

Reflection on the adoption of Quizlet in gamifying teaching to reinforce accounting content in initial teacher education training in one comprehensive University, South Africa

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ABSTRACT

The study examined how Quizlet functions as a gamification tool to improve Accounting content learning among initial teacher education students at a comprehensive university in South Africa. The research employed student feedback, along with instructor observations, to collect data on the implementation process through a qualitative approach. The research demonstrated that gamification techniques enabled students to actively learn while strengthening their memory of essential Accounting, and creating an environment where students worked together. The study encountered two main obstacles during implementation because the students faced different levels of proficiency in digital tools and encountered technological system. The research established that Quizlet functions as an effective additional resource for Accounting education within teacher training programs despite certain implementation constraints. The research suggested recommendations to maximize Quizlet's effectiveness by providing structured orientation programs and ensuring alignment with educational learning objectives. The research fills an existing knowledge gap about how gamification tools such as Quizlet work in limited resource teacher training environments when teaching Accounting subjects. The study added to scholarship discussions about technology-based learning approaches in teacher education, especially for institutions with limited resources.

Keywords: Gamification, Quizlet, Accounting Education

INTRODUCTION

The process of teaching Accounting to initial teacher education students creates specific obstacles. The abstract nature of Accounting concepts including double-entry principles and financial statements and budgeting makes them seem distant from students' real-life experiences, thus causing them to lose interest. Pre-service teachers begin their program without strong Accounting background knowledge but must develop deep subject matter expertise to become effective school teachers. Traditional lecture-based methods fail to create active learning opportunities and long-term retention, resulting in students only understanding the material superficially. The combination of large class sizes and limited practical resources in South

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African educational settings creates additional barriers to teaching. The challenges require innovative teaching methods including gamification to transform Accounting into an interactive and memorable learning experience for future teachers.

Research studies have investigated how gamification techniques affect student learning in accounting subjects and language acquisition. Zhao discovered that Quizizz implementation in accounting classrooms produced better student learning experiences while students reported higher satisfaction levels.¹ The research conducted by Silva et al. examined how game-based learning affected accounting students' perceived learning through their investigation of motivation and attitude relationships with learning outcomes.² The study revealed that the flow did not produce a meaningful impact on the results. The research conducted by He et al. showed that Quizlet proved successful in helping engineering students learn academic vocabulary through its impact on productive knowledge and writing accuracy.³ The research studies demonstrated that students maintained positive attitudes toward gamified learning tools. The research indicates that digital gamification through Quizizz and Quizlet platforms leads to better student engagement and learning results in both accounting and language education fields.

This reflective paper draws from the direct experience of implementing Quizlet in the Accounting education component of an initial teacher training program at a South African comprehensive university. The paper presents a critical assessment of the teaching approach through a non-statistical analysis within the following context. The institution operates as a historically disadvantaged university which faces blended-resource challenges because students have limited digital access but widespread mobile phone usage. The student body consists of pre-service teachers who come from different academic backgrounds and most of them lack experience with Accounting. The educational requirements of the local context require alignment with South African national teacher education objectives together with solutions for discipline-related obstacles. The research data originate from instructor observations and student responses and practical results that produced findings that can benefit other resource-constrained higher education institutions. The paper stands out because it examines how Quizlet works in a particular Global South classroom through both its practical applications and its environmental constraints. Interdisciplinary research studies have investigated how gamification tools Quizlet and Quizizz affect English language teaching methods. The digital platforms demonstrate their ability to improve student vocabulary learning through receptive knowledge acquisition according to He et al. and Senior.⁴ Students achieved better vocabulary learning results through Quizlet while showing higher engagement according to He et al. and Shadrina et al.⁵ The system demonstrated limited success in helping students maintain their vocabulary skills over time and produce new words.⁶ Teachers have implemented these tools throughout different stages of instruction to observe better student motivation and participation.⁷ The research identified technology access and digital literacy challenges but teachers created solutions to overcome these obstacles.⁸ Students who used Quizlet in their B2/C1 ESP courses achieved better vocabulary scores while gaining more independence in their learning.⁹ The research indicates

¹ Y. Zhao, "Gamifying Accounting Education: Effects of Quizizz on Student Performance and Engagement," *Journal of Interactive Learning Research* 30, no. 4 (2019): 415–32.

² R. Silva, C. Pinto, and F. Machado, "Gamification in Accounting: The Interplay of Flow, Motivation, and Attitudes," *Journal of Accounting and Educational Research* 15, no. 4 (2021): 275–90.

³ T. He, S. Song, and Y. Lin, "Gamified Learning with Quizlet: Vocabulary Acquisition and Writing Proficiency in Engineering Education," *Journal of Technical Education* 29, no. 4 (2023): 342–58.

