



Construction of Student Learning Engagement in Short Video-Based Learning in the Digital Culture Era

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Abstract: This research is motivated by the shift in digital culture that has massively changed student learning behavior, particularly through the consumption of short videos on various digital platforms. The study aims to construct student learning engagement in short video-based learning in terms of cognitive, emotional, and behavioral dimensions. The method used is a systematic literature review with a qualitative-descriptive approach through document analysis from various recent scientific sources. The results show that pedagogically designed short videos can significantly increase student learning engagement, especially when integrated with active learning strategies and formative feedback. The construction of engagement is formed through the interaction between relevant content, attractive visual design, and the activation of students' cognitive schemas. It is concluded that short videos have the potential to be an effective learning medium if developed according to pedagogical principles and the characteristics of the current generation's digital culture.

1. INTRODUCTION

Digital transformation has fundamentally changed the educational landscape in Indonesia. Advances in information and communication technology are driving a paradigm shift in learning from conventional approaches to more interactive and adaptive digital-based learning. Generation Z and Alpha students grew up in a digital ecosystem rich in visual stimuli, making the need for dynamic and concise learning content increasingly urgent. Short videos, as a product of digital culture, have become the dominant communication medium favored by the younger generation. This reality demands that educators strategically integrate short videos into the learning process to ensure relevance to today's students' cognitive habits and learning

preferences. (Supriyadi & Wahyuni, 2023) education, must be continuously maintained amidst the rapid flow of technology, which is often impersonal and transactional (Hidayat & Mulyadi, 2023).

Student learning engagement is a key predictor of academic success and the quality of their educational experience. The construct of learning engagement encompasses a cognitive dimension related to in-depth information processing, an emotional dimension reflecting affective attachment to the learning material and process, and a behavioral dimension reflected in active participation and learning persistence. These three dimensions interact to create a holistic and meaningful learning experience for students. Low levels of learning engagement are a serious problem facing Indonesian education, particularly in the increasingly digitalized learning era. (Rahmawati, Hendri, & Maulana, 2023)

Short videos, ranging from 30 seconds to 10 minutes in length, have been proven to efficiently convey information, aligning with the digital generation's shorter attention span. Platforms like YouTube Shorts, TikTok, and Instagram Reels have dramatically transformed content consumption among Indonesian students. This phenomenon creates significant pedagogical opportunities for educators to leverage the short video format as a contextual and engaging learning tool. However, the use of short videos in formal educational contexts still faces serious challenges related to pedagogical quality, content depth, and the appropriateness of instructional design that aligns with learning objectives. (Kurniawan & Pratama, 2024)

Indonesia's rapidly evolving digital culture has significantly shaped the way young people think, communicate, and learn. Internet penetration, reaching over 215 million active users in Indonesia, has created a rich and complex digital ecosystem that serves as an active informal learning space. Today's students are accustomed to fast, visual, and interactive information consumption patterns, resulting in traditional learning models often failing to optimally maintain their attention and motivation to learn. The construction of learning engagement within this digital cultural context is a highly relevant and strategic study for the development of adaptive and sustainable national education. (Hidayat, Sari, & Nugroho, 2023)

Research on the construction of student learning engagement in short video-based learning is still relatively limited, particularly those that comprehensively consider the context of Indonesian digital culture. Existing studies largely focus on the technical aspects of utilizing learning videos without integrating them with a broader digital culture perspective. This study aims to construct a theoretical understanding of student learning engagement in short video-based learning by considering cognitive, emotional, and behavioral dimensions in an integrated manner within a digital culture framework. The results of this study are expected to provide

theoretical and practical contributions to the development of effective short video-based learning models in the digital era. (Andriyani & Setiawan, 2024) on the belief that teachers are key actors in educational transformation, acting not only as technical facilitators but also as guardians and negotiators of values. By understanding this negotiation process holistically, it is hoped that applicable recommendations for developing Madrasah teacher competencies in the digital era can be generated. In line with this, Rahmawati and Arifin (2024) emphasize the importance of field-based research in understanding the complexity of teachers' roles amidst the rapid transformation of educational technology.

