



DIGITAL MEDIA INTEGRATION AND STUDENT ENGAGEMENT IN INDONESIAN EFL CLASSROOMS

by

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Abstract:

Although digital media have been widely implemented in EFL learning, empirical evidence regarding their impact on students' engagement across cognitive, emotional, and behavioral dimensions in Indonesian junior high school contexts remains limited. This study looks at how digital media are integrated into EFL classrooms and how it affects students' participation in an Indonesian junior high school. A mixed-method approach with an explanatory sequential design combined quantitative and qualitative data was used in the study. Participants were selected by purposive sampling. Data dikumpulkan melalui semi-structured interviews, observations di kelas, dan questionnaires. The quantitative data were analyzed using descriptive statistics, while the qualitative data were analyzed through reduction, display, and drawing conclusions. Among the three dimensions of engagement, the results showed that emotional engagement had the highest level, with a mean score of 3.87 on a five-point Likert scale. Engagement in behavioral and cognitive dimensions was the highest, followed by emotional engagement. Observational and interview data supported the findings. In summary, including digital media into EFL instruction effectively raises student involvement. According to this study, educators should make the most of digital media in order to develop more engaging and student-centered learning environments.

Keywords: digital media, EFL, student engagement

Abstrak:

Meskipun media digital telah banyak diterapkan dalam pembelajaran Bahasa Inggris sebagai Bahasa Asing (EFL), bukti empiris mengenai dampaknya terhadap keterlibatan siswa di berbagai dimensi kognitif, emosional, dan perilaku dalam konteks sekolah menengah pertama di Indonesia masih terbatas. Tujuan dari penelitian ini adalah untuk menyelidiki penggabungan media digital dalam pembelajaran Bahasa Inggris sebagai bahasa asing (EFL) atau Bahasa Inggris sebagai bahasa asing, dan bagaimana penggabungan ini berdampak pada partisipasi siswa di sekolah menengah pertama di Indonesia. Menggabungkan data kuantitatif dan kualitatif, penelitian ini menggunakan pendekatan campuran dengan desain penjelasan berurutan. Metode purposive sampling digunakan untuk memilih siswa kelas VIII untuk penelitian. Data dikumpulkan melalui observasi, kuesioner, dan wawancara semi-terstruktur. Statistik deskriptif digunakan untuk menganalisis data kuantitatif, sedangkan data kualitatif dievaluasi melalui pengurangan, penyajian, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa siswa memiliki tingkat keterlibatan yang sangat tinggi, dengan nilai rata-rata sebesar 3,87 pada skala Likert 1-5. Dimensi keterlibatan emosional menerima nilai tertinggi, dan dimensi keterlibatan perilaku dan kognitif menerima nilai terendah. Penggunaan media digital seperti

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YouTube dan Quizizz telah terbukti dapat meningkatkan partisipasi, motivasi, dan interaksi siswa selama proses pembelajaran. Hasil observasi dan wawancara juga menunjukkan bahwa siswa lebih aktif dan tertarik saat menggunakan media digital. Penelitian ini menyimpulkan bahwa integrasi media digital efektif dalam meningkatkan keterlibatan siswa dalam pembelajaran EFL, oleh karena itu, guru disarankan untuk menggunakan media digital sebaik mungkin untuk membuat pembelajaran lebih interaktif dan berfokus pada siswa.

