Gender-Based Preferences and Experiences in Using Interactive Quiz Platforms: A Qualitative Study of EFL Students

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Abstract

This study investigates gender-based differences in students' preferences and experiences with interactive quiz platforms Quizizz and Kahoot among English Tadris students at STAIN Mandailing Natal. Employing a qualitative descriptive approach, the research involved 30 participants, equally divided by gender (15 male and 15 female students), selected through purposive sampling. Data were collected through semi-structured interviews and document analysis, then analyzed thematically using Braun and Clarke's framework. Four primary themes guided the analysis: ease of use, technical and accessibility features, learning motivation, and material comprehension. Findings indicate that while both male and female students preferred Quizizz for its intuitive design and support for self-paced learning, notable gender differences emerged in motivation and usage patterns. Male students favored Kahoot due to its competitive features, such as real-time leaderboards and time-bound questions, which enhanced engagement and fostered a stimulating classroom environment. Conversely, female students valued Quizizz's calm, flexible learning experience, which minimized anxiety and allowed for deeper understanding through repeated practice and instant feedback. The results suggest that gender plays a critical role in shaping students' engagement with educational technologies, particularly those that integrate gamification elements. The study highlights the importance of aligning technological tools with learners' individual preferences to optimize engagement and learning outcomes. Practical implications point to the need for more inclusive and adaptive instructional strategies when integrating digital platforms in EFL settings. Future research is recommended to explore larger samples and diverse educational contexts for broader generalizability.

Keywords*: gender preferences, interactive quiz platforms, Quizizz, Kahoot, EFL learning*

INTRODUCTION

In the digital age, education increasingly relies on technology to improve the quality of learning, enabling a more interactive and adaptive approach to teaching and learning (Ezzaim et al, 2024). Educational technology now not only supports online delivery of materials but also provides tools that enable more effective monitoring of learning progress and assessment. The use of educational technology, such as e-learning platforms, online quizzing applications, and technology-based simulations, has been proven to increase student engagement and assist educators in identifying specific learning needs (Hasbi et al, 2025). This is in line with research which states that the application of technology in learning increases student learning effectiveness and motivation (Garrison & Kanuka, 2004; Graham, 2013). In addition,

appropriate technology integration in education can provide more inclusive learning opportunities and greater accessibility for students from diverse backgrounds (Bates, 2015).

Online-based quiz platforms have emerged as crucial tools in modern education, fostering interactive learning and real-time assessments. The integration of quizzes within online learning platforms enhances engagement and provides immediate feedback, which is beneficial for students' understanding and retention of material (Yang et al., 2021; Thomas et al., 2018; Gholami & Moghaddam, 2013). This interactive approach not only accommodates varied learning styles but also promotes deeper engagement through features such as varied exercise types and automated analysis of learning outcomes (Griff & Matter, 2012; Dengri et al., 2021). Regular quizzes can serve as motivational aids, encouraging students to revisit and study course materials, ultimately leading to improved academic performance (Orr & Foster, 2013; Bowers et al., 2023). Through the online quiz platform, students have the opportunity to conduct independent practice as well as interactive competitions with their classmates, thus developing a more enjoyable and motivating learning experience. Furthermore, research shows that digital quiz platforms can improve information retention and foster higher learning motivation through repetition and instant feedback (Plump & LaRosa, 2017; Wang & Tahir, 2020). Thus, the use of online quiz technology not only facilitates the evaluation process, but also provides a more dynamic and adaptive learning experience.

In today's digital age, online quiz platforms such as Quizizz and Kahoot have become popular tools in education, offering innovative and interactive solutions to traditional learning challenges. With their ability to provide an interactive and fun learning experience, these platforms integrate game elements in the learning process, which has proven to be effective in increasing student motivation and engagement. Engaging features, such as intuitive interface design, the ability to compete directly with peers, as well as instant feedback, allow students to more actively participate in learning. In addition, the use of this platform facilitates differentiation of learning, where students can learn according to their own pace and learning style. Research shows that interactive and enjoyable learning environments, such as those offered by online quiz platforms, can strengthen material comprehension and information retention, thus supporting better academic achievement (Deterding et al., 2011; Hamari et al., 2016). Thus, the integration of online quiz platforms in education not only enriches the learning experience but also enhances the effectiveness of classroom teaching. Online quiz platforms like quizizz and Kahoot! have revolutionized the way students engage in the learning process, making it an interactive and fun experience. With intuitive and colorful interfaces, quizizz and Kahoot! are designed to grab students' attention and encourage active participation. Users can create quizzes, polls, and discussions that can be accessed by students via mobile devices or computers.