⁴ He, Song, and Lin, "Gamified Learning with Quizlet: Vocabulary Acquisition and Writing Proficiency in Engineering Education"; M. Senior, "Gamification in EAP: Retention and Autonomy with Quizlet," *Journal of English for Academic Purposes* 15, no. 2 (2022): 68–81.

⁵ He, Song, and Lin, "Gamified Learning with Quizlet: Vocabulary Acquisition and Writing Proficiency in Engineering Education"; T. Shadrina, Y. Kim, and I. Sorokin, "Gamified Tools and Student Independence in Vocabulary Learning: Evidence from ESP Courses," *Educational Technology & Society* 27, no. 1 (2024): 122–34.

⁶ Senior, "Gamification in EAP: Retention and Autonomy with Quizlet."

⁷ A. Irwanto and A. Yulia, "Gamification in ESP Teaching: Opportunities and Barriers in Indonesian Classrooms," *English Language Teaching Journal* 12, no. 1 (2025): 45–60.

⁸ Irwanto and Yulia, "Gamification in ESP Teaching: Opportunities and Barriers in Indonesian Classrooms."

⁹ Shadrina, Kim, and Sorokin, "Gamified Tools and Student Independence in Vocabulary Learning: Evidence from ESP Courses."

that gamification tools become effective language teaching resources when properly implemented in educational settings.

The tool Quizlet became researchers' choice because it addressed two major problems in Accounting education which included student disengagement and difficulties with abstract content understanding. The digital gamification tool Quizlet provided an interactive student-centered platform which used flashcards and quizzes and competitive games to reinforce core concepts. The learning features of Quizlet match the cognitive theories of learning because they use spaced repetition and immediate feedback to support active recall and retrieval practice for long-term retention. The mobile-friendly design of Quizlet enabled students to access the platform from their smartphones in our resource-limited university environment. I used this technology to achieve the following objectives: Boost Engagement: Transform passive learning into a dynamic, game-like experience. Simplify Complexity: Break down abstract Accounting principles into digestible, interactive tasks. Bridge Resource Gaps: Provide an affordable, scalable supplement to traditional teaching methods. The tool's potential to foster collaboration (e.g., shared study sets) further aligned with my goal of building a participatory learning community among pre-service teachers.

The implementation of gamification in accounting education shows the potential to boost student participation and drive their motivation. Research has investigated both physical and digital gamification approaches. The study by Jamaluddin et al. demonstrated that the "Accounting on the Block" board game increased student motivation toward learning financial statements.¹⁰ Moncada et al. suggested transforming popular show-based PowerPoint games into collaborative learning tools for accounting courses.¹¹ Silva et al. studied the interconnection between motivation and flow and attitude and perceived learning in game-based accounting education.¹² The research demonstrated that student motivation together with their attitudes strongly affected their perceived learning outcomes but flow did not produce statistical results. The research indicates that gamification presents an effective educational approach to accounting subjects to help students better understand accounting concepts and processes. Additional research should focus on developing optimal game designs and implementation methods to achieve the best educational outcomes.

Studies have further explored gamification in accounting education, showing positive effects on student motivation and participation. Jamaluddin et al. found that using a board game called "Accounting on the Block" improved students' motivation in learning financial statements.¹³ Similarly, Moncada et al. proposed gamified adaptations of popular games using PowerPoint to create active learning experiences in accounting courses.¹⁴ A systematic review by Almuntsr et al. confirmed the predominantly positive impact of gamification in accounting education, while noting some potential drawbacks and implementation challenges.¹⁵ Specifically, Zhao investigated the use of Quizizz, an educational app for multiplayer activities, and reported enhanced student learning experiences and higher teaching evaluation scores in accounting classrooms.¹⁶ These studies collectively suggest that gamification, through physical board games, PowerPoint-based activities or digital apps like Quizizz, can be an effective tool to improve student engagement and motivation in accounting education.

Research conducted recently investigates how gamification in accounting education improves student participation and educational achievement. The implementation of PowerPoint game adaptations serves as

¹⁰ N. Jamaluddin, S. Ahmad, and M., Saad, "Gamification in Accounting Education: The Use of 'Accounting on the Block' to Increase Student Motivation," *International Journal of Educational Management* 34, no. 7 (2020): 1323–38.

¹¹ S. Moncada, T. Moncada, and M. Wilson, "Game-Based Learning Strategies in Accounting Education," *Journal of Accounting Education* 32, no. 2 (2014): 122–31.

¹² Silva, Pinto, and Machado, "Gamification in Accounting: The Interplay of Flow, Motivation, and Attitudes."