Kata kunci: Media digital, EFL, Keterlibatan siswa

INTRODUCTION

The advancement of digital technology has significantly transformed English as a Foreign Language (EFL) education by enabling the integration of digital media, such as instructional videos, interactive applications, and online platforms, to create more engaging and effective learning environments (Purwanita 2024; Suriadi et al. 2025). Platforms such as YouTube, Quizizz, and Duolingo allow teachers to design interactive and varied learning activities that enhance students' engagement (Fatimatus Zahro, Nurul Hidayah, and Muhammad Zam-zam 2025). Student engagement, encompassing cognitive, emotional, and behavioral dimensions, is widely recognized as a key factor influencing learning success and academic achievement (Lasekan et al., 2024; Mahmood et al., 2024;). However, EFL instruction in Indonesian junior high schools is still often characterized by teacher-centered approaches, resulting in limited student participation and low learning motivation (Miró-Colmenárez et al. 2025; Şengül and Karabacak 2026). Digital media offers a promising solution by providing interactive, visual, and collaborative learning experiences that encourage students to actively construct knowledge (Chusna, Khasanah, and Najikhah 2024; Kümmel et al. 2020; Man et al. 2025). This perspective is supported by the Digital Natives concept, which suggests that learners who are familiar with technology are more responsive to technology-enhanced learning environments (Alkhomees and Bahfen 2025). Previous studies have shown that digital media positively influences students' motivation, engagement, and learning experiences (Guaña-Moya et al. 2024; Majid, Rahman, and Anwar 2025; Velarde Orozco and de Benito Crosetti 2026). However, limited research has examined how cognitive, emotional, and behavioral engagement are simultaneously manifested through digital media integration in Indonesian junior high school EFL classrooms using both quantitative and qualitative evidence. Therefore, this study aims to investigate the influence of digital media integration on students' engagement and to explore how cognitive, emotional, and behavioral engagement are manifested in Indonesian EFL classrooms.

Despite the growing body of research demonstrating the benefits of digital media integration, most studies have focused on learning motivation, technology acceptance, or academic performance. Consequently, limited attention has been given to examining student engagement comprehensively across its cognitive, emotional, and behavioral dimensions, particularly in Indonesian junior high school EFL classrooms (Damanik and Widodo 2024). Moreover, variations in school characteristics, technological infrastructure, internet access, and teacher competence may influence the effectiveness of digital media integration, highlighting the need for further empirical evidence from diverse educational contexts (Haryanto et al. 2026). Therefore, this study investigates the influence of digital media integration on students' engagement in Indonesian junior high school EFL classrooms. Its novelty lies in examining engagement across cognitive, emotional, and behavioral dimensions using an explanatory sequential mixed-methods design while exploring the implementation of digital media in authentic classroom settings, thereby contributing to the growing literature on technology-enhanced EFL learning.

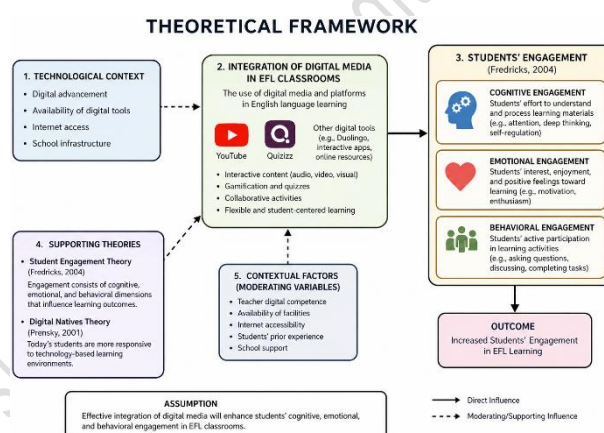


Figure 1. Theoretical framework

The conceptual framework illustrates the relationship between digital media integration and students' engagement in EFL learning. Digital media integration, including platforms such as YouTube and Quizizz, is expected to influence students' engagement, which consists of cognitive, emotional, and behavioral dimensions. In addition, several contextual factors such as teacher competence, infrastructure, and internet access may moderate this relationship. The framework also highlights the theoretical foundation based on student engagement theory and digital natives theory.

Based on the background and research gap, this study addresses the following research questions:

1. To what extent does the integration of digital media influence students' engagement in EFL classrooms?
2. Why do cognitive, emotional, and behavioral dimensions of student engagement manifest in digital media-integrated learning?
3. How do students and teachers perceive the use of digital media in enhancing engagement in EFL learning?

METHOD

Design

This study employed qualitative ethnographic design using an explanatory sequential mixed-methods design. It is to answer what, why and how. The research was conducted in two phases. In the first phase, quantitative data were collected through a questionnaire and analyzed using descriptive statistics to determine students' engagement levels. In the second phase, qualitative data were collected through classroom observations and semi-structured interviews to explain and elaborate the quantitative findings. The integration of both datasets occurred during the interpretation stage to provide a comprehensive understanding of students' engagement in digital media-integrated EFL learning.

