



## Quizizz: Basic accounting equation learning at SMK Negeri 11 Bandung

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### ABSTRACT

This study investigates how the Quizizz platform teaches the basic concept of accounting equations in Vocational High Schools. The accounting equation is a fundamental concept in learning accounting. A good understanding of this concept is needed because it is fundamental to learning and will be very useful for vocational high school students entering the world of work. However, there are still many vocational students who do not have a good understanding of this concept. Therefore, a study was conducted using a descriptive quantitative method involving 20 students at SMK Negeri 11 Bandung. Data was collected through observation and questionnaires. The results showed that using Quizizz significantly improved students' understanding of the basic concepts of accounting equations. Students who use Quizizz have a higher average score on the test of understanding the basic concepts of accounting equations than those who do not use Quizizz. In addition, students enjoyed learning accounting more and understood the subject better using Quizizz.

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### ABSTRAK

Studi ini menyelidiki bagaimana platform Quizizz digunakan untuk mengajarkan konsep dasar persamaan akuntansi di Sekolah Menengah Kejuruan (SMK). Persamaan akuntansi merupakan konsep dasar yang penting dalam pembelajaran akuntansi. Diperlukan pemahaman yang baik terhadap konsep ini karena merupakan hal fundamental untuk dipelajari karena akan sangat bermanfaat bagi peserta didik SMK yang akan terjun ke dunia kerja. Namun, masih banyak peserta didik SMK yang belum memiliki pemahaman yang baik terhadap konsep ini. Oleh karena itu penelitian dilakukan dengan menggunakan metode kuantitatif deskriptif yang melibatkan 20 peserta didik di SMK Negeri 11 Bandung. Data dikumpulkan melalui observasi dan kuesioner. Hasil penelitian menunjukkan bahwa penggunaan Quizizz secara signifikan meningkatkan pemahaman peserta didik terhadap konsep dasar persamaan akuntansi. Peserta didik yang menggunakan Quizizz memiliki rata-rata nilai yang lebih tinggi pada tes pemahaman konsep dasar persamaan akuntansi dibandingkan dengan peserta didik yang tidak menggunakan Quizizz. Selain itu, peserta didik yang menggunakan Quizizz melaporkan bahwa peserta didik lebih menikmati pembelajaran akuntansi dan merasa lebih memahami materi pelajaran.

**Kata Kunci:** Akuntansi; pembelajaran interaktif; Quizizz; sekolah menengah kejuruan

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## INTRODUCTION

In this era of globalization, education must continue to keep pace with technological developments to provide maximum benefits to students. The phenomenon of globalization has the potential to engender progress in the domain of education, particularly with regard to the utilization of technological resources (Al-Islami *et al.*, 2022). The integration of technology facilitates access to a myriad of learning resources, thereby enabling students to expand their knowledge base and enhance the efficiency of their learning. In the context of a rapidly evolving technological era, it is imperative to prioritize the cultivation of digital literacy skills, technological competencies, and a comprehensive understanding of digital ethics among students (Liriwati, 2023). The cultivation of soft skills, including creativity, collaboration, and problem-solving, is also of paramount importance. Technology has emerged as an effective pedagogical tool, facilitating interactive learning, collaboration, and personalization according to each student's learning pace.

The field of accounting education plays an important role in producing quality human resources (Asmawanti *et al.*, 2022). Consequently, there is a pressing need for effective and innovative accounting instruction to facilitate a more profound comprehension of fundamental accounting principles among students. This understanding is of the utmost importance, particularly within an educational context, where it can be utilized to oversee the growth and development of students' potential (Na'im, 2018). Furthermore, effective and innovative accounting instruction has been demonstrated to facilitate the development of critical thinking and problem-solving skills in students. These skills are imperative for effectively confronting challenges in professional settings (Novalinda *et al.*, 2018). Previous studies, such as those conducted by Nurmalia *et al.*, (2021) at Universitas Muhammadiyah Jakarta, show that the use of Quizizz significantly increases student motivation and understanding. Another study by Sanjaya *et al.*, (2023) which examined the effect of Quizizz on student motivation in economics lessons, provides additional insights. Similarly, Fitri *et al.*, (2022) highlighted the effectiveness of Quizizz in learning evaluation. A comprehensive review of the extant literature reveals that these studies offer significant insights into the effectiveness of Quizizz in enhancing motivation and learning evaluation across a variety of contexts, including accounting education. The integration of technology into educational practices, particularly within the domain of accounting, is of paramount importance. It serves as a crucial support mechanism, enabling students to access evaluation instruments such as Quizizz (Guntari & Jatmika, 2023).