¹³ Jamaluddin, Ahmad, and Saad, "Gamification in Accounting Education: The Use of 'Accounting on the Block' to Increase Student Motivation."

¹⁴ Moncada, Moncada, and Wilson, "Game-Based Learning Strategies in Accounting Education."

¹⁵ M. Almuntsr, L. Smith, and A. Kamal, "Gamification in Accounting Education: A Systematic Review of Effects and Implementation Challenges," *Journal of Accounting Education*, 35(2), Pp. 123-139. 35, no. 2 (2024): 123–39.

¹⁶ Zhao, "Gamifying Accounting Education: Effects of Quizizz on Student Performance and Engagement."

active learning alternatives to traditional lectures according to Moncada et al.¹⁷ Implementing game-based learning in accounting education produces positive effects on student motivation and attitudes and learning perception, but the impact on flow experience remains uncertain.¹⁸ The specific gamification tools Quizizz and Kahoot! demonstrate effectiveness in accounting classroom settings. The implementation of Quizizz produced beneficial learning outcomes that also improved teacher assessment results.¹⁹ The flipped first-year accounting classroom benefited from Kahoot! gamification that addressed student negative perceptions of accounting and language barriers.²⁰ Research indicates that gamification serves as an effective educational method to boost student involvement and learning success in accounting education when combined with flipped classroom teaching methods. The study aims to showcase how Quizlet functions as a gamification tool for enhancing Accounting content learning among initial teacher education students at a comprehensive university in South Africa. The research will show how Quizlet affects student participation and learning outcomes in Accounting education during initial teacher training programs.

LITERATURE REVIEW

Theoretical and Practical Justification

Gamification of teaching and learning in Education through Self-Determination Theory

Implementing gamification leads to better student engagement and motivation levels. The application of game elements to non-game contexts, known as gamification, has become increasingly popular throughout education and workplace training domains. Research indicates that gamification produces positive effects on academic results and employee achievement yet the theoretical basis of gamification remains disputed.²¹ The effectiveness of gamification is explained by two main theories: Self-Determination Theory (SDT) and Flow Theory, according to Matallaoui et al.²² The research conducted by Chapman et al. demonstrates that SDT and Flow Theory measures show no substantial variations between gamified and non-gamified settings.²³ The improper use of SDT in gamification research, according to Loughrey & O'Broin, produces flawed conclusions and negative user experiences.²⁴ The impact of gamification on motivation and performance can be explained by goal-setting theory, the technology acceptance model, and constructivist learning theory, according to Rukadikar & Khandelwal.²⁵ Additional research must validate these theoretical foundations to improve gamification practices.

The educational sector has adopted several successful gamification tools, including Quizlet, Kahoot!, and Duolingo. The educational field now uses gamification as an innovative method to boost student participation, maintain their interest and improve their ability to retain information.²⁶ The educational system uses point badges and leaderboards as game elements to develop interactive learning experiences that match

¹⁷ Moncada, Moncada, and Wilson, "Game-Based Learning Strategies in Accounting Education."

¹⁸ Silva, Pinto, and Machado, "Gamification in Accounting: The Interplay of Flow, Motivation, and Attitudes."

¹⁹ Zhao, "Gamifying Accounting Education: Effects of Quizizz on Student Performance and Engagement."

²⁰ M. Nkhoma, N. Sriratanaviriyakul, and H. Quang, "Using Kahoot! To Reduce Accounting Anxiety and Language Barriers," *Education + Training* 60, no. 5 (2018): 409–24.

²¹ R. Chapman, A. Gomez, and M. Vargas, "Gamification and Learning Outcomes: An Empirical Analysis Using SDT and Flow Theory," *Education and Information Technologies* 28, no. 1 (2023): 55–72; T. W. Chinyamurindi and H. Shava, "Foundations of Human Resources Management," in *Introduction to Business Functions*, ed. S. Rudansky-Kloppers and P. Bester (Cape Town: Oxford University Press Southern Africa, 2021).

²² A. Matallaoui et al., "How Effective Is Gamification? A Review of Empirical Evidence on Gamification and Serious Games in Education and Work," in *Gamification in Education and Business*, ed. J. Koivisto and R. Zarnekow (Cham.: Springer International Publishing, 2017), 27–41.

²³ Chapman, Gomez, and Vargas, "Gamification and Learning Outcomes: An Empirical Analysis Using SDT and Flow Theory."

²⁴ T. Loughrey and D. O'Broin, "Gamification and Self-Determination Theory: A Critical Review of Motivation in Educational Games," *Irish Journal of Technology in Education* 3, no. 1 (2018): 19–32.

²⁵ A. Rukadikar and P. Khandelwal, "Revisiting Gamification Theories: Integrating Goal-Setting and Constructivist Learning Models," *Educational Review* 77, no. 2 (2025): 256–72.