Previous research shows that experiences and preferences in using learning technologies can vary based on demographic factors, including age, socio-economic background, and especially gender. Gender is known to play a significant role in influencing the way individuals interact with educational technology, where men and women may have different preferences in the selection of technology types, ease of use, and comfort level when using it. Some studies have even found that male students tend to be more interested in competitive or game-based aspects of learning technology, while female students prioritize collaborative aspects and interface comfort (Selwyn, 2007; Teo, 2010). These variations

suggest that a deeper understanding of gender preferences in technology use can aid the development of more inclusive learning approaches that suit the specific needs of each user group.

There are two objectives of this study. This study aims to describe the preferences of male and female students in using online quiz platforms. In addition, this study also aims to explain the experiences of male and female students in using online quiz platforms. This research focuses on students of the English Tadris study program at STAIN Mandailing Natal with the aim of analyzing the differences in preferences and experiences of male and female students in using online quiz platforms, namely quiziz and kahoot. Given the importance of technology in English education, understanding how both gender groups interact with quiz platforms can provide valuable insights for the development of more effective teaching methods. Do students consider interactivity, ease of use, visual appearance, or additional features such as result reports and scoring systems? By understanding these preferences, it is hoped that it will be possible to identify which platforms are more effective in supporting the teaching and learning process, so that lecturers can choose the platform that best suits the needs and expectations of students.

METHOD

This research employed a qualitative descriptive approach to examine the preferences and experiences of students in the English Tadris Study Program at STAIN Mandailing Natal in using online quiz platforms specifically Quizizz and Kahoot with attention to gender differences. A qualitative approach was chosen to allow for a rich, in-depth understanding of individual student experiences, which cannot be fully captured through quantitative measures (Hollstein, 2011). By emphasizing subjective perspectives, this method facilitates an exploration of how different genders perceive and engage with educational technologies in meaningful ways.

The participants of the study consisted of 30 undergraduate students, equally divided between male and female respondents 15 males and 15 females. The selection of participants was conducted through purposive sampling, a technique appropriate for qualitative research, as it enables the researcher to deliberately choose individuals who have direct experience with the phenomena under study. All participants had previously used both Quizizz and Kahoot as part of their academic activities, making them well-suited to provide insights into the comparative use of these platforms.

Data collection was carried out through semi-structured interviews and document analysis. The semi-structured interviews served as the primary data source, allowing for the collection of detailed and personalized responses while also providing flexibility to explore emerging topics during the conversations. Open-ended questions were designed to elicit responses related to usability, accessibility, motivation, learning strategies, and perceptions of the effectiveness of each platform. Interviews were conducted individually in a conducive setting to ensure participants felt comfortable expressing their views freely.

In addition to interviews, document analysis was employed to supplement and triangulate the findings. The researchers analyzed students' quiz result records and written reflections following their use of the platforms. These documents offered additional context and evidence of student engagement and performance, helping to validate and enrich the

information gathered during interviews. By combining these two methods, the study was able to produce a more comprehensive understanding of student preferences and experiences.

The data obtained were analyzed thematically using the framework developed by Braun and Clarke (2006), which involves six key stages: data familiarization, generation of initial codes, identification of themes, review of themes, definition and naming of themes, and final report writing. Both interview transcripts and document data were systematically coded to identify recurring patterns and categories. The analysis focused on four primary themes aligned with the study objectives: ease of use, technical and accessibility factors, learning motivation, and material comprehension. Themes were developed through both deductive reasoning based on the research questions and inductive reasoning based on emergent patterns within the data.

Throughout the research process, ethical considerations were carefully observed. Prior to participation, all students were informed about the purpose and procedures of the study, and their voluntary consent was obtained. Confidentiality and anonymity were maintained by assigning codes to each participant, and personal identifiers were excluded from all reports and transcripts. Ethical clearance for the research was obtained from the institutional research ethics committee at STAIN Mandailing Natal, ensuring that the study adhered to established standards of research integrity and participant protection.