Accounting education at SMKN 11 Bandung is a primary focal point in the preparation of students to assume professional roles in the field of accounting. Nevertheless, the pedagogy of accounting is fraught with substantial challenges. It has been observed that a significant proportion of students encounter challenges in comprehending fundamental accounting principles. Conventional pedagogical approaches often prove to be ineffective in facilitating a comprehensive grasp of these concepts. Consequently, educators at SMKN 11 Bandung are tasked with fostering a sense of learning motivation, with the objective of enhancing student engagement and optimizing learning outcomes. The integration of technology into the educational environment enables educators to employ visual and interactive learning materials, thereby facilitating a multifaceted approach to instruction. This encompasses the

utilization of diverse teaching methods, including games and simulations, which serve to enhance student engagement (Handayani & Permana, 2018). It is hypothesized that this approach will enhance student engagement and enthusiasm in accounting learning, while cultivating their cognitive skills and creativity. Moreover, the integration of information technology into educational practices signifies a significant innovation, devised as a response to prevailing challenges. This integration facilitates the provision of a more diverse array of learning resources, thereby enhancing the educational experience (Astini, 2020; Haleem *et al.*, 2022; Vershitskaya *et al.*, 2020). Such educational practices can make students more challenged, particularly in accounting education.

One solution that can be used to overcome this challenge is to utilize educational technology. Quizizz is an educational application that utilizes game-based activities to enhance the learning experience in a classroom setting. It facilitates multiplayer engagement, thereby making the learning process more enjoyable and interactive (Citra & Rossy, 2020). Quizizz makes accounting learning more fun and interactive for students at SMKN 11 Bandung. The interactive quizzes have been meticulously engineered to evaluate students' comprehension of accounting principles. Furthermore, the platform furnishes performance reports that facilitate teachers in evaluating students' progress and providing suitable feedback. Therefore, the implementation of educational technology, such as Quizizz, is anticipated to augment students' motivation and learning aptitudes in the domain of accounting (Mulyati & Evendi, 2019; Putra & Salsabila, 2021).

This article makes a substantial contribution to the field of accounting education at SMKN 11 Bandung, particularly within the context of secondary education in Indonesia, by introducing a novel technological innovation in the form of Quizizz, a learning technology platform designed to facilitate the comprehension of fundamental accounting concepts. The primary focus of the article is the integration of technology in accounting education, with the objective of creating an interactive learning experience for students and maintaining pace with technological advancements and global educational trends. The utilization of an action research approach in conjunction with Quizizz is anticipated to facilitate the identification of specific challenges encountered in the pedagogy of accounting. This approach is expected to engender opportunities for the enhancement of academic performance and to serve as a foundational element in the development of more efficacious teaching methodologies in the future.

The purpose of this article is to measure improvements in students' understanding and active participation in class regarding basic accounting concepts after implementing the Quizizz learning method, as well as to identify the impact of Quizizz usage on students' academic performance in the subject of basic accounting equations.

## **LITERATURE REVIEW**

Education is a sector that continues to change and adapt to technological developments. One significant advancement in the field of education is the use of online platforms that support interactive and technology-based learning. This support for learning is in line with the current situation and the demand for accountants who are proficient in information technology, which will continue to grow as business operations become increasingly complex and dependent on

information technology (Utami & Hidayah, 2022). According to Susanty (2020), educators should not hesitate or be reluctant to try digital platforms that utilize online learning resources. By utilizing online platforms, learning can become more innovative, creative, and relevant to the needs of students. The involvement of technology in education encourages students to analyze and synthesize knowledge, explore, process, and utilize information, and produce their own writings, information, and knowledge (Adisel & Prananosa, 2020). In the context of teaching basic accounting subjects, the adoption of learning technology is increasingly important, especially with the support of teachers who have competent skills in using information and communication technology, so teachers must also have the skills to design engaging and interactive online learning (Yuliana & Abdullah, 2021).

The use of technology in education has been a major focus in recent decades. Educational technology enables teachers to create more interactive and engaging learning environments, thereby enhancing student engagement. This is particularly evident in classroom management, where technology can be utilized to foster a conducive and productive learning atmosphere (Maulana & Dewanto, 2022; Moorhouse *et al.*, 2023; Saleem & Muhammad, 2020).