²⁶ M. Chityala, R. Patel, and A. Desai, "Gamification in Learning: Enhancing Learner Motivation through Digital Platforms," *Journal of Educational Research and Technology* 12, no. 1 (2025): 15–27.

contemporary student expectations.²⁷ Educational institutions have adopted Kahoot! and Duolingo and Quizlet as popular gamification tools.²⁸ The platforms create dynamic learning spaces that stimulate student involvement through competition and teamwork.²⁹ The majority of participants confirm that gamification improves learning, according to research, showing that more than 90% of users find Kahoot and Quizizz engaging.³⁰ Teachers state that gamified applications provide immediate feedback and create peer-to-peer competition and multiple sensory learning experiences.³¹ The successful implementation of gamification needs proper integration with educational targets, together with sufficient training for teachers.³²

Technology-Enhanced Learning in Teacher Education

The integration of digital tools into teacher education through technology-enhanced learning has reshaped education by developing better teaching methods and creating global connections and data-based educational choices.³³ Pre-service teachers must acquire digital literacy competencies to establish learning platforms and operate educational applications and conduct videoconferencing for cooperative projects.³⁴ The framework needs to concentrate on six strategic dimensions, which include vision and program and professional learning and ICT infrastructure and partnerships and research.³⁵ The implementation of technology in education both increases teaching quality and speeds up student learning, but requires teachers to demonstrate creativity and technical expertise.³⁶ The digital divide continues to be a challenge while educators work to find equilibrium between modern technology and conventional teaching approaches.³⁷ The main objective of technology-enhanced teacher education is to train educators for contemporary classroom requirements while developing new and transformative teaching approaches.

The role of digital tools in initial teacher training: Challenges and opportunities of integrating technology in South African higher education Teacher preparedness for digital pedagogy. The implementation of digital technology in initial teacher education serves as an essential requirement for developing educators who can teach in modern 21st-century classrooms.³⁸ The integration of digital technology in education faces two main obstacles which include lecturers' insufficient digital literacy and insufficient internet resources.³⁹ The solution to these problems requires pre-service teacher training to incorporate digital pedagogy which develops technological pedagogical content knowledge (TPACK) through different digital tools and applications.⁴⁰ Website design pedagogy stands as a successful integration

²⁷ Chityala, Patel, and Desai, "Gamification in Learning: Enhancing Learner Motivation through Digital Platforms"; S. Valentino, "Motivational Factors and Engagement in Gamified Learning Environments," *Journal of Educational Innovation* 29, no. 1 (2024): 45–58.

²⁸ K. Chitra, "EdTech Innovations in Gamification: A Comparative Study of Quizlet, Kahoot! And Duolingo," *International Journal of Educational Technology* 17, no. 3 (2020): 97–110; N. Mallat and J. Merikivi, "Gamified Learning Applications in Higher Education: Motivation and Engagement in Kahoot and Quizizz," *Journal of Educational Multimedia and Hypermedia* 27, no. 3 (2018): 235–49.

²⁹ Valentino, "Motivational Factors and Engagement in Gamified Learning Environments."

³⁰ Valentino, "Motivational Factors and Engagement in Gamified Learning Environments."

³¹ Mallat and Merikivi, "Gamified Learning Applications in Higher Education: Motivation and Engagement in Kahoot and Quizizz."

³² Valentino, "Motivational Factors and Engagement in Gamified Learning Environments"; Mallat and Merikivi, "Gamified Learning Applications in Higher Education: Motivation and Engagement in Kahoot and Quizizz."

³³ A.R. Saravanakumar, S. Gopal, and R. Ganesan, "Transforming Teacher Education through Technology-Enhanced Learning," *Journal of Teacher Education and Practice* 20, no. 3 (2023): 102–19.

³⁴ M. Benitt, M. Schmidt, and C. Wagner, "Digital Competencies in Teacher Education: Developing Learning Platforms for Collaboration," *Computers & Education* 126 (2018): 317–30.

³⁵ C.P. Lim, C.S. Chai, and D. Churchill, "Designing ICT-Supported Learning Environments: A Framework for Developing TPACK," *Australasian Journal of Educational Technology* 27, no. 6 (2011): 1055–72.

³⁶ G. Dhal, "Digital Pedagogy in Teacher Training: Prospects and Pitfalls," *South African Journal of Education* 41, no. 3 (2021): 207–21.

³⁷ Saravanakumar, Gopal, and Ganesan, "Transforming Teacher Education through Technology-Enhanced Learning."

