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The Integration of Gamification and Digital Storytelling in Islamic Religious Education to Enhance Elementary Students' Religious Literacy

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Abstract

This study aimed to examine the effectiveness of integrating gamification and digital storytelling in enhancing elementary students' religious literacy at SDN 124 Kota Bengkulu, Indonesia. The study employed a mixed-methods approach with a quasi-experimental one-group pretest–posttest design. A total of 46 fifth-grade students participated in the research. Quantitative data were collected through religious literacy tests administered before and after the instructional intervention, while qualitative data were obtained through classroom observations, semi-structured interviews, and documentation. Quantitative data were analyzed using descriptive and inferential statistics, including a paired-sample *t*-test, whereas qualitative data were analyzed using an interactive model involving data reduction, data display, and conclusion drawing. The findings revealed a statistically significant improvement in students' religious literacy after the implementation of the integrated instructional model. The mean score increased from 71.41 in the pre-test to 82.39 in the post-test, with the paired-sample *t*-test indicating a significant difference ($t = 17.244, p < .001$). Furthermore, the average normalized gain (N-Gain) score of 0.395 indicated a moderate level of instructional effectiveness. Qualitative findings further demonstrated that the integration of gamification and digital storytelling enhanced students' engagement, motivation, participation, collaboration, and the internalization of Islamic values through interactive learning experiences. The combination of game-based learning elements and digital narratives created a more meaningful and student-centered learning environment that facilitated both cognitive understanding and affective development. This study concludes that integrating gamification and digital storytelling is an innovative and effective pedagogical approach for strengthening religious literacy among elementary school students. The findings contribute to the growing body of research on technology-enhanced Islamic education and provide practical implications for developing engaging, value-oriented learning in the digital era.

Keywords: Gamification; Digital Storytelling; Islamic Religious Education; Religious Literacy; Elementary Education; Learning Innovation.

INTRODUCTION

The rapid advancement of digital technology has significantly transformed the educational landscape, including at the primary school level. In the era of the Industrial Revolution 4.0 and Society 5.0, education is no longer merely focused on knowledge transmission but also on the development of critical thinking, creativity, collaboration, and various forms of literacy, including digital and value-based literacy (Trilling & Fadel, 2022). In this context, religious literacy becomes an essential component that must be nurtured from an early age, particularly in elementary education as the foundation for character building.

Religious literacy refers to the knowledge, skills, and understanding needed to comprehend religious diversity and to engage critically, reflectively, and constructively in multicultural and pluralistic societies (Shaw, 2022). Religious literacy encompasses teachable knowledge, skills, and attitudes that help individuals understand the role of religion and spirituality in personal and societal life and encourage responsible participation in diverse communities (Walker et al., 2021). Religious literacy is not limited to the ability to read and understand religious texts but also encompasses the ability to interpret, internalize, and apply religious values in daily life in a contextual and reflective manner (Moore, 2023). In Islamic Religious Education, religious literacy is recognized as a fundamental component in fostering students' moral integrity, spiritual awareness, and social responsibility, enabling them to understand, internalize, and practice Islamic values in multicultural societies (Biesta, 2021; UNESCO, 2023; Muhammad Ali Ramdhani et al., 2024). However, in practice, PAI learning at the elementary level still faces several challenges, particularly in terms of instructional methods that are less engaging and tend to limit active student participation.

Previous studies indicate that teacher-centered learning approaches often result in low student engagement, which negatively affects conceptual understanding and value internalization (Hattie, 2024). In the context of PAI, this issue is exacerbated by the dominance of lecture-based teaching and rote memorization, which provide limited opportunities for students to experience meaningful and contextual learning. Consequently, students' religious literacy tends to develop partially and remains suboptimal.

From a developmental perspective, elementary school students are in the concrete operational stage, which requires interactive, visual, and experience-based learning approaches (More 2023). At this stage, children tend to learn more effectively through play, storytelling, and visually engaging media. Therefore, innovative instructional strategies are

needed to align with these characteristics while also leveraging the potential of digital technology.

One promising approach is gamification, which involves the application of game design elements such as points, levels, badges, leaderboards, and challenges into non-game contexts like education to enhance student motivation and engagement (Deterding et al., 2021). Empirical studies have shown that gamification can significantly improve learning motivation, engagement, and academic performance (Hamari, Koivisto, & Sarsa, 2024). Through gamified learning environments, students actively participate in the learning process and experience a more enjoyable and interactive form of learning.

In addition, digital storytelling has emerged as an effective pedagogical strategy. Digital storytelling integrates narrative elements with digital media such as images, audio, video, and animation to deliver learning content in a more engaging and meaningful way (Robin, 2023). This approach has been proven to enhance students' conceptual understanding, critical thinking, and reflective abilities (Sadik, 2023). In the context of PAI, digital storytelling offers significant potential for conveying religious values through inspirational and contextually relevant stories.

The integration of gamification and digital storytelling in PAI learning is expected to create a more holistic learning experience. Gamification enhances student motivation and participation, while digital storytelling strengthens comprehension and value internalization through meaningful narratives. The combination of these approaches enables the development of engaging, interactive, and value-oriented learning environments that support the improvement of students' religious literacy.

However, empirical studies that specifically integrate gamification and digital storytelling in Islamic Religious Education at the elementary level remain limited. Most existing studies examine these approaches separately and are predominantly conducted in general subjects rather than religious education. Furthermore, there is a lack of research focusing on their implementation in public elementary schools in regional contexts, such as SD Negeri 124 Kota Bengkulu.

Preliminary observations conducted at SD Negeri 124 Kota Bengkulu reveal that PAI instruction is still dominated by conventional lecture methods and textbook-based learning, with minimal use of digital media. Students tend to be less active and less enthusiastic during the learning process, which affects their understanding and application of religious values in

daily life. This situation highlights a gap between the demands of 21st-century learning and the current instructional practices in the classroom.

Based on these issues, there is a need for innovative instructional models that integrate digital technology with pedagogical approaches aligned with the characteristics of elementary school students. Therefore, this study aims to examine the integration of gamification and digital storytelling in PAI learning as an effort to enhance students' religious literacy.

Several recent studies have demonstrated that gamification can significantly enhance students' learning motivation, engagement, and academic achievement in various educational contexts. For example, Sailer and Homner (2020) concluded that gamification positively influences cognitive, motivational, and behavioral learning outcomes through the integration of game elements such as points, badges, and leaderboards. Similarly, Zainuddin et al. (2021) found that gamified learning environments improved students' participation and collaborative learning in digital classrooms. However, these studies primarily emphasized learning motivation, engagement, and academic performance rather than the development of religious literacy.

In parallel, research on digital storytelling has shown its effectiveness in promoting students' critical thinking, creativity, communication skills, and meaningful learning experiences. Robin (2021) argued that digital storytelling enables learners to construct knowledge through multimodal narratives that foster deeper understanding and reflection. More recent studies by Yang et al. (