Participant

Participants in this study were 32 eighth-grade students from an Indonesian junior high school. Purposive sampling was employed to select participants who had experienced digital media-integrated EFL learning activities. In the quantitative phase, all 32 students completed a questionnaire measuring their engagement in EFL learning. In the qualitative phase, six students were purposively selected for semi-structured interviews to provide a deeper explanation of the quantitative findings and to explore their experiences of learning English through digital media. The study was conducted in classrooms where digital platforms such as YouTube and Quizizz were integrated into the learning process.

Instrument

Three instruments were used to collect the data: a questionnaire, an observation sheet, and a semi-structured interview guide. The questionnaire measured students' cognitive, emotional, and behavioral engagement using 20 items rated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). A structured non-participant observation sheet was used to examine students' participation, interaction, attention, responsiveness, and involvement during EFL lessons integrating digital media, particularly YouTube and Quizizz. A semi-structured interview guide was employed to explore students' experiences and perceptions of digital media use, providing deeper explanations of the quantitative findings and strengthening data triangulation.

Data Collecting Technique

Data were collected using quantitative and qualitative methods through questionnaires, classroom observations, semi-structured interviews, and supporting documents. A five-point Likert-scale questionnaire was distributed to measure students' cognitive, emotional, and behavioral engagement in EFL learning (Song et al. 2025). Classroom observations were conducted to examine students' participation, interaction, and responsiveness during lessons using digital media, particularly YouTube and Quizizz. Six students were purposively selected for semi-structured interviews to provide deeper insights into their learning experiences and to explain the quantitative findings. Supporting documents, including lesson plans and instructional materials, were also collected to strengthen data triangulation. The use of multiple data collection methods enhanced the validity and trustworthiness of the findings.

Data Analysis Technique

Quantitative data from the five-point Likert-scale questionnaire were analyzed using descriptive statistics to determine students' cognitive, emotional, and behavioral engagement. Qualitative data from classroom observations and semi-structured interviews were analyzed using an interactive model consisting of data reduction, data display, and conclusion drawing to identify patterns of student engagement in digital media-integrated EFL learning.

a) Quantitative Data Analysis

The quantitative data obtained from the questionnaire were analyzed using descriptive statistics (Sport, Septiyani, and Suherman 2026). The mean score was calculated to determine

the level of students' engagement across cognitive, emotional, and behavioral dimensions. The formula used to calculate the mean score is presented below:

$$X = \sum \frac{X}{N}$$

Where X represents the mean score, $\sum X$ is the total score obtained, and N is the number of respondents. The results were then interpreted using engagement level criteria as shown in Table 2.

Table 2. Criteria of Students' Engagement Level

Mean Score Range	Category
1.00 - 2.33	Low
2.34 - 3.66	Moderate
3.67 - 5.00	High

Table 2 presents the criteria used to classify students' engagement levels based on the mean scores. The classification consists of three categories: low, moderate, and high, which helps in interpreting the quantitative findings clearly.

b) Data Validation

To ensure the validity of the findings, data triangulation was applied by comparing the results from questionnaires, observations, and interviews. This process helped to confirm the consistency of the data and strengthen the credibility of the research.

Trustworthiness

The trustworthiness of the qualitative data was ensured through credibility, transferability, dependability, and confirmability. Credibility was established through data triangulation by comparing survey, classroom observation, and interview findings, as well as member checking to confirm the accuracy of interview interpretations. Transferability was supported by providing a clear description of the research context, participants, and learning activities. Dependability was maintained through systematic data collection and analysis procedures. Confirmability was achieved by documenting field notes, interview transcripts, and other data sources to ensure that the findings were based on the data rather than researcher bias.

RESULT AND DISCUSSION

Result

This section presents the findings according to the three research questions. The quantitative findings obtained from the questionnaire are first presented, followed by qualitative findings from classroom observations and semi-structured interviews to explain and support the quantitative results.

1) The Influence of Digital Media Integration on Students' Engagement in EFL Classrooms

The first research question examines the extent to which digital media integration influences students' engagement in EFL classrooms. The quantitative findings indicate that students' engagement is at a high level. Table 3 presents the mean scores of students' engagement across the cognitive, emotional, and behavioral dimensions.