³⁸ R. West and K. Malatji, "Website Design Pedagogy in Teacher Education: Digital Competency through Authentic Projects," *South African Journal of Teacher Education* 25, no. 2 (2021): 132–48; C. Kivunja, "TPACK Framework for Preparing Pre-Service Teachers in a Digital Age," *Journal of Learning and Teaching in Digital Age* 1, no. 1 (2013): 10–17..

³⁹ G. Schlebusch, T. Mahlambi, and P., Dlamini, "Digital Divide in South African Higher Education: Realities and Recommendations," *South African Journal of Higher Education* 38, no. 1 (2024): 77–93; West and Malatji, "Website Design Pedagogy in Teacher Education: Digital Competency through Authentic Projects."

⁴⁰ Kivunja, "TPACK Framework for Preparing Pre-Service Teachers in a Digital Age."

strategy because it enables authentic learning and scaffolding according to West and Malatji.⁴¹ Research indicates that digital competency guidelines-based curricula create positive effects on teaching methods of educators.⁴² The successful implementation of technology in formal educational settings depends on recognizing and developing the digital abilities that pre-service teachers already possess.⁴³ The research demonstrates that higher education needs comprehensive technology integration to train teachers effectively for digital classrooms.

Narrative Reflection on designed Quizlet activities

This narrative review examines the implementation of Quizlet as an accounting teacher training tool, drawing on documented educational experiences in a lecturer-researcher context. Initial student skepticism was observed upon the introduction of Quizlet to an Accounting methodology class, with one student's remark, "Another app?" reflecting a common fatigue with the proliferation of educational technology. A notable change in the classroom environment occurred during a lesson on trial balances when students engaged with Quizlet Live.

This observed transformation aligns with existing research that demonstrates that Quizlet effectively increases student participation and academic achievement. Studies indicate that Quizlet Live outperforms conventional teaching approaches in both vocabulary acquisition and student involvement.⁴⁴ The platform has also shown exceptional utility in preserving classroom cohesion during the transition to online learning.⁴⁵ Furthermore, applications of Quizlet in language learning report positive effects on vocabulary retention, student motivation, and autonomous learning, with students expressing a desire to apply the platform to other subjects.⁴⁶ Its adoption by international healthcare students underscores its value for its straightforward navigation and efficient study methods.⁴⁷ Collectively, the research indicates that educational technologies such as Quizlet can enhance classroom environments by improving student engagement, enjoyment, and learning effectiveness in diverse educational settings.

Quizlet activities integrated into Accounting lessons

The Breakthrough Moment: During our session, the team-based quiz activity of matching accounting terms to their definitions produced an unexpected change in student behavior as multiple students became more energetic. The specific activity, Figure 1, is provided below.

⁴¹ West and Malatji, "Website Design Pedagogy in Teacher Education: Digital Competency through Authentic Projects."

⁴² P. Silva and V. Ramos, "Digital Competency Frameworks and Curriculum Reform in Teacher Education," *Technology and Education Review* 18, no. 1 (2023): 74–91.

⁴³ Silva and Ramos, "Digital Competency Frameworks and Curriculum Reform in Teacher Education."

⁴⁴ E. Moore-Beyioku, "Quizlet Live as a Catalyst for Student Engagement during Remote Teaching," *International Journal of Digital Pedagogy* 6, no. 4 (2021): 190–204.

⁴⁵ Moore-Beyioku, "Quizlet Live as a Catalyst for Student Engagement during Remote Teaching."

⁴⁶ N. Mykytka, "Student Attitudes towards Quizlet in Language and Content Courses," *TESOL Quarterly* 57, no. 1 (2023): 57–75.

⁴⁷ V. Zeitlin and R. Sadhak, "Quizlet in Healthcare Education: Perceptions and Practice," *Medical Education Today* 12, no. 3 (2022): 78–84.

