat dan Tantangan Gadget Sebagai Media Pembelajaran Efektif Pada Mata Pelajaran Ekonomi Di SMA. *Jurnal Pendidikan Ilmu Pengetahuan Sosial Indonesia*, *7*(2), 111–122. https://doi.org/10.26737/jpipsi.v7i2.2460

Kusuma, N. F., Haerunisa, N., Harahap, A. T., Zainiza, M., Fazira, A., Hastuti, S., Latifah, L., Khoirina, N., Syafiq, M. A., Fitriyasari, M., & Amin, R. (2025).

Best practice pembelajaran abad 21. Naba Edukasi Indonesia.

Lorenza, D., Istikharah, I., Rahmayanti, N., Wahyuda, A., & Taufiqurrahman, M. (2025). Penerapan Gamifikasi Untuk Meningkatkan Motivasi Belajar PAI Di SMP 15 Kota Bengkulu. Educatoria: Jurnal Ilmiah Ilmu Pendidikan, 5(3), 192–201. https://doi.org/10.36312/educatoria.v5i3.576

Mariati. (2023). Pemanfaatan Media Game Edukasi Akuntansi (Gedutan) Dalam Meningkatkan Pemahaman Siswa Pada Mata Pelajaran Akuntansi. *Proceeding International Seminar on Islamic Studies*, 4, 932–940. https://jurnal.umsu.ac.id/index.php/insis/article/view/14144

Masnu'ah, S., & Aisyah, N. H. (2024). Pemanfaatan Aplikasi Quizizz dalam Keaktifan Belajar Pada Pembelajaran Pendidikan Agama Islam di Madrasah Tsanawiyah. Didaktika: *Jurnal Kependidikan,* 13(1), 595–604. https://jurnaldidaktika.org/contents/article/view/1360

Mayer, R. E., & Fiorella, L. (2022). Introduction to Multimedia Learning. In R. E. Mayer & L. Fiorella (Eds.), *The Cambridge Handbook of Multimedia Learning* (3rd ed., pp. 3–16). New York, NY: Cambridge University Press.

Mei, S. Y., Ju, S. Y., & Adam, Z. (2018). Implementing Quizizz as Game Based Learning in the Arabic Classroom. *European Journal of Social Science Education and Research*, *5*(1), 194–198. https://doi.org/10.2478/ejser-2018-0022

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: SAGE Publications.

Munawir, Rofiqoh, A., & Khairani, I. (2024). Peran Media Interaktif Dalam Meningkatkan Motivasi Belajar Siswa pada Mata Pelajaran SKI di Madrasah Ibtidaiyah. *Jurnal AL-AZHAR INDONESIA SERI HUMANIORA*, *9*(1), 63–71. https://doi.org/10.36722/sh.v9i1.2828

Mustofa, R. H., & Riyanti, H. (2019). Perkembangan E-Learning Sebagai Inovasi Pembelajaran Di Era Digital. *Jurnal Ilmu Kependidikan*, 17(3), 379–391. https://doi.org/10.31851/wahanadidaktika.v17i3.4343

Nurwan, A. S., Fauziah, S. N., & Mumtaz, Z. K. (2026). Problem-based learning as innovation in basic accounting education: achieving deep learning. *Hipkin Journal of Social Studies*, *1*(1), 61–74. https://doi.org/10.64014/hipkin-jss.v1i1.289

Pitoyo, M. D., Sumardi, & Asib, A. (2020). Gamification-based assessment: The washback effect of quizizz on students' learning in higher education. *International Journal of Language Education*, *4*(1), 1–10. https://doi.org/10.26858/ijole.v4i2.8188

Poltak, H. (2024). Pendekatan Metode Studi Kasus dalam Riset Kualitatif Hendrik. *Journal of Local Architecture and Civil Engineering*, *2*(2), 50–58. https://doi.org/10.59810/localengineering

Pulungan, A. H. (2021). The Use of Interactive Learning Media for Teachers in Rural Areas. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, *4*(1), 524–532. https://doi.org/10.33258/birle.v4i1.1705

Putri, R. A., Samudra, A. A., & Junaidi, S. (2024). Analysis of Students' Learning Skills and Innovation Skills at SMK Negeri 2 Padang Panjang. *Journal of Educational Sciences*, 8(2), 259–269. . https://jes.ejournal.unri.ac.id/index.php/JES/article/view/174/134

