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Utilization of Digital Features to Increase Student Learning Engagement in Madrasah Tsanawiyah

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Abstract:
This study aims to explore the use of digital features to increase student learning engagement in a madrasa environment. The background of the study is based on the low level of active student participation in conventional learning and the potential of digital technology as an interactive tool that encourages active learning and motivation. Using a qualitative descriptive approach, data were obtained through interviews, observations, and documentation of teachers and students who actively use digital media. The results of the study show two main findings: increased student interactivity in the learning process and increased learning motivation due to enjoyable digital experiences. Features such as interactive quizzes, point systems, online discussions, and visual displays have been shown to create a more lively and competitive learning atmosphere. These findings align with theories of learning engagement and intrinsic motivation and provide a significant contribution to technology-based learning strategies. The implications of this study emphasize the importance of integrating digital features as a primary requirement in creating adaptive, participatory, and meaningful learning in the digital era.

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INTRODUCTION

The development of digital technology has transformed the world of education, changing the way teachers deliver materials and how students interact in the learning process. Digital features such as Learning Management Systems (LMS), interactive quizzes, instructional videos, and gamification have become part of learning strategies at various levels of education(Khan & Ali, 2023; Rachmatullah et al., 2023). In this context, student engagement is an important factor that is greatly influenced by how these digital features are used(Lumban Gaol & Hutasoit, 2021; Novita Sari et al., 2023). High engagement not only drives improved learning outcomes, but also builds students' motivation, attention, and active participation in learning.

However, an important question remains: to what extent do digital features actually contribute to increased student learning engagement? Several studies have shown that inappropriate use of technology can actually reduce focus and trigger distraction(Alfarizi & Ikasari, 2023; Nugraha, 2022). In addition, the use of digital features is often limited to administrative aspects or visual complements, without truly touching on the affective, cognitive, and behavioral dimensions of students as a whole(Hasan et al., 2023; Wasriyono et al., 2022). Therefore, this study seeks to fill this gap by deeply investigating how digital features are used strategically to build holistic learning engagement.

Previous research, such as by Ramke et al., (2022) And Aprida Ariyani & Hartati, (2024), have demonstrated the potential of technology to enhance learning motivation. However, most of their focus has been on academic performance as the end result, rather than the learning engagement process itself. This is the novelty of this study, which places student engagement at the center of attention, rather than merely as an additional indicator. This study also adds another novel dimension by directly exploring students' perceptions of the digital features they use, something rarely the primary focus of similar studies.

This study aims to explore how digital features can be effectively utilized to enhance students' learning engagement in affective (emotional), cognitive (understanding), and behavioral (active participation) aspects. This study argues that digital technology should not be positioned merely as a teaching aid, but as a pedagogical medium capable of creating an interactive, inclusive, and experience-oriented learning environment. The findings of this study are expected to provide tangible contributions for educators and learning designers in integrating digital features that are not only innovative but also have a direct impact on student learning engagement.

RESEARCH METHOD

This study uses a qualitative descriptive approach that aims to provide an in-depth description of how digital features are utilized in the learning process to enhance student engagement. The focus of this research is on understanding the processes, interactions, and experiences of students and teachers in using digital learning technology in the madrasah environment.(Judijanto et al., 2024). The research was conducted in a natural setting so that the data obtained reflected actual conditions without manipulation.

Data collection techniques included in-depth interviews, participant observation, and documentation. Interviews were conducted with students and teachers who actively used digital features in their learning, while observations were conducted during the classroom learning process. Documentation, including screenshots of digital feature usage, online learning activity logs, and student assignment archives, was also collected to support data triangulation. This approach enabled researchers to capture student engagement across multiple dimensions: affective, cognitive, and behavioral.

Participant selection was conducted using a purposive sampling technique, selecting informants deemed most knowledgeable and experienced in the use of digital

features in learning. Criteria for informants included teachers who actively use technology in their teaching and students who are consistently involved in the digital learning process. This research was conducted at a junior high school (madrasah) that has actively implemented digital-based learning in its curriculum.

Table 1. Instruments and Data Sources

No	Instrument	Data source	Data Types	Purpose of Use
1	Interview Guidelines	Teachers, Students	Verbal/narrative data	Exploring experiences and perceptions related to digital features
2	Observation Sheet	Learning process in class	Student behavior/engagement data	Observing student engagement directly
3	Documentation (photos, screenshots, student assignments)	Madrasah archives and learning platforms	Visual and written data	Supporting evidence of digital feature usage
4	Field Notes	Researchers	Reflective/contextual data	Support interpretation and meaning during observation

Data analysis was performed using an interactive model of(Miles et al., 2013)This includes data reduction, data presentation, and conclusion drawing. Data validity was maintained through triangulation of sources and methods. Therefore, the results of this study are expected to provide a comprehensive overview of effective digital feature utilization practices and offer a model for enhancing student learning engagement based on real-world experiences.

RESULTS AND DISCUSSION

Result

More Active Learning Interactivity

The use of digital tools has been shown to increase interactivity in the learning process. Teachers use various platforms such as Quizizz, Google Classroom, and Padlet to deliver quizzes, reflective assignments, and online discussion spaces. During observations, students were seen actively answering questions, responding to peers' comments, and asking questions through the comments or live chat features within the platforms.