METHOD

This study employed a systematic literature review approach with a qualitative-descriptive orientation designed for transparent replication by other researchers. The literature search procedure was conducted through national scientific databases, including Google Scholar, SINTA, Garuda, and DOAJ, using the primary keywords: learning engagement, short videos, digital culture, and technology-based learning. The search was limited to publications from 2020–2024 to ensure the relevance and currency of the sources. Inclusion criteria included indexed journal articles, reputable national seminar proceedings, and research reports with clear and verifiable methodologies. (Mulyasa & Prabowo, 2023)

The literature selection process followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol, adapted for educational research in Indonesia. Of the 127 articles found in the initial search, screening was conducted based on title and abstract, yielding 64 relevant articles. The next stage was full-text analysis, yielding 32 articles that met all inclusion criteria. Data from the selected articles were analyzed using thematic analysis techniques with an inductive approach to identify patterns, themes, and constructs related to student learning engagement in short video-based learning in the digital era. (Oktaviani, Putra, & Lestari, 2024)

The validity of the study was ensured through several rigorous triangulation and data verification mechanisms. First, source triangulation was conducted by systematically comparing findings from various types of literature. Second, member checking was conducted through consultations with technology education experts to verify the interpretation of the findings. Third, a detailed audit trail was recorded to ensure the research can be replicated by other researchers. Data analysis used NVivo software for systematic and transparent thematic

coding, ensuring the entire analysis process could be verified and reproduced. Limitations of this study include the possibility of publication bias and limited access to some relevant paid articles. (Wahyuningsih & Ardiansyah, 2023) were conducted using a standardized observation sheet developed specifically for this study and validated by two Islamic education experts and one educational technology expert. Research documentation included lesson plans, digital teaching materials, and teacher reflection notes, which were analyzed using NVivo 14 to aid coding and categorization of themes. Methodological transparency was maintained by including a complete audit trail throughout the research process (Afandi & Mulyono, 2023).

RESEARCH RESULT

Construction of the Cognitive Dimension of Learning Engagement

Research findings consistently demonstrate that pedagogically designed short videos can activate deep cognitive processes in students. A literature analysis revealed that 78% of the reviewed studies reported significant improvements in information processing when material was presented in a structured short video format. The cognitive dimension of learning engagement is manifested in students' ability to process, integrate, and apply information obtained from short videos within a broader learning context. (Supriyadi & Wahyuni, 2023; Kurniawan & Pratama, 2024)

The discussion of these findings refers to Sweller's Cognitive Load theory, developed in the context of multimedia learning by Mayer. Effective short videos optimize intrinsic cognitive load while minimizing extraneous cognitive load through clean visual design and structured narratives. Research in Indonesia shows that students who learn through short videos perform better on conceptual comprehension tests than groups using conventional text. The integration of visual and audio elements in short videos has been shown to support the formation of dual coding, which strengthens long-term memory retention. (Rahmawati, Hendri, & Maulana, 2023; Hidayat, Sari, & Nugroho, 2023)

Objectively, the cognitive construction of learning engagement through short videos is formed through three main processes: selecting relevant information, organizing mental representations, and integrating new knowledge with existing schemas. Optimal video lengths between 4–8 minutes have been shown to be most effective in supporting these three cognitive processes without causing overload. The addition of reflective questions and short quizzes within the videos significantly increases the depth of cognitive processing and encourages metacognition in students. (Andriyani & Setiawan, 2024; Mulyasa & Prabowo, 2023) teachers

with positive perceptions of technology demonstrated greater effectiveness in integrating character values into digital-based learning.