Table 3. Students' Engagement by Dimension (n= 32)

Dimension	Mean	Category
Cognitive	3.78	High
Emotional	3.92	High
Behavioral	3.91	High
Overall	3.87	High

As shown in Table 3, all dimensions of engagement fall into the high category. Emotional engagement obtained the highest mean score ($M = 3.92$), followed by behavioral engagement ($M = 3.91$) and cognitive engagement ($M = 3.78$). The overall mean score of 3.87 indicates that digital media integration positively influences students' engagement in EFL learning.

Figure 1. Students' Engagement by Dimension (n=32)

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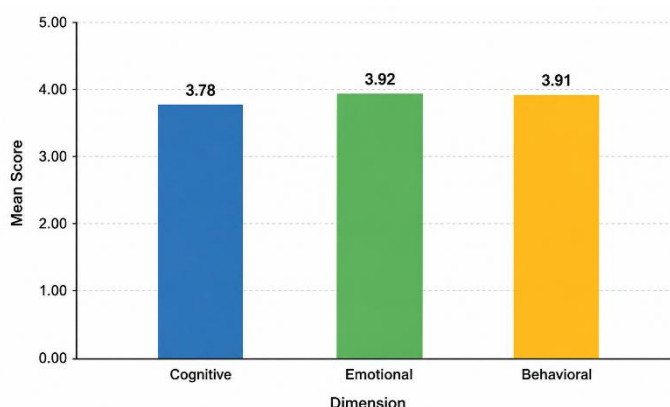


Figure 1 illustrates that emotional and behavioral engagement are slightly higher than cognitive engagement. This finding suggests that digital media is particularly effective in increasing students' interest, enjoyment, and participation during EFL learning activities.

The quantitative findings were supported by classroom observations and interview data. During digital media-integrated lessons, students actively participated in classroom discussions, responded to teachers' questions, and completed learning tasks using platforms such as YouTube and Quizizz. Interview data also revealed that students perceived digital media as interesting, interactive, and motivating, which enhanced their engagement in learning English.

2) Manifestation of Cognitive, Emotional, and Behavioral Engagement

The second research question explored how cognitive, emotional, and behavioral engagement were manifested during digital media-integrated EFL learning. Classroom observations and semi-structured interviews showed that students demonstrated all three dimensions of engagement. Behaviorally, students actively participated by paying attention to the teacher's explanations, responding to questions, joining discussions, and completing learning tasks using digital platforms such as YouTube and Quizizz. During Quizizz sessions, students showed high levels of participation, as reflected in one student's comment: *"I am more active in answering questions and participating in Quizizz activities because they are fun and competitive"* (Student 5). Emotional engagement was evident in students' enthusiasm, interest, and enjoyment when interacting with instructional videos and interactive quizzes. Cognitive engagement was reflected in students' concentration while watching educational videos, answering comprehension questions, and applying what they learned to classroom tasks. As one participant explained, *"The videos help me understand the material better because I can see examples and hear the pronunciation directly"* (Student 1). Although cognitive engagement

was evident, it was slightly lower than emotional and behavioral engagement, indicating that some students still required additional guidance for more complex learning tasks. Overall, the qualitative findings suggest that digital media created interactive and enjoyable learning experiences that supported students' engagement across all three dimensions.

3) Students' Perceptions of Digital Media Integration

The third research question explores students' perceptions of the use of digital media in enhancing engagement in EFL learning. The findings indicate that students generally have positive perceptions of digital media-integrated learning.

Table 4. Distribution of Students' Engagement Levels (n= 32)

Category	Frequency	Percentage
High	26	82%
Moderate	5	14%
Low	1	4%
Total	32	100%

As presented in Table 4, the majority of students (82%) were categorized as having a high level of engagement. Only 14% of students were categorized as having moderate engagement, while 4% showed low engagement. These findings suggest that digital media integration contributes positively to students' engagement in EFL learning.

Figure 2. Distribution of Students' Engagement Levels

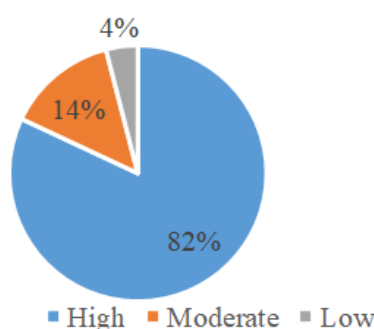


Figure 2 visually illustrates the distribution of students' engagement levels. The figure confirms that most students belong to the high-engagement category, indicating that digital media-integrated learning is generally well received by students and supports active participation in EFL classrooms.