FINDINGS AND DISCUSSION
1. Students' Preferences in Using Online Quiz Platforms

This section discusses student preferences in using online quiz platforms quizizz and Kahoot. The results of the study will be described by differentiating the preferences of male students and female students on the elements of user-friendliness, technical and accessibility, motivation and competition as well as learning styles, and material understanding.

Graphic 1. Platform Preference Based on Gender
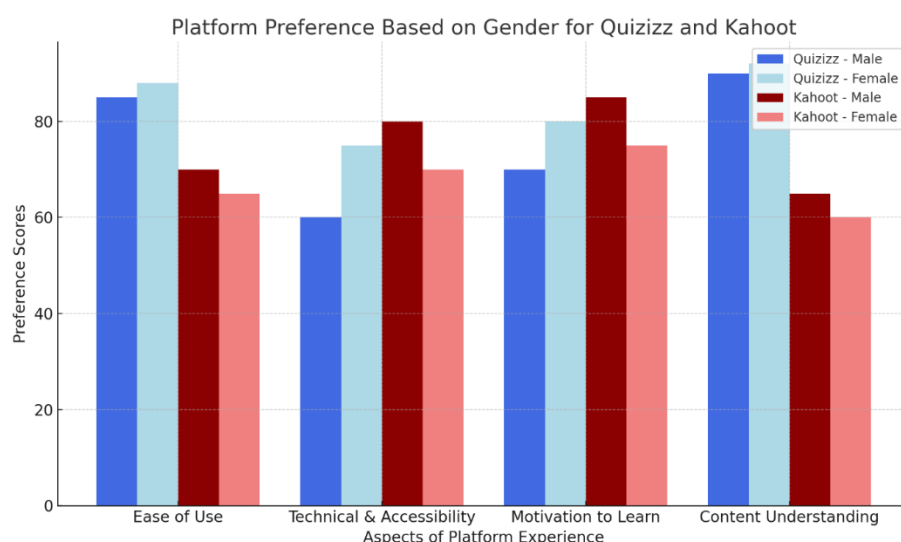
a. Male Students' Preferences in Using Quiz and Kahoot Platforms

On the element of user-friendliness, both platforms were rated as easy to use, but Quizizz received higher praise in terms of its user-friendly interface and ease of accessibility. Students feel comfortable using Quizizz for self-study, because this platform allows users to access various question banks and study at their own pace without the pressure of strict time limits. Quizizz also offers a flexible practice mode, allowing students to repeat quizzes at any time to deepen their understanding.

Meanwhile, Kahoot is more often used in a classroom context for live quizzes, where real-time interaction with lecturers and classmates is a key advantage. Kahoot's features that support in-class quizzing activities, such as real-time leaderboards and time limits that encourage quick responses, create a more intensive competitive atmosphere. In addition, the ease with which lecturers can manage live quiz sessions on Kahoot makes this platform more suitable for collaborative classroom-based learning, while Quizizz is a favorite for in-depth and repetitive individual learning.

On the technical and accessibility elements, male students showed a strong preference for platforms that offer interactive and competitive elements. Both Quizizz and Kahoot provide gamification features that make learning more engaging. However, Kahoot was often chosen for its ability to create an atmosphere of immediate competition with its real-time visible leaderboard. This feature allows students to see their rankings instantly, thus encouraging a competitive spirit and motivation to perform better. In addition, Kahoot's interactive experiences, such as time limits and dynamic music, increase male students' adrenaline and enthusiasm in answering each question.

On the other hand, Quizizz remains an attractive option for students who like flexibility in study tempo, as it allows them to manage their time without the pressure of strict time limits. However, for most male students who have a competitive preference, Kahoot's leaderboard and real-time feedback features are considered to be able to build a more intensive game atmosphere and encourage them to study in a more fun and challenging way.

On the element of learning motivation, the use of these two platforms was shown to increase male students' learning motivation. Engagement in online quizzes not only made them more active in the learning process, but also created greater curiosity towards the subject matter. The competitive elements of Kahoot, such as leaderboards and time limits, encouraged male students to participate more vigorously, striving to achieve high scores and maintain a position at the top of the rankings. This not only increased their focus during quiz sessions, but also added to the fascination with the subject matter itself.

On the other hand, Quizizz, which allows repetition of questions without a specific time limit, supports deeper understanding of difficult topics. Male students tend to consider Quizizz as an effective tool for self-study as it can adapt to their own learning needs and pace. In the long run, these two platforms not only increase their motivation to learn, but also help them build more proactive and self-directed learning strategies, and increase their confidence in facing exams or other evaluations.