Rizkullah, M. F., Sahlan, M., & Puspitarini, D. (2025). Penggunaan Media Pembelajaran Quizizz'' dalam Proses Pembelajaran di Sekolah Dasar. *JURNAL BASICEDU*, *9*(4), 860–867. https://doi.org/10.31004/basicedu.v9i4.10201

Sagala, I. C. (2023). Efektivitas Penggunaan Media Quizizz Terhadap Minat Belajar Siswa Dalam Pembelajaran Online Akuntansi. *Journal on Education*, *05*(04), 14338–14348. https://jonedu.org/index.php/joe/article/view/2467

Saroh, S., Quraini, A. N., Aprilia, I., & Setiyatna, H. (2023). Tahapan Implementasi Kurikulum Merdeka Sesuai Kesiapan Pendidik Dan Satuan Pendidik. Jurnal Lentera Anak, 4(1), 59–70. https://ejournal.unisnu.ac.id/jla/article/view/7207/2522

Shoffa, S., Subroto, D. E., Nasution, F. S., Astuti, W., Romadi, U., Cholid, F., Azhari, D. S., Hafidz, Kardi, J., Umar, R. H., & Gusmirawati. (2023). *Media Pembelajaran.* Surabaya: CV. Afasa Pustaka.

Simanjuntak, M., Harahap, F., & Gultom, S. (2025). The Effect of Wordwall-Based Interactive Learning Media on Students' Interest and Learning Outcomes in Social Studies at MTs Hifzhil Qur'an Medan. *Journal of Educational Sciences*, 9(3), 410–422. https://jes.ejournal.unri.ac.id/index.php/JES/article/view/410

Subhan, M., Mufid, D. I., Nurhalimah, Sekarsari, R., & Wahyana, S. (2025). Pemanfaatan Teknologi Untuk Meningkatkan Efektivitas Pembelajaran. *Jurnal Teknologi Pendidikan Dan Pembelajaran (JTPP)*, *03*(01), 22–26.

Thohiri, R., Fazillah, J., & Nasution, S. S. N. A. (2026). Introductory business learning based on actual economic issues as an effort to improve the business literacy of accounting education students. Journal of Educational Sciences, 10(5), 750–760. https://jes.ejournal.unri.ac.id/index.php/JES/article/view/2156

Ula, A. F., Fadilah, G. N., & Nurrusyifa, A. (2025). Meningkatkan Minat Belajar Siswa Melalui Penerapan Game Based Learning dalam Kurikulum Merdeka di SMA Batik 2 Surakarta. *Katalis Pendidikan: Jurnal Ilmu Pendidikan Dan Matematika*, *2*(4), 125–133. https://doi.org/10.62383/katalis.v2i4.2657

Wahyuni, N. (2025). Penggunaan aplikasi quizizz untuk meningkatkan antusiasme dan hasil belajar siswa pada mata pelajaran IPAS di kelas V MIN 10 Aceh Besar. Jurnal Studi Tindakan Edukatif, 1(1), 49–58. https://jurnal.samudra.ac.id/index.php/jste/article/view/49

Walidin, W., Saifullah, & Tabrani. (2015). *Metodologi Penelitian Kualitatif & Grounded Theory*. Banda Aceh: FTK Ar-Raniry Press.

Wardana, A., & Sitorus, P. (2025). Interactive problem-based learning media assisted by google sites in commercial accounting material. Journal of Educational Sciences, 9(3), 112–125. https://jes.ejournal.unri.ac.id/index.php/JES/article/download/1243/644/4722

Yana, A. U., Antasari, L., & Kurniawan, B. R. (2019). Analisis Pemahaman Konsep Gelombang Mekanik Melalui Aplikasi Online Quizizz. *Jurnal Pendidikan Sains Indonesia (Indonesian Journal of Science Education)*, *7*(2), 143–152. https://doi.org/10.24815/jpsi.v7i2.14284

Yulianti, Achruh, A., & Rosdiana. (2025). Kompetensi Guru Profesional dan

Penggunaan Aplikasi Quizizz di UPT SDN 13 Binamu Kabupaten Jeneponto. Socius: *Jurnal Penelitian Ilmu-Ilmu Sosial*, 2(1), 681–686. https://doi.org/10.5281/zenodo.15709944

Zebua, S. (2020). Penerapan Model Problem Posing Untuk Meningkatkan Minat Belajar Akuntansi. *Majalah Ilmiah Warta Dharmawangsa*, *14*(2), 307–316.

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

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