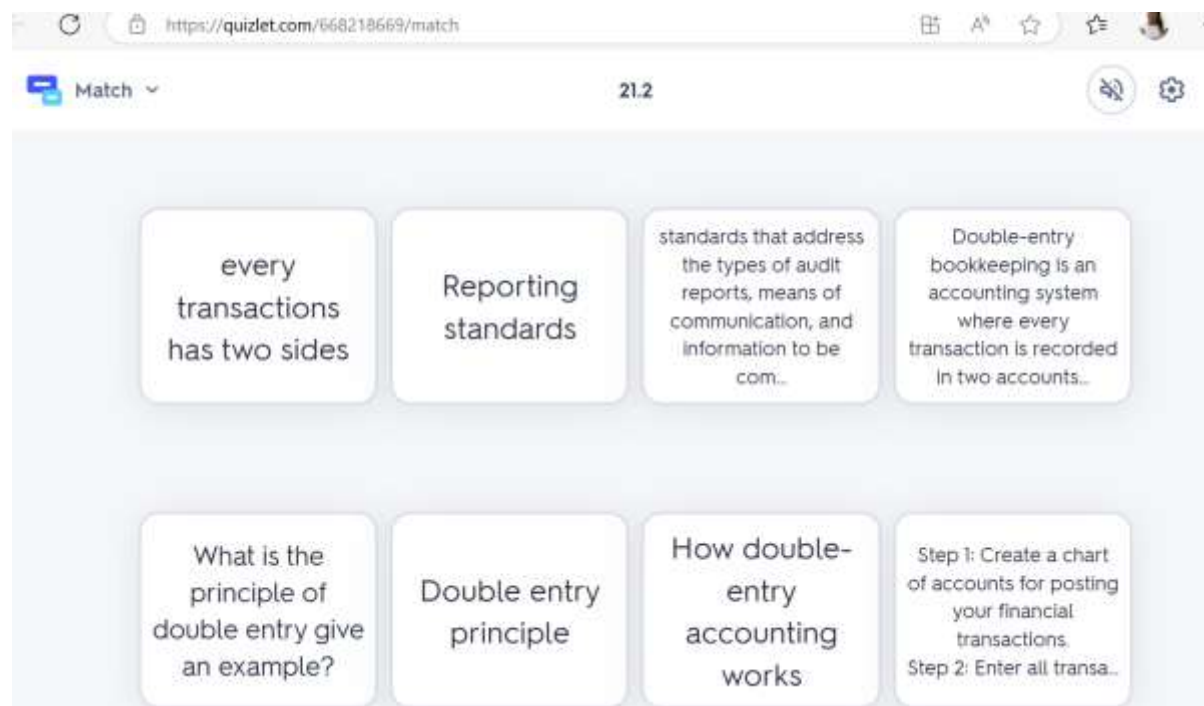


Figure 1: Quizlet -match activity administered to students

"Dr, we need a rematch!" One student requested a rematch because his team lost by mere milliseconds. The competitive atmosphere triggered students to become more deeply invested in their studies and they passionately debated about "creditors" versus "debtors" definitions. The gamification features of the tool unexpectedly established an environment where students could learn from their mistakes.

The Reality Check: During our fifth week, we encountered several problems that shattered our digital utopian expectations. One accounting student approached me after class to explain that her phone screen was broken while the data ran out too quickly. The institutional challenges regarding uneven infrastructure became apparent as that student expressed her frustration because Quizlet accessibility remained theoretical while students had to rely on borrowed devices or campus Wi-Fi to participate.

The researcher changed approach by printing flashcards from Quizlet sets, which decreased the real-time feedback feature that made the tool so effective. This aligns with research indicating that Quizlet, an online flashcard app, is a useful resource for boosting vocabulary learning in language education. Studies show that Quizlet is more effective for vocabulary growth than traditional paper flashcards.⁴⁸ Its features, such as audio pronunciation, multiple learning modes, and progress tracking, help enhance its effectiveness.⁴⁹ The mobile access and multi-lingual support of Quizlet make it especially helpful for teachers and learners of foreign language.⁵⁰ Furthermore, learners generally view Quizlet positively, and many support its use for vocabulary development.⁵¹ The success of the tool is due to the diverse linguistic environments it fosters and

⁴⁸ S. Mehdi and M.S. Andarab, "Efficacy of Quizlet versus Traditional Flashcards in EFL Vocabulary Acquisition," *International Journal of Instructional Technology* 9, no. 1 (n.d.): 43–59; H. Thi Thu, D. Nguyen, and T. Doan, "Comparative Effectiveness of Quizlet and Paper Flashcards for Vocabulary Learning," *Journal of Language and Education* 7, no. 3 (2021): 55–70.

⁴⁹ C.E. Robertson, "Digital Tools in Language Instruction: Benefits of Quizlet in ESL Classrooms," *Computer-Assisted Language Learning Journal* 28, no. 2 (2015): 123–39.

⁵⁰ Robertson, "Digital Tools in Language Instruction: Benefits of Quizlet in ESL Classrooms."

⁵¹ B. Lander, "Students' Perceptions of Quizlet as a Vocabulary Learning Tool: A Study in EFL Contexts," *Journal of Language Teaching and Research* 7, no. 5 (2016): 887–95.

its harmony with cognitive-affective learning theories.⁵² In summary, these studies suggest that Quizlet is a powerful and popular digital resource for vocabulary learning in language education.