Male students tend to prefer Kahoot's varied quiz formats, including multiple-choice and short-answer questions, as this adds dynamism and challenge to learning. They derive satisfaction from the variety of question types that test not only factual knowledge, but also quick thinking and decision-making skills under time pressure. This variety makes quiz sessions more interactive and adrenaline-pumping, so they are more eager to participate. In

addition, they appreciate features such as instant feedback that allows them to see their results and correct answers at a glance. This feature is very useful in accelerating concept understanding and minimizing confusion over wrong answers. The analysis of quiz results displayed after each session also provides an opportunity for students to reflect on their weaknesses and mistakes. The analysis of quiz results displayed after each session also provides an opportunity for students to reflect on their weaknesses and strengths, so that they can improve their understanding of the material in a more targeted manner. These features not only enrich the learning experience, but also provide additional motivation for male students to learn more independently and take responsibility for their academic achievements.

b. Preferences of Female Students in Using Quiziz and Kahoot Platforms

On the element of user-friendliness, quizizz is known for its user-friendly interface, allowing female students to access learning materials easily, anytime and anywhere compared to Kahoot. Research shows that more than 90% of students feel that the appearance and menu of Quizizz is easier to understand than Kahoot. This is especially important for students who may not have much experience with technology, as the simple and intuitive interface helps them use the platform more confidently and without technical difficulties.

In addition, Quizizz provides clearer navigation and a less complicated control system, minimizing the risk of errors when answering questions or accessing materials. The absence of a strict time limit as with Kahoot is also a plus for female students, who may feel more comfortable studying in an unrushed atmosphere. Quizizz also allows users to study independently with flexible settings, which suits the learning style of female students who tend to prefer a calm and pressure-free learning environment. This convenience makes Quizizz an ideal choice for those who value simplicity and convenience in the online learning process.

This flexibility can increase learning motivation as it gives students the opportunity to organize and control their own study time. With the ability to determine when and how long they want to practice, students feel more responsible for their learning process. Quizizz also allows them to repeat certain exercises or material as needed, without the pressure of rigid time limits, so they can explore difficult topics more comfortably and at an appropriate pace. With features such as repeatable quizzes, progress reports, and diverse questions, the platform provides a more personalized learning experience and supports students to improve their understanding and skills independently.

Furthermore, in terms of convenience and effectiveness, female students tend to feel more comfortable using the quiz platform for self-practice, while male students are more likely to use the platform as a competitive tool during the learning process. Factors such as previous technology experience, learning style preference and comfort with the interface also influence their perception of the quiz platform.

On the technical and accessibility front, Quizizz allows female students to self-study anytime and anywhere, giving them the flexibility they need to study effectively in the midst of a busy schedule. Flexible features such as free online access make this platform especially useful for students who have busy class schedules or want to complete academic assignments outside of class hours. Quizizz also offers easy access from various devices, be it smartphones,

tablets, or laptops, so that students can take advantage of their free time, such as while traveling or in between other activities, to study without location restrictions.

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Female students are often more motivated by understanding the material than competition. Quizizz allows them to complete questions at their own pace and offers immediate feedback. According to research by Plass, Homer, and Kinzer (2015), "*female students tend to be more interested in learning environments that emphasize understanding and support them in achieving mastery of the material, not just getting high rankings*." Quizizz provides question discussions that can be accessed immediately after answering, helping them understand mistakes without rushing to score points.

Kahoot has a leaderboard system that shows each participant's position directly, which creates an atmosphere of strong competition. However, research shows that female students often dislike overly competitive environments as it can increase anxiety. According to Hwang and Wu (2019), "*Female students are more responsive to learning environments that feature collaboration and support rather than intense direct competition*." Quizizz, with its more flexible format, allows students to focus on personal achievement instead of rankings.

Quizizz encourages female students' intrinsic motivation by providing a more individualized and time-pressure-free learning experience. In a study by Wang and Tahir (2020), it was stated that "*intense competition as in Kahoot could risk reducing intrinsic motivation in female students, especially when their main goal is to understand concepts, not win the game*." Quizizz allows them to stay motivated without the need to sacrifice rigor or understanding.