Interviews with students showed that they felt more engaged when using apps that allowed them to interact directly, such as answering real-time quizzes and providing reactions or feedback on the material. One eighth-grade student said, "I'm more enthusiastic because I can immediately see whether my answers are right or wrong, and I can also see the ranking. It's fun, like playing a game." Teachers also stated that interactivity increased compared to conventional lectures or face-to-face learning without digital media. They said it was easier to assess student understanding through the analytics features or automatic reports from digital quiz and assignment apps.

Meanwhile, documentation in the form of screenshots of student activity in

online quizzes and discussions demonstrated a high level of participation. Each student submitted at least one response to class discussions and participated in quizzes, achieving a participation score above 80%.

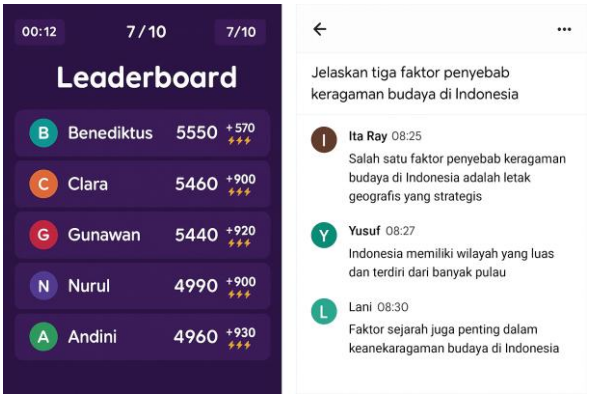

Figure 1. Class discussion in the form of a quiz

Motivation to Learn Increases Because Learning is More Enjoyable

The implementation of engaging digital features such as educational games, point systems, and interactive visualizations has been proven to increase student enthusiasm and motivation in learning. Students show greater interest when the material is presented in the form of pictorial quizzes, animations, or ranked competitions. Some students even feel like learning is a fun game, rather than just an obligation. Teachers report that student engagement has increased significantly since the material was presented using a visual and digital approach, especially for students who are typically passive in conventional learning.

Students' responses to this form of learning have also been very positive. They reported feeling more valued when they earned points, badges, or rankings after completing assignments. This indirectly boosted their self-confidence and motivation to actively participate. Learning activities that previously felt monotonous now became more dynamic and challenging. The following data compares students' motivational responses in two different learning models:

Table 2. Comparison of Student Enthusiasm Levels in Two Learning Models

Types of Learning	Number of Enthusiastic Students	Lack of Enthusiastic Students	Percentage of Enthusiasm (%)
Conventional (without digital features)	11 out of 30 students	19 students	37%
Digital (using gamification & visuals)	26 out of 30 students	4 students	87%

The table shows a significant increase in student enthusiasm when learning uses interactive digital features. Most students feel more engaged in learning when the classroom atmosphere is made more fun and competitive through digital elements. They respond positively to quiz- and game-based learning because it provides a more dynamic experience, is less boring, and allows for challenges. In this situation, students

feel freer to express themselves, more confident in trying, and encouraged to participate without fear of mistakes. The points, rankings, or badges awarded also serve as a form of appreciation that increases intrinsic motivation. Even students who were previously passive or lacked confidence begin to show initiative in completing assignments and participating in discussions. Teachers also feel helped because the learning process becomes more efficient and is able to capture students' attention from beginning to end. This fact shows that the use of digital features not only enhances the appearance of learning but also has a real impact on increasing students' enthusiasm and motivation to learn.

DISCUSSION

Research findings show that appropriate use of digital features can increase student learning engagement through two main aspects: more active interactivity and increased learning motivation(McKenzie, 2023). Students show greater enthusiasm when involved in participatory learning processes through digital platforms such as interactive quizzes, online discussions, and live feedback(Vodianka & Yurii, 2020). This finding is in line with the learning engagement theory by Richardson & Wilson, (2024), which states that engagement encompasses three dimensions: affective, cognitive, and behavioral(Aisyah & Zakiyah, 2023; Lailatul fitriyah, 2021). Digital features have been shown to address all three aspects by facilitating the expression of positive emotions, deeper understanding, and participatory behavior during learning.

In addition, increasing student motivation also strengthens the relevance of this approach to the theory of learning motivation by Tomalá De La Cruz et al., (2023) in Self-Determination Theory (SDT), which emphasizes the importance of autonomy, competence, and relatedness in fostering intrinsic motivation. Features such as point systems, rankings, and interactive visualizations encourage students to feel in control of their learning, gain recognition for their competence, and become socially connected in digital classroom interactions(Khusnu Alif et al., 2024; Mundiri et al., 2021; Sodikin et al., 2024). Thus, these findings not only confirm existing theories but also demonstrate that integrating digital features into education can be an effective strategy for fostering more meaningful, enjoyable, and sustainable learning(Mundiri et al., 2025). These findings recommend that teachers design digital learning not merely as a tool, but as a learning environment capable of strengthening student motivation and interactivity across the board.

CONCLUSION

The research results show that the targeted use of digital features can increase student learning engagement, particularly in terms of interactivity and motivation. Students are more actively involved in learning through quizzes, online discussions, and direct feedback. The fun, competitive, and interactive learning experience encourages greater enthusiasm and confidence. These findings reinforce theories of learning engagement and motivation and demonstrate that technology functions not only as a tool but also as part of an effective pedagogical strategy.

This research contributes to providing a concrete picture of digital practices that

can create a more vibrant and participatory learning environment. The implication is that teachers need to design digital learning experiences that are not only informative but also encourage participation and enthusiasm for learning. Ultimately, the integration of digital features into learning should be positioned as a primary requirement in building an education that is adaptive and relevant to current developments.

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