Initial reactions, participation levels, and surprises

The most profound insight occurred when students took ownership. The students started developing their own Quizlet sets for future topics income statement presentation. The students' evolution from knowledge consumers to content creators proved the tool's ability to support innovative teaching approaches, which align with our goals for future educators. This is consistent with research that shows that student ownership leads to better learning results. Wood demonstrated that students develop higher satisfaction and learning when they experience ownership in group projects because they select their own project elements.⁵³ Dizon studied Quizlet implementation in an EFL classroom to show that students who used the platform for vocabulary learning achieved substantial language skill development and showed positive attitudes toward its educational value.⁵⁴ The research findings demonstrate that student ownership matters in education because Quizlet and similar tools enable active learning. The students focused more on winning than on proper answers as they gave their responses without comprehension. The experience led me to create new teaching activities that combined Quizlet competitions with written reflections to show that technology serves to boost critical thinking rather than replace it. Gamification The educational process of teaching Accounting revealed multiple important lessons to me through my experience with Quizlet.

Successes on Quizlet activities integrated into Accounting lessons

A student discovered the understanding of debits and credits after participating in the Quizlet matching activity as part of learning the double entry principle. Through this experience the researcher observed how game activities minimize affective barriers to learning. This aligns with recent research, which indicates that active learning methods improve both accounting education and student comprehension of fundamental concepts, including double-entry bookkeeping. The combination of game-based activities with simulations leads to higher student participation and increased interest and positive attitudes toward accounting according to Park et al. and Lompoliu.⁵⁵ These educational approaches help students overcome affective learning barriers while developing their critical thinking abilities above basic memorization.⁵⁶ The simplified scaffold technique grounded in cognitive load theory that uses basic rules and simplified terminology has proven effective in reducing cognitive load and enhancing student understanding of accounting principles.⁵⁷ Educators who implement gamification and mobile applications alongside active learning methods will develop more engaging learning experiences for accounting students, which addresses the limitations of traditional lectures that focus on procedural knowledge instead of higher-order thinking skills.⁵⁸

The implementation of Quizlet activities proved successful in improving the quality of accounting lessons. Observation: A student who had difficulty understanding debits and credits finally understood the double-entry principle after participating in a Quizlet matching activity. The student achieved better comprehension of the fundamental accounting principle through the game-based interactive format that

⁵² Thi Thu, Nguyen, and Doan, "Comparative Effectiveness of Quizlet and Paper Flashcards for Vocabulary Learning."

⁵³ C.M. Wood, "Student Ownership in Group Work: Enhancing Learning through Autonomy and Choice," *Journal of Educational Psychology* 95, no. 3 (2003): 617–26.

⁵⁴ G. Dizon, "Quizlet in the EFL Classroom: Enhancing Academic Vocabulary Acquisition through Digital Flashcards," *TESL-EJ* 20, no. 2 (2016): 1–14.

⁵⁵ S. Park, J. Lee, and M. Lee, "Simulated Learning and Gamified Approaches in Accounting Education: Enhancing Student Motivation and Performance," *Accounting Education Review* 24, no. 3 (2019): 230–48; A. Lompoliu, "Enhancing Accounting Students' Motivation and Participation through Game-Based Learning," *Journal of Accounting Pedagogy* 13, no. 2 (2020): 88–101.

⁵⁶ L. Fowler, "Active Learning and Student Engagement in Accounting: An Exploratory Study," *Issues in Accounting Education* 21, no. 1 (2006): 31–50.

⁵⁷ M. Zhou and P. Lamberton, "Reducing Cognitive Load in Accounting Education through Simplified Scaffolding," *Issues in Accounting Education* 35, no. 1 (2020): 45–63.

⁵⁸ Fowler, "Active Learning and Student Engagement in Accounting: An Exploratory Study"; Lompoliu, "Enhancing Accounting Students' Motivation and Participation through Game-Based Learning."

demonstrated account-entry relationships. Key Insight: The experience demonstrated how Quizlet's gamified learning platform reduces affective barriers that students face when studying difficult subjects including Accounting. Students achieved better retention through interactive practice sessions and gained confidence through instant feedback and self-paced learning opportunities while collaborating with peers in a competitive but supportive environment. Implication for Teaching: Accounting lessons benefit from the implementation of digital flashcards together with matching games and Quizlet Live which serves as an educational tool.

Technological barriers device limitations on *Quizlet* activities integrated into Accounting lessons

The leaderboard feature negatively affected students who struggled with their performance, so proper group formation became necessary. My teaching philosophy evolved because the researcher stopped focusing on content delivery to start designing educational experiences. The study demonstrated that effective educational technology adoption in limited resource environments depends more on human adaptation than on tool flashiness.