Discussion

The first research question examined the influence of digital media integration on students' engagement in EFL classrooms. The findings indicate that digital media integration positively enhanced students' engagement, with an overall mean score of 3.87, representing a high level of engagement. Among the three dimensions, emotional engagement recorded the highest mean score ($M = 3.92$), followed by behavioral engagement ($M = 3.91$) and cognitive engagement ($M = 3.78$). These results suggest that digital media encouraged active participation and fostered positive learning experiences in the EFL classroom.

The qualitative findings supported the quantitative results by showing that digital media enhanced students' emotional, behavioral, and cognitive engagement in EFL learning. Regarding emotional engagement, one student stated, *"I enjoy learning English through YouTube because the videos help me understand the lesson more easily and make learning more enjoyable"* (Student 2), indicating that digital media created a more enjoyable learning experience. Behavioral engagement was reflected in students' active participation. As one participant explained, *"I am more active in answering questions and participating in Quizizz activities because they are fun and competitive"* (Student 5). Another student added, *"When we use Quizizz, I want to join the activity because I can immediately see my score and compare it with my friends"* (Student 4). Cognitive engagement was also evident, as one student noted, *"The videos help me stay focused because I can see examples and follow the lesson more easily"* (Student 1). Classroom observations confirmed these findings, showing that students paid greater attention, participated more actively in discussions, responded more frequently to teachers' questions, and completed learning tasks enthusiastically when YouTube and Quizizz were integrated into classroom instruction. Overall, the findings indicate that digital media promotes a more engaging, interactive, and student-centered EFL learning environment.

This finding supports previous studies conducted by (Čančer, Tominc, and Rožman 2025; Guaña-Moya et al. 2024; Majid et al. 2025; Velarde Orozco and de Benito Crosetti 2026), which reported positive student perceptions toward technology-enhanced learning. Majid et al., 2025 found that Indonesian EFL students viewed digital learning media as effective in increasing their motivation, interest, and participation in English learning activities. Similarly, Čančer et al., (2025) reported that students perceived digital technologies as useful tools that supported learning and facilitated greater involvement in classroom tasks. Velarde Orozco &

de Benito Crosetti, (2026) also found that virtual learning environments contributed positively to students' motivation and engagement in English language learning. Furthermore, Guña-Moya et al., (2024) demonstrated that interactive technologies created more dynamic learning experiences and increased students' willingness to participate actively in educational activities. The consistency between these studies and the present findings suggests that digital media has considerable potential to foster positive learning experiences and strengthen student engagement in EFL classrooms.

The positive perceptions may be attributed to the visual, audio, and interactive features provided by digital media. Platforms such as YouTube and Quizizz allow students to access learning materials in more engaging ways compared to traditional classroom instruction. The combination of multimedia elements, immediate feedback, and interactive activities helps maintain students' attention and encourages active participation throughout the learning process. This finding is supported by students' interview responses. One student explained, "The videos help me understand the lesson better because I can see examples and hear the pronunciation directly" (Student 1). Another student stated, "I enjoy learning English through YouTube because the videos make the lesson easier to understand and more enjoyable" (Student 2). Regarding the interactive nature of digital media, a student commented, "Quizizz makes learning fun because I can answer questions directly and see my score immediately" (Student 5). Similarly, another participant remarked, "When we use Quizizz, I want to join the activity because I can immediately see my score and compare it with my friends" (Student 4). These responses indicate that students valued the visual, auditory, and interactive features offered by digital media. The interview findings further revealed that students perceived learning activities involving videos and online quizzes as more enjoyable, less monotonous, and more relevant to their daily experiences with technology. These factors may explain why students demonstrated positive attitudes toward digital media integration and reported higher levels of engagement during EFL lessons.