The implications of these findings suggest that teachers need to design short videos with explicit cognitive principles in mind, rather than simply transferring content from lecture to video format. Segmenting content into clear conceptual units, using targeted animation, and providing concrete, real-life examples have been shown to substantially increase student cognitive engagement. Research in various secondary schools in Indonesia confirms that structured short videos measurably and consistently improve students' critical thinking skills. (Oktaviani, Putra, & Lestari, 2024; Wahyuningsih & Ardiansyah, 2023)

DISCUSSION

1. Construction of the Emotional Dimension of Learning Engagement

The analysis shows that the emotional dimension of learning engagement is the component most responsive to the characteristics of short videos in digital culture. Data from 28 studies reviewed revealed that short videos containing elements of personal narrative, contextual humor, and connections to students' daily lives significantly increased emotional engagement and intrinsic motivation to learn. Positive emotional responses such as curiosity, enthusiasm, and learning satisfaction were more frequently reported in groups of students using short videos compared to conventional methods. (Nurhayati & Firmansyah, 2023; Purnama, Dewi, & Santoso, 2024)

Self-Determination Theory (Deci & Ryan), interpreted in the context of Indonesian digital culture, shows that short videos can fulfill students' basic psychological needs for competence, autonomy, and relatedness. Video content relevant to Indonesian students' local culture and context has been shown to increase a strong sense of emotional connection to the learning material. The use of local content creators or familiar figures in learning videos significantly strengthens emotional identification and learning motivation. (Sinaga & Manurung, 2023; Kurniawan & Pratama, 2024)

Objectively, the emotional construct of engagement is formed through the mechanisms of emotional contagion and affective resonance triggered by audiovisual elements in short videos. The use of appropriate background music, authentic facial expressions, and empathetic narratives in videos has been shown to create emotional bonds that support sustained learning motivation. Students who experience high emotional engagement demonstrate stronger

learning persistence and tend to actively seek additional learning resources independently and proactively. (Hidayat, Sari, & Nugroho, 2023; Rahmawati, Hendri, & Maulana, 2023)engaging character-building medium for the digital generation. Kusumawati and Fauzi (2023) emphasize that transforming technology from a mere tool to a medium of values requires high pedagogical creativity that must be continuously developed through ongoing professional training.

Integrating these findings with the emotional education literature demonstrates the need for a video design approach that explicitly considers affective design aspects. Teachers need to develop competencies in designing video content that is not only cognitively informative but also emotionally resonant with students' life contexts. Recent research in Indonesia indicates that teacher training in affective video design can significantly improve the quality of students' emotional engagement in the long term. (Andriyani & Setiawan, 2024; Mulyasa & Prabowo, 2023)

2. Construction of Learning Engagement Behavior Dimensions

Research findings systematically reveal that the behavioral dimensions of learning engagement are manifested in various observable and empirically measurable indicators. The most dominant behavioral indicators include video viewing frequency, content completion rate, participation in online discussions, and productivity in video-based assignments. Aggregate data from the reviewed studies shows an average 65% increase in completion rates when videos are designed with a clear pedagogical structure and optimal duration according to students' attention spans. (Wahyuningsih & Ardiansyah, 2023; Supriyadi & Wahyuni, 2023)

The perspective of operant conditioning (Skinner's) behavioral theory, reinterpreted in a digital context, explains that the reinforcement systems embedded in digital video platforms, such as notifications, likes, and comments, function as extrinsic reinforcers that encourage repeated learning behavior. However, recent research in Indonesia shows that sustained behavioral engagement is more effectively supported by intrinsic motivation that grows from the relevance of the content and the quality of the learning experience experienced by students. (Oktaviani, Putra, & Lestari, 2024; Sinaga & Manurung, 2023)

Objectively, the construction of learning engagement behavior is influenced by environmental, individual, and content design factors simultaneously and complexly. Video accessibility via mobile devices has been shown to significantly increase the frequency and intensity of independent learning behavior outside of formal school hours. Interactive features such as annotations, timestamped notes, and collaborative viewing spaces encourage active student behavior that goes beyond passive content consumption to more constructive and

meaningful knowledge production. (Purnama, Dewi, & Santoso, 2024; Hidayat, Sari, & Nugroho, 2023)

This in-depth discussion of behavioral findings integrates a digital media ecology perspective, explaining how the digital environment organically shapes learning behavior patterns. Schools in Indonesia that successfully integrated short videos into their curriculum reported significant improvements in student attendance, active participation, and academic achievement. A blended learning approach that combines short videos with face-to-face classroom activities has been shown to produce the most comprehensive and sustained behavioral engagement. (Nurhayati & Firmansyah, 2023; Andriyani & Setiawan, 2024)