2. Student Experience in Using the Online Quiz Platform
a. Male Students' Experience in Using Online Quiz Platform

From the competitive aspect, students find Kahoot more interesting because of the direct competition element through the leaderboard. Kahoot is preferred to enhance the competitive atmosphere in the classroom, due to its feature that allows leaderboard and strict timer. Male students feel more excited when using Kahoot for quick quizzes, especially for review before exams or on material they already understand.

The presence of leaderboards in Kahoot creates an element of competition that motivates students to try harder. Students feel stimulated to compete with their peers, which in

turn increases their activeness and engagement in the learning process. The atmosphere of competition in the classroom when using Kahoot is considered entertaining and makes students more enthusiastic. Kahoot is very interesting when used in synchronous learning with the whole class, especially for review or discussion sessions.

From the aspect of motivation and engagement, students' engagement in Kahoot was very high during the live quiz session. They felt more connected to their classmates and lecturers, as the competitive interaction allowed them to see real-time rankings and feel a sense of healthy competition. This atmosphere made them more enthusiastic, as each answer directly impacted their position on the leaderboard, encouraging them to actively participate. In addition, features such as Kahoot's visual reactions and sound effects also add excitement and create a sense of community, making students feel like they are part of a fun and dynamic learning experience in the classroom.

Whereas, engagement on Quizizz tends to be more individualized. Although fun, some male students felt less connected to their classmates when using this platform, as there was no direct interaction or real-time competition featuring shared rankings. Quizizz emphasizes a more self-paced approach to learning, allowing students to work on problems at their own pace without strict time pressure. This does provide flexibility, but reduces the class dynamics and sense of community that usually comes with live competition. Some students also felt that the less intense competitive element made the learning atmosphere feel calmer but less energizing, so they lost the moments of togetherness that they often experienced when using Kahoot.

In terms of material comprehension and feedback, Kahoot provides feedback, but it is quicker and shorter due to its time-based format. Students felt that Kahoot was more suitable for quick tests of understanding, whereas Quizizz was more effective for in-depth learning sessions.

b. Female Students' Experience in Using the Online Quiz Platform

Most respondents preferred Quizizz because it did not require account registration. They found it faster and more practical to join the quiz by simply entering the code given by the lecturer. Quizizz better allows students to learn independently. Female students felt that Quizizz provided a calmer and pressure-free experience. Without the direct competition, they can focus on each question and understand the material without rushing.

From the aspect of understanding the material, many female students felt that Quizizz helped their understanding because of the automatic feedback feature provided after answering questions. They felt that the platform was very supportive of in-depth learning, where each question could be reviewed without a strict time limit. One student said, 'Quizizz is very helpful because after answering, I immediately know which one is right and which one is wrong, so I can learn from my mistakes.

From the aspect of motivation and engagement, Quizizz is considered more suitable for female students who are more comfortable learning without pressure. Many feel motivated because they can manage their time independently and focus on understanding the material. Female students also felt that Quizizz reduced their anxiety, as there was no real-time ranking that they had to participate in.

Discussion

The findings of this study provide valuable insights into gender-based differences in students' preferences and experiences with interactive quiz platforms Quizizz and Kahoot addressing the initial research objectives effectively. Notably, students' preference differences based on ease of use, accessibility, learning motivation, and understanding of content offer meaningful interpretations that can inform teaching practices and technological integration in language classrooms.

In terms of ease of use, both male and female students demonstrated a clear preference for Quizizz, highlighting its intuitive design and user-friendly interface. This finding aligns with prior research indicating that ease of use significantly influences technology acceptance among students (Teo & Zhou, 2021; Nugroho & Susanto, 2022). The consistency of preference across genders underscores the importance of intuitive user interfaces in educational technology, suggesting that platforms designed for simplicity and ease of navigation have broader appeal and utility in diverse student populations (Fryer & Bovee, 2021).

However, distinct gender preferences emerged regarding technical accessibility and learning motivation. Male students favored Kahoot due to its real-time competitive features, such as leaderboards and immediate feedback, which promoted active engagement and heightened excitement. This aligns with earlier findings indicating that male students often respond positively to competitive and game-based elements in learning platforms (Wang & Tahir, 2020). Conversely, female students showed a stronger preference for Quizizz, primarily due to its self-paced nature and reduced emphasis on competition, which facilitated deeper engagement and less anxiety. These results are consistent with findings from previous studies emphasizing that female students frequently prefer collaborative or individualized learning environments rather than direct competitive settings (Plass, Homer, & Kinzer, 2015; Hwang & Wu, 2019). This divergence highlights the necessity for educators to thoughtfully select quiz platforms in consideration of classroom dynamics and gender-specific learning preferences.