The findings can also be interpreted through the Student Engagement Theory proposed by Lasekan et al., (2024); Song et al., (2025) which conceptualizes engagement as a multidimensional construct consisting of cognitive, emotional, and behavioral dimensions. According to this theory, meaningful learning occurs when students are actively engaged across these three dimensions. The high overall engagement score ($M = 3.87$) found in this study, together with the high levels of emotional, behavioral, and cognitive engagement, indicates that

digital media integration successfully facilitated students' active involvement in EFL learning. The findings suggest that digital media not only encouraged students to participate in classroom activities but also enhanced their interest, motivation, and efforts to understand learning materials. Therefore, the results provide empirical support for Song et al., (2025) proposition that engagement is a multidimensional construct and demonstrate that digital media can serve as an effective tool for fostering student engagement in EFL classrooms.

These findings are consistent with the Digital Natives Theory, which suggests that contemporary learners are familiar with digital technologies and respond positively to technology-supported learning environments. The positive perceptions expressed by students indicate that digital media aligns with their learning preferences and everyday experiences. Platforms such as YouTube and Quizizz provided interactive, accessible, and engaging learning experiences that enhanced students' motivation, participation, and understanding. This is reflected in the interview findings. One student stated, *"I enjoy learning English through YouTube because the videos help me understand the lesson more easily and make learning more enjoyable"* (Student 2). Another explained, *"I am more active in answering questions and participating in Quizizz activities because they are fun and competitive"* (Student 5). Similarly, a participant commented, *"When we use Quizizz, I want to join the activity because I can immediately see my score and compare it with my friends"* (Student 4), while another noted, *"The videos help me stay focused because I can see examples and follow the lesson more easily"* (Student 1). These findings suggest that integrating digital media into EFL instruction creates learning environments that are more engaging, relevant, and responsive to the needs of today's learners.

These responses indicate that digital media enhances students' motivation, participation, and interaction in EFL learning. Overall, students viewed YouTube and Quizizz as effective tools for creating more engaging, interactive, and student-centered learning experiences. However, these findings should be interpreted with caution because the study was conducted in a single junior high school and focused on only two digital platforms. Variations in educational contexts, technological access, digital literacy, and instructional practices may influence students' experiences with digital media. Therefore, future research should investigate a wider range of digital tools across diverse educational settings to provide a more comprehensive understanding of digital media integration in EFL learning.

Regarding the second research question, the findings revealed how cognitive, emotional, and behavioral engagement were manifested during digital media-integrated EFL learning. Behavioral engagement was reflected in students' active participation in classroom activities, including answering questions, joining discussions, and completing tasks using YouTube and Quizizz. Emotional engagement was demonstrated through students' enthusiasm, enjoyment, and positive attitudes toward learning, while cognitive engagement was evident in their efforts to understand learning materials, follow instructions, and apply information from digital resources, although some students still required guidance when completing more complex tasks.

These findings are consistent with previous studies showing that digital media promotes multidimensional student engagement. Lasekan et al., (2024) reported that technology-supported learning environments improve students' participation, motivation, and involvement, while Yaseen et al., (2025) found that interactive digital technologies encourage active participation and increase learners' interest in classroom activities. The findings also support Student Engagement Theory (Song et al. 2025), which views engagement as a multidimensional construct comprising cognitive, emotional, and behavioral dimensions. Although digital media facilitated all three dimensions, emotional and behavioral engagement were more prominent than cognitive engagement, suggesting that higher-order thinking skills require not only technology but also well-designed instructional strategies that foster critical thinking, reflection, and problem-solving.

Therefore, digital media integration supports cognitive, emotional, and behavioral engagement by encouraging active participation and fostering positive learning experiences in EFL classrooms. However, maximizing cognitive engagement requires instructional strategies that promote critical thinking, reflection, and deeper knowledge construction. These findings should be interpreted with caution because the study was conducted in a single junior high school and examined only YouTube and Quizizz. Consequently, the results may not be generalizable to other educational contexts, as technological infrastructure, teacher competence, and students' digital literacy may influence the effectiveness of digital media integration.