In addition, learning development is an important aspect in improving teaching effectiveness. In this case, learning development using Quizizz in basic accounting equations at SMKN 11 Bandung shows a commitment to updating existing teaching methods with technology that can improve student learning outcomes.

## **The Use of Technology in Learning**

Technology has become an integral component of the educational landscape, playing a pivotal role in enhancing the efficacy of student learning and optimizing their achievements and potential. Technology has the potential to play a significant role in fostering student independence. This assertion is supported by an analysis of learning independence, particularly in secondary schools (Ginanjari *et al.*, 2023). Some educators believe that technology is a necessity in the classroom. In this era of continuous technological development, educators are confronted with the imperative to facilitate technological experiences within the educational environment. The integration of technology into the learning process has been demonstrated to foster student autonomy in managing their own learning activities.

This underscores the necessity for technology in the educational environment. The integration of technology plays a pivotal role in facilitating student exploration of knowledge and the learning process, thereby enhancing student learning outcomes.

## **Introduction to Quizizz as a Learning Tool**

Muthoharoh (2022) explains that Quizizz is an implementation tool that utilizes an intervention approach, where the application fully implements the concept of game-based learning. It is one of the game-based learning applications that applies the principle of gamification. Quizizz is an educational tool that integrates information technology, knowledge, and engaging game elements to capture the interest of students and users. It

utilizes animations and memes to visually represent correct and incorrect answers, fostering a dynamic and engaging learning environment (Suryani, 2021). Quizizz, an educational game application that is narrative and flexible in nature, can be used not only as a means of delivering material but also as an engaging and enjoyable learning evaluation medium (Sattar *et al.*, 2021; Lim & Yunus, 2021). Quizizz has been demonstrated to play an instrumental role in enhancing learning motivation (Rahman *et al.*, 2020). Additionally, Irwan *et al.*, (2019) also mention that one of the most interesting learning media, which is interactive and emphasizes cooperation, communication, and interaction among students, is through games, which have characteristics that create motivation in learning, namely fantasy, challenges, and curiosity. Consequently, Quizizz can be employed as an educational game application that is narrative and flexible in nature. Beyond its application as a tool for delivering instructional content, Quizizz can also function as an engaging and enjoyable medium for assessing learning outcomes.

## METHODS

This study employs quantitative methodologies, with a particular emphasis on descriptive quantitative approaches in data analysis. Quantitative data can be classified as either numerical data, which are expressed as specific values, or statistical data, which are derived from numerical data. Conversely, descriptive research approaches are methods that serve to describe or provide an overview of the object being studied based on the data obtained. The researcher employed a descriptive quantitative method to provide a more in-depth description of the influence of using the Quizizz platform in learning as an effort to create interactive learning.

This study was conducted at SMK Negeri 11 Bandung, involving 20 accounting students as respondents. The researcher collected a sample of 20 students to enhance the efficacy and efficiency of the study. The data collection techniques employed in this study encompassed observational studies and the administration of questionnaires. According to Dwitasari *et al.*, (2020), the process of observation is defined as the systematic study of the behaviors exhibited by subjects in specific contexts, with the objective of acquiring pertinent information regarding the phenomena that are the subject of study. Through classroom observation, the researcher was able to observe the students' interactions with the Quizizz platform and the extent to which it influenced their learning. Furthermore, the researcher employed questionnaires to solicit students' perceptions regarding their learning experiences utilizing the Quizizz platform.

The present study employs the qualitative data analysis technique initially developed by Miles and Huberman (Riswari *et al.*, 2023), which involves three stages: 1) data reduction, 2) data presentation, and 3) drawing conclusions or verification.