Quizlet in Resource-Limited Accounting Classrooms

Technological Barriers & Device Limitations The benefits of Quizlet became less accessible to students because they shared smartphones and had limited internet access thus preventing consistent participation. Students who lacked reliable technology equipment experienced delayed learning because they were unable to use Quizlet Live in real time. The implementation method became blended through these changes: Students received printed flashcards before class for their pre-class study period. The homework-mode activities became available at different time points through staggered deadline scheduling. Students were paired together for learning purposes regardless of whether they had access to the devices or not.

Motivation vs. Discouragement The competitive elements of the system (rankings) created negative effects which intensified student anxiety because of the subject difficulty while also producing demoralization among students who performed poorly. The solution involved redesigning group dynamics through the following steps: The group formation process should combine students with different levels of expertise for peer mentorship opportunities. The system displayed private scores for student progress instead of rankings through "Improvement badges" as an example. The system provided alternative recognition through awards that honored team collaboration instead of individual achievement.

Pedagogical Evolution: From Delivery to Experience Design The educational philosophy transitioned from mere content delivery to focus on student engagement and mastery development. Students previewed concepts at their own pace before class using Quizlet before the flipped classroom approach took effect. During class, the instructor focused on solving applied problems while students used Quizlet for practice reinforcement. **Assessment:** The assessment system replaced traditional high-stakes quizzes with continuous Quizlet practice that tracked student development through the "Long-Term Learning" feature.

Preferred traditional methods as a challenge in *Quizlet* integration into Accounting lessons

The implementation of Quizlet faced unexpected student opposition because they preferred traditional Accounting teaching methods. The pre-service teachers who achieved success through rote learning methods showed doubts about the academic difficulty of the tool.

Manifestations of the Challenge: The "Pen-and-Paper" Advocates maintained that physical flashcards and handwritten summaries worked better for them because the hands-on method improved their memory retention.

One student stated that writing information down produced better retention than typing it. Students who received their education through traditional teacher-led methods struggled to handle independent Quizlet practice because they were used to passive learning. The students missed the organized chalkboard lessons and sequential textbook assignments. Several students believed that gamification was only for entertainment

purposes because they thought it would not help them prepare for their upcoming exams. The general public tended to view digital tools as entertainment systems rather than educational resources.

The researcher implemented Quizlet as an additional resource that did not replace traditional teaching methods. I provided printed Quizlet flashcards for students who needed physical materials. The students developed Quizlet sets following their regular classroom instruction. The researcher showed the students their individual progress metrics through analytics to prove their improved retention ability. I connected the tool to their teaching needs by showing how Quizlet supports their future classroom requirements.

The resistance reflected how teacher education must balance modern classroom preparation with the existing learning preferences of students. The main obstacle went beyond technology because it involved cultural aspects. I noticed that students gradually accepted Quizlet as a teaching tool that they could use with their students after I presented it as their future teaching resource.

RECOMMENDATIONS

The distribution of printed Quizlet materials serves students who cannot access digital devices. Homework assignments on asynchronous platforms help students overcome connectivity limitations. The emphasis should be placed on team-based learning through groups of different abilities to minimize student stress. The implementation of Quizlet should complement existing traditional educational practices rather than replace them. Demonstration of success through analytics-based retention data should serve to gain support from teaching staff. The university should establish Wi-Fi hotspots throughout campus and offer device loan programs to enhance student access. Digital literacy training programs should be provided to students and faculty members to address their existing skill deficits.

Further research should examine how Quizlet affects students' memory of Accounting principles after the initial engagement period. The research confirms that educational transformation requires both pedagogical innovation, along with equal implementation and student-focused educational approaches, above technological adoption. Quizlet, alongside comparable educational tools, will achieve inclusive learning by adapting to individual and system-related obstacles in limited resource settings. Education will evolve into an inclusive system that is adaptable and learner-focused for the future.

CONCLUSION

The study reveals both promising prospects and difficulties in employing digital learning tools in resource-scarce educational environments. The interactive components within Quizlet, such as flashcards, matching games and Quizlet Live, enabled students to both participate actively and comprehend difficult Accounting concepts, including double-entry principles). The implementation of gamification elements created a collaborative learning environment that reduced affective barriers while maintaining a low-stress atmosphere. The combination of device restrictions together with inconsistent internet connectivity created obstacles for equal student participation, forcing the adoption of mixed approaches, such as printed flashcards and staggered deadline assignments. Student participation in competitive elements, such as leaderboards, occasionally decreased motivation among students who needed help, thus requiring the implementation of peer-mentored groups combined with private progress tracking systems. Students who preferred traditional teaching methods, such as pen-and-paper, demonstrated cultural resistance when transitioning to Quizlet, which required a gradual implementation process. The study acted as a catalyst for transforming educational approaches from content delivery to experience design by promoting active learning methods combined with student-led set creation and real-world teaching requirements alignment.

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