In relation to RQ3, which explored students' perceptions of digital media use in enhancing participation, the findings indicated that students viewed digital media integration positively. Platforms such as YouTube and Quizizz made learning more engaging, interactive,

and less monotonous, thereby increasing students' motivation and active participation. These findings are consistent with those of Velarde Orozco & de Benito Crosetti, (2026), who reported that digital learning tools improve students' motivation, engagement, and learning experiences in EFL contexts. The positive responses may be attributed to the multimedia features of digital platforms, including visual and audio content, interactivity, and immediate feedback, which support meaningful learning experiences. These findings also support the Digital Natives concept (Alkhomees and Bahfen 2025), suggesting that learners who are familiar with technology are more likely to respond positively to technology-enhanced learning environments. Consequently, students who perceive digital media as useful and enjoyable tend to maintain attention, participate more actively, and engage cognitively, emotionally, and behaviorally, creating more interactive and student-centered EFL learning experiences.

CONCLUSION AND SUGGESTION

Conclusion

This study investigated the integration of digital media in EFL classrooms and its impact on students' engagement in an Indonesian junior high school context. In relation to RQ1, the findings indicate that digital media integration has a positive influence on students' engagement in EFL learning, as reflected in the high overall engagement level ($M = 3.87$). This suggests that the use of digital media such as YouTube and Quizizz is associated with increased student engagement in English learning activities.

Regarding RQ2, the study found that students' engagement is manifested in cognitive, emotional, and behavioral dimensions. Emotional and behavioral engagement were more dominant compared to cognitive engagement, indicating that digital media is particularly effective in enhancing students' interest, enjoyment, and active participation, while cognitive engagement requires more structured instructional support to be further developed. This shows that digital media contributes differently across the dimensions of student engagement.

In relation to RQ3, the findings reveal that students have positive perceptions toward digital media integration in EFL learning. Students reported that digital media made learning more interactive, enjoyable, and less monotonous, which increased their motivation and willingness to participate in classroom activities. These positive perceptions indicate that both

students and teachers view digital media as an effective instructional tool for enhancing engagement in EFL classrooms.

Overall, it can be concluded that digital media integration plays a significant role in enhancing students' engagement in EFL learning across cognitive, emotional, and behavioral dimensions. However, this study is limited to a single school context and two digital platforms, namely YouTube and Quizizz, which may restrict the generalizability of the findings. Future research is recommended to explore a wider range of digital media and different educational settings to obtain a more comprehensive understanding of its impact on student engagement in EFL learning.

Limitation

This study has several limitations. First, it involved only 32 eighth-grade students from a single junior high school in Indonesia, limiting the generalizability of the findings. Future research should include larger samples from multiple schools and educational levels. Second, the study employed a descriptive mixed-method design without experimental or control groups, making it difficult to establish causal relationships between digital media integration and student engagement. Future studies are encouraged to use experimental or quasi-experimental designs. Third, although data triangulation was applied through questionnaires, classroom observations, and semi-structured interviews, additional methods such as learning analytics, classroom video recordings, or longitudinal tracking could provide richer evidence of student engagement. Finally, the study focused only on YouTube and Quizizz and was conducted over a relatively short period. Future research should investigate a wider range of digital tools, including learning management systems, gamified applications, and AI-assisted learning platforms, while adopting longitudinal designs to examine the long-term effects of digital media integration on student engagement and learning outcomes.

Implication

This study has implications for EFL teaching, educational policy, theory, and future research. For teaching practice, the findings show that digital media integration can improve students' cognitive, emotional, and behavioral engagement. Teachers are encouraged to use digital tools such as YouTube and Quizizz to create more interactive learning activities. Since cognitive engagement was lower than emotional and behavioral engagement, teachers should also include activities that promote critical thinking, problem-solving, and reflection. For

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educational policy, schools should provide reliable internet access, digital devices, and learning platforms to support effective digital learning. Teacher training programs are also needed to improve digital literacy and teaching skills. From a theoretical perspective, the findings support the multidimensional framework of student engagement proposed by Fredricks et al. (2004). They also support the Digital Natives concept, suggesting that students are more engaged when learning activities incorporate digital technology. However, these findings should be interpreted carefully because the study was conducted in one school using only two digital platforms.

For future research, studies should involve different educational levels, broader contexts, and a wider range of digital tools. Experimental or longitudinal studies are recommended to examine the long-term effects of digital media on student engagement. Future research may also investigate other variables, such as learner autonomy, academic achievement, and digital literacy.

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