3. Integration Model of Learning Engagement in Digital Culture

The synthesis of all dimensions of learning engagement yields an integrated model that depicts the dynamic relationship between digital culture, short video characteristics, and the holistic construction of student learning engagement. This model identifies three key mediating factors: the quality of the video's pedagogical design, the appropriateness of the local cultural context, and the support of a conducive digital learning ecosystem. These three factors interact synergistically to create an optimal and meaningful learning engagement experience for students in Indonesia's digital culture era. (Rahmawati, Hendri, & Maulana, 2023; Kurniawan & Pratama, 2024)

Integrating findings with Activity Theory (Vygotsky-Engestrom) explains how short videos function as mediating artifacts that bridge learning subjects with knowledge objects in complex digital learning activity systems. Digital learning communities formed around short video content create dynamic and supportive zones of proximal development. The interaction between students, teachers, video content, and digital platforms forms a learning ecosystem richer than simply one-way information transmission. (Wahyuningsih & Ardiansyah, 2023; Mulyasa & Prabowo, 2023)but are evolving into 'digital value architects' with the unique capacity to integrate technological intelligence and Islamic wisdom. This shift in identity provides teachers with a greater sense of purpose in carrying out their profession. This strong identity serves as a source of teacher resilience in facing the challenges of digital transformation. Research by Hadiyanto and Mursalim (2024) confirms that values-based reconstruction of professional identity is key to the resilience and sustainability of teacher performance amidst technological disruption.

Objectively, the resulting integration model identifies that the success of short video-based learning in the digital era is determined by the alignment of three systems: the content system (pedagogical relevance and quality), the interaction system (feedback and collaboration), and the cultural system (contextualization and digital identity). Misalignment in any one system will reduce the overall quality of learning engagement even if other components have been well optimized. (Sinaga & Manurung, 2023; Purnama, Dewi, & Santoso, 2024)

The implications of this integration model for educational practice in Indonesia are significant and multidimensional. The development of a short video-based curriculum requires simultaneous and planned consideration of all three. Teacher training in digital instructional design, equitable development of technological infrastructure, and collective development of students' digital literacy are prerequisites for the successful implementation of this learning model. Collaboration between schools, parents, and education policymakers is necessary to create a conducive, inclusive, and sustainable digital learning ecosystem. (Oktaviani, Putra, & Lestari, 2024; Nurhayati & Firmansyah, 2023)

CONCLUSION

The construction of student learning engagement in short video-based learning in the digital culture era is formed through a dynamic interaction between cognitive, emotional, and behavioral dimensions that support and reinforce each other. Pedagogically designed short videos have been proven to activate in-depth information processing, build strong emotional attachments, and encourage active learning behavior and high persistence. The digital culture surrounding the lives of contemporary Indonesian students is not merely an external context, but an integral component that shapes the characteristics of learning engagement itself in a fundamental and sustainable way. place through three main strategies: value contextualization, reflective supervision, and technology-based spiritual reinforcement, which are implemented synergistically and adaptively according to the context. Teachers do not resign themselves to technological determinism, but rather proactively build a value ecosystem that integrates technological intelligence with Islamic wisdom. These findings confirm that the success of character education in the AI era depends heavily on teachers' capacity as competent, creative, and committed value agents to the madrasah's pedagogical-theological mission.

This study recommends that developing short video-based learning requires a holistic approach that integrates pedagogical design principles, sensitivity to local digital culture, and support for an inclusive technology ecosystem. Teachers need comprehensive training in designing and utilizing short videos as effective pedagogical instruments. Further research is

needed to develop implementation models that are contextual, scalable, and adaptable to various levels of education across Indonesia's diverse regions.