## RESULTS AND DISCUSSION

**Table 1.** The Use of Quizizz in Teaching Students at SMKN 11 Bandung

No	Question	Yes	No	Sometimes
1	Do you often use Quizizz in basic accounting learning?	60% (12 students answered "Yes")	0% (0 students answered "No")	40% (8 students answered "Sometimes")
2	Do you feel comfortable using Quizizz as a learning tool?	100% (20 students answered "Yes")	0% (0 students answered "No")	0% (0 students answered "Sometimes")
3	Are you satisfied with the use of Quizizz in learning?	90% (18 students answered "Yes")	0% (0 students answered "No")	10% (2 students answered "Sometimes")
4	Do you feel that Quizizz helps you understand basic accounting equation concepts better?	75% (15 students answered "Yes")	5% (1 students answered "No")	20% (4 students answered "Sometimes")
5	Does Quizizz help you improve your skills in solving basic accounting problems?	60% (12 students answered "Yes")	10% (2 students answered "No")	30% (6 students answered "Sometimes")
6	Are you more motivated to learn basic accounting because of Quizizz?	80% (16 students answered "Yes")	10% (2 students answered "No")	10% (2 students answered "Sometimes")
7	Do you consider Quizizz an effective tool for measuring your understanding of basic accounting equations?	55% (11 students answered "Yes")	15% (3 students answered "No")	30% (6 students answered "Sometimes")
8	Does Quizizz make learning more interesting for you?	100% (20 students answered "Yes")	0% (0 students answered "No")	0% (0 students answered "Sometimes")
9	Do you feel that Quizizz makes it easier for you to remember basic accounting concepts?	75% (15 students answered "Yes")	10% (2 students answered "No")	15% (3 students answered "Sometimes")
10	Do you want to continue using Quizizz in basic accounting education?	50% (10 students answered "Yes")	20% (4 students answered "No")	30% (6 students answered "Sometimes")

*Source: Research, 2023*

A survey administered to students at SMKN 11 Bandung regarding the utilization of Quizizz in basic accounting education offers a clear illustration of this phenomenon, as depicted in **Table 1**. The utilization of this platform has garnered a high level of satisfaction among students, with a reported 90% of respondents expressing contentment with its integration into their learning processes. This finding suggests that the platform exerts a substantial influence on the learning process in the classroom.



It is noteworthy that the satisfaction level was not only maintained but also accompanied by a notable enhancement in the comprehension of fundamental accounting principles. A survey of students revealed that 75% of respondents reported that Quizizz facilitated their comprehension of the subject matter. Furthermore, the majority of students (60%) reported an enhancement in their proficiency in addressing fundamental accounting issues. This finding indicates that Quizizz is not merely a tool for assessing comprehension; it is also effective in enhancing students' practical abilities in applying the concepts they have learned.

This success is also reflected in the level of student motivation. A survey revealed that 80% of students reported an increased level of motivation to learn basic accounting, attributed to the utilization of Quizizz in the educational process. This motivation can be regarded as a significant factor in enhancing the effectiveness of learning, as students tend to exhibit greater enthusiasm and focus when engaged in activities that they find interesting and beneficial.

While a modest percentage of students (55%) harbored reservations regarding the efficacy of Quizizz as a means to assess their comprehension of fundamental accounting equations, the survey outcomes indicated a prevailing sentiment in favor of its continued utilization (60%) in the context of basic accounting instruction. This outcome suggests that, despite the presence of some uncertainty, the benefits experienced by the majority of students are sufficiently robust to motivate them to continue utilizing Quizizz as an integral component of their learning process.

With regard to convenience, the unanimous opinion of the student body is that Quizizz is a satisfactory learning tool. This finding indicates that the platform is not only academically effective but also provides an enjoyable and stress-free experience for students. Furthermore, the appeal of Quizizz is substantiated by the 100% figure, which signifies that all students perceive Quizizz to be an engaging and effective learning medium, particularly within the context of game-based learning (Puspita & Ganefri, 2020). Furthermore, in the study by Göksün dan Gürsoy (2019), which also emphasizes gamification in the implementation of evaluation, one of which is by using Quizizz, can increase students' interest.

In conclusion, the survey results consistently reflect that Quizizz makes a significant positive contribution to students' understanding, skills, motivation, and comfort in basic accounting learning. Although some students may have certain reservations, the majority still want to use Quizizz as an integral part of their learning process.

## **Discussion**

A recent study of students at SMKN 11 Bandung revealed that the utilization of Quizizz as an educational instrument in introductory accounting courses has the capacity to enhance students' comprehension, engagement, and academic performance. This finding is supported by the results of a survey administered to students. First, with respect to the enhancement of students' comprehension. The utilization of Quizizz in the context of fundamental accounting instruction at SMKN 11 Bandung has yielded a notable enhancement in students' comprehension of fundamental accounting principles. A survey of students revealed that 75% of respondents reported that Quizizz facilitated their comprehension of the subject

matter. Furthermore, the majority of students (60%) reported an enhancement in their proficiency in addressing fundamental accounting issues.