Regarding content comprehension, both genders preferred Quizizz, primarily due to its feedback system, which enables deeper processing of learning materials without strict time constraints. This finding is significant as it aligns with cognitive load theory, suggesting that reduced extraneous cognitive load such as time pressure can enhance learning effectiveness and material retention (Sweller, van Merriënboer, & Paas, 2019). Hence, educators aiming to foster thorough content understanding may benefit from employing less competitive platforms, particularly in language classrooms where comprehension and retention are paramount.

The practical implications of these findings are noteworthy. Educators are encouraged to carefully choose online quiz platforms aligned with their pedagogical goals and classroom demographics. For instance, to stimulate active participation and quick recall in review sessions, Kahoot's competitive nature could be highly effective, especially for male students. Conversely, for formative assessments and self-paced study sessions aimed at deeper learning, Quizizz might be more appropriate, especially for mixed-gender groups or predominantly female classes. From a theoretical perspective, the findings extend the existing knowledge base about gender influences in educational technology acceptance and highlight the nuanced ways in which gender intersects with learning preferences, thus contributing to the discourse on inclusive educational technology design.

Despite the valuable insights, several limitations warrant consideration. First, the qualitative descriptive nature of the study and the small, purposively sampled population limit the generalizability of findings. Although purposive sampling allowed detailed exploration of gender differences, broader generalizations should be approached cautiously. Future research employing mixed-methods approaches or larger, randomly selected samples could significantly enhance generalizability and validity. Another limitation concerns the contextual setting specifically, the unique socio-cultural and academic environment of the STAIN Mandailing Natal campus which may have influenced student preferences and experiences. Thus, findings may differ in diverse academic or cultural contexts, and researchers should remain cautious about transferring conclusions directly to significantly different settings.

CONCLUSION

This study explored the preferences and experiences of male and female students in using interactive quiz platforms Quizizz and Kahoot in the context of English language learning at STAIN Mandailing Natal. The results reveal that gender plays a significant role in shaping students' engagement with educational technology. While both male and female students generally preferred Quizizz in terms of ease of use and material comprehension, their motivations and interactions with each platform varied notably.

Male students tended to be more responsive to the competitive elements offered by Kahoot, favoring its real-time leaderboards, time-bound questions, and dynamic class interactions. These features enhanced their engagement and motivation during classroom activities. In contrast, female students were more inclined toward Quizizz, valuing its calm, self-paced environment that promotes deeper reflection and reduces performance anxiety. The ability to review questions and receive instant feedback without time pressure contributed positively to their understanding and confidence.

These findings underscore the importance of considering gender differences in the implementation of educational technologies. Educators are encouraged to adopt a more flexible and differentiated approach in selecting and integrating quiz platforms, aligning the platform features with the learning needs, styles, and preferences of their students. Ultimately, the thoughtful use of platforms like Quizizz and Kahoot can not only enhance student motivation and engagement but also contribute to more inclusive, effective, and personalized learning experiences.

Future research should extend these insights by involving larger and more diverse populations, exploring psychological and cultural factors influencing platform preference, and integrating teachers' perspectives on quiz-based learning tools. Such studies would provide a more comprehensive understanding of the pedagogical potential and challenges of interactive technologies in education.

REFERENCES

Bates, A. W. (2015). Teaching in a digital age: Guidelines for designing teaching and learning. Tony Bates Associates Ltd.

Bowers, D., Rabourne, D., & McKeirnan, K. (2023). Impact of practice quizzes on student perceptions and assessment outcomes of a third-year pharmacotherapy course. Pharmacy Education, 23(1), 329–338. https://doi.org/10.46542/pe.2023.231.329338

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101.

Dengri, C., Gill, A., Chopra, J., Dengri, C., Koritala, T., Khedr, A., … & Jain, N. (2021). A review of the quiz, as a new dimension in medical education. Cureus. https://doi.org/10.7759/cureus.18854

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification". In Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments (pp. 9–15). ACM.