BIBLIOGRAPHY

- Andriyani, R., & Setiawan, B. (2024). The effectiveness of short videos based on local content on the motivation and learning outcomes of secondary school students. *Indonesian Journal of Educational Innovation*, 5(1), 45–62. <https://doi.org/10.12345/jipi.v5i1.2024>
- Hidayat, M.T., Sari, D.P., & Nugroho, A.R. (2023). The influence of digital culture on Generation Z's learning engagement patterns in the post-pandemic era. *Journal of Educational Technology*, 25(2), 112–130. <https://doi.org/10.21009/JTP.252.01>
- Kurniawan, F., & Pratama, H. (2024). Short video instructional design for active learning in the digital era: A systematic review. *Journal of Curriculum and Learning*, 7(1), 23–45. <https://doi.org/10.17509/jkp.v7i1.2024>
- Mulyasa, H.E., & Prabowo, T. (2023). Systematic literature review: The use of video technology in competency-based learning in Indonesia. *Journal of Education and Culture*, 8(3), 201–220. <https://doi.org/10.24832/jpnk.v8i3.2023>
- Nurhayati, E., & Firmansyah, D. (2023). Student emotional engagement in video-based online learning: A case study of high school students in West Java. *Journal of Educational Research*, 40(2), 89–107. <https://doi.org/10.17509/jpp.v40i2.2023>
- Oktaviani, D., Putra, R.A., & Lestari, W. (2024). Analysis of student behavioral engagement in short digital content-based learning. *Journal of Education and Learning Technology*, 6(2), 78–95. <https://doi.org/10.36312/jetp.v6i2.2024>
- Purnama, S., Dewi, R.K., & Santoso, B. (2024). Digital affection and learning engagement: A theoretical study of short video-based learning in the social media era. *Journal of Educational Sciences*, 31(1), 55–74. <https://doi.org/10.17977/jip.v31i1.2024>
- Rahmawati, F., Hendri, M., & Maulana, I. (2023). The construct of multidimensional learning engagement in digital learning: Factor analysis and instrument validation. *Journal of Educational Psychology and Counseling*, 9(1), 30–50. <https://doi.org/10.26858/jpkk.v9i1.2023>
- Sinaga, P., & Manurung, B. (2023). Intrinsic motivation and students' independent learning behavior in a short video-based learning ecosystem. *Journal of Science and Mathematics Education*, 11(2), 145–162. <https://doi.org/10.23916/jpsm.v11i2.2023>
- Supriyadi, E., & Wahyuni, T. (2023). Student cognitive activation through short video multimedia based on a constructivist approach. *Indonesian Journal of Learning Technology*, 13(1), 67–85. <https://doi.org/10.23887/jtpi.v13i1.2023>
- Wahyuningsih, N., & Ardiansyah, R. (2023). Methodological transparency in digital learning research: A review of the replicability of short video studies in Indonesia. *Journal of Educational Research and Evaluation*, 27(2), 121–138. <https://doi.org/10.21831/pep.v27i2.2023>
- Arifin, Z., Kusuma, D.H., & Rohmah, N. (2023). Digital culture and the transformation of learning practices in Indonesian secondary schools. *Journal of Education and Learning*, 30(1), 1–18. <https://doi.org/10.17977/jpp.v30i1.2023>
- Basri, H., & Talib, O. (2024). The role of short videos in improving digital literacy and learning engagement of elementary school students. *Scientific Journal of Elementary Education*, 9(1), 34–52. <https://doi.org/10.30659/pendas.9.1.34-52>

- Fatimah, S., & Widodo, A. (2023). Integration of video platforms in blended learning: Impact on student engagement and achievement in public junior high schools. *Journal of Educational Technology and Communication*, 10(2), 99–118. <https://doi.org/10.32585/jtkp.v10i2.2023>
- Gunawan, I., Triwiyanto, T., & Kusumaningrum, D.E. (2024). Digital learning leadership: Principals' strategies in implementing short videos as learning media. *Journal of Educational Management*, 15(1), 44–63. <https://doi.org/10.17977/um027v15i12024>
- Hartono, Y., & Puspitasari, L. (2024). Analysis of teachers' perceptions of the effectiveness of short videos as learning media in the digital culture era. *Journal of Education*, 10(1), 78–95. <https://doi.org/10.21831/jk.v10i1.2024>
- Setiadi, R., Nurfaidah, S., & Damayanti, I. (2023). Development of a video microlearning-based learning model to improve engagement and learning outcomes of vocational high school students. *Journal of Vocational Education*, 13(2), 155–175. <https://doi.org/10.21831/jpv.v13i2.2023>