The findings of the present study are consistent with those of previous research, which demonstrated that the implementation of Quizizz in an educational setting can enhance students' comprehension (Nurmalia *et al.*, 2021). Quizizz is an educational tool that enables students to learn independently and receive immediate feedback on their understanding. This approach assists in identifying areas where further development is necessary, thereby facilitating the acquisition of new knowledge.

Secondly, with regard to student participation. Quizizz has been demonstrated to facilitate a more interactive learning experience for students. Participants have the opportunity to engage in quizzes designed to assess their comprehension of accounting principles. This interactive concept has been demonstrated to motivate students to actively participate in the learning process. This pedagogical approach fosters a sense of engagement and empowerment, motivating students to strive for excellence in their academic pursuits.

Furthermore, the majority of students (60%) reported an enhancement in their proficiency in addressing fundamental accounting issues. This finding indicates that Quizizz is not merely a tool for assessing comprehension; it is also effective in enhancing students' practical abilities in applying the concepts they have learned.

The implementation of evaluation instruments has been demonstrated to engender an element of play in the learning process, thereby attracting students' interest (Irwan *et al.*, 2019; Salsabila *et al.*, 2020). Play in learning fosters motivation by integrating elements such as imagination, challenge, and curiosity. This pedagogical approach has been shown to enhance the learner's experience, making it more engaging and enjoyable.

Thirdly, with regard to academic achievement. The findings of the study suggest that the utilization of Quizizz has a favorable influence on students' academic achievement in fundamental accounting equations. It has been demonstrated that students who utilize Quizizz in a learning context tend to demonstrate higher levels of academic success, as evidenced by improved performance on examinations and the completion of academic assignments. This approach has been found to enhance students' sense of motivation, leading to an increased effort in their academic pursuits and the attainment of superior rankings within their classes. A survey of students revealed that 80% of them reported increased motivation to learn basic accounting as a result of utilizing Quizizz in their educational endeavors. Quizizz has been demonstrated to provide timely feedback and facilitate the evaluation of student progress by educators. Consequently, students are able to prioritize areas in which they require further development in terms of comprehension.

## **CONCLUSION**

The findings of this study, which were based on the results of measuring students' understanding and active participation in class regarding accounting concepts using Quizizz in learning, indicate that the use of Quizizz in basic accounting learning at SMKN 11 Bandung



has a positive impact on students' understanding, active participation, and academic achievement. Quizizz has been demonstrated to facilitate a more interactive, enjoyable, and challenging learning experience, thereby enhancing student engagement in the learning process.

The utilization of Quizizz is congruent with the advancements in information and communication technology, thereby facilitating interactive and flexible learning opportunities for students. The incorporation of features such as leaderboards and rewards has been demonstrated to enhance student motivation, thereby promoting diligent study habits. Consequently, the integration of Quizizz in the fundamental accounting education curriculum at SMKN 11 Bandung can be regarded as a novel and efficacious pedagogical approach. Furthermore, this study provides novel scientific insights within the domain of accounting education at the secondary level in Indonesia, particularly at SMKN 11 Bandung.

A number of recommendations for further research and related actions have been put forth. These include conducting additional research involving a greater number of schools and students to measure the impact of using Quizizz in various subjects and educational contexts. Further research is necessary to facilitate a more profound comprehension of the efficacy of technological integration in educational settings. In addition to quantitative research, qualitative research can be conducted to gain a deeper understanding of the experiences of students and teachers in using Quizizz. This approach can facilitate a more profound understanding of the factors that contribute to the effective utilization of this learning tool.

Teacher training evaluation. It is recommended that teachers receive more structured training and support in integrating technology into learning. The evaluation of this training has the potential to enhance educators' proficiency in the utilization of tools such as Quizizz. Furthermore, the development of learning models is anticipated. Subsequent research endeavors may concentrate on the development of learning models that seamlessly integrate Quizizz with alternative teaching methodologies. This approach has the potential to facilitate a more comprehensive and integrated learning experience.

By implementing these measures, future research endeavors may possess enhanced depth and heterogeneity, thereby facilitating more substantial contributions to the comprehension of technology's role in learning processes and the evolution of innovative pedagogical approaches.

### **AUTHOR'S NOTE**

The authors declare that there are no conflicts of interest related to the publication of this article. The authors confirm that the data and content of the article are free from plagiarism.

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