Ezzaim, A., Dahbi, A., Haidine, A., & Aqqal, A. (2024). The impact of implementing a Moodle plug-in as an AI-based adaptive learning solution on learning effectiveness: Case of Morocco. International Journal of Interactive Mobile Technologies (iJIM), 18(1), 133–149. https://doi.org/10.3991/ijim.v18i01.46309

Fryer, L. K., & Bovee, H. N. (2021). Supporting gender inclusivity in gamified learning environments. Computers & Education, 167, 104183. https://doi.org/10.1016/j.compedu.2021.104183

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. The Internet and Higher Education, 7(2), 95–105.

Gholami, V., & Moghaddam, M. (2013). The effect of weekly quizzes on students' final achievement score. International Journal of Modern Education and Computer Science, 5(1), 36–41. https://doi.org/10.5815/ijmecs.2013.01.05

Graham, C. R. (2013). Emerging practice and research in blended learning. In M. G. Moore (Ed.), Handbook of distance education (pp. 333–350). Routledge.

Griff, E., & Matter, S. (2012). Evaluation of an adaptive online learning system. British Journal of Educational Technology, 44(1), 170–176. https://doi.org/10.1111/j.1467-8535.2012.01300.x

Hamari, J., Koivisto, J., & Sarsa, H. (2016). Does gamification work? – A literature review of empirical studies on gamification. In 2014 47th Hawaii international conference on system sciences (pp. 3025–3034). IEEE.

Hasbi, A. I. P., Abduh, A., Basri, M. A., & Tahir, M. (2025). The use of code mixing by foreign refugees in multilingual environment of Makassar City towards English language teaching in Indonesia. KLASIKAL: Journal of Education, Language Teaching and Science, 7(1), 229–239.

Hollstein, B. (2011). Qualitative approaches. In J. Scott & P. J. Carrington (Eds.), The SAGE handbook of social network analysis (pp. 404–416). SAGE Publications.

Hwang, G. J., & Wu, P. H. (2019). Facilitating interactive problem-solving strategies through technology-supported interactive learning environments. Computers & Education, 138, 1–12.

Nugroho, A., & Susanto, E. (2022). Factors influencing students' acceptance of online learning technologies: An integrated review. *Education and Information Technologies, 27*(1), 47–73. https://doi.org/10.1007/s10639-021-10585-x

Orr, R., & Foster, S. (2013). Increasing student success using online quizzing in introductory (majors) biology. *CBE—Life Sciences Education, 12*(3), 509–514. https://doi.org/10.1187/cbe.12-10-0183

Perdana, I., Saragi, R. E. S., & Aribowo, E. K. (2020). Persepsi siswa terhadap pemanfaatan media Kahoot dalam pembelajaran bahasa Indonesia. *Kwangsan, 8*(2), 290–306.

Plass, J. L., Homer, B. D., & Kinzer, C. K. (2015). Foundations of game-based learning. *Educational Psychologist, 50*(4), 258–283.

Plump, C. M., & LaRosa, J. (2017). Using Kahoot! in the classroom to create engagement and active learning: A game-based technology solution for eLearning novices. *Management Teaching Review, 2*(2), 151–158.

Selwyn, N. (2007). The use of computer technology in university teaching and learning: A critical perspective. *Journal of Computer Assisted Learning, 23*(2), 83–94.

Sweller, J., van Merriënboer, J. J. G., & Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review, 31*(2), 261–292. https://doi.org/10.1007/s10648-019-09465-5

Teo, T. (2010). A path analysis of pre-service teachers' attitudes to computer use: Applying and extending the technology acceptance model in an educational context. *Interactive Learning Environments, 18*(1), 65–79.

Thomas, R., Weywadt, C., Anderson, J., Martinez-Papponi, B., & McDaniel, M. (2018). Testing encourages transfer between factual and application questions in an online learning environment. *Journal of Applied Research in Memory and Cognition, 7*(2), 252–260. https://doi.org/10.1016/j.jarmac.2018.03.007

Wang, A. I., & Tahir, R. (2020). The effect of using Kahoot! for learning – A literature review. *Computers & Education, 149*, 103818.

Yang, C., Luo, L., Vadillo, M., Yu, R., & Shanks, D. (2021). Testing (quizzing) boosts classroom learning: A systematic and meta-analytic review. *Psychological Bulletin, 147*(4), 399–435. https://doi.org/10.1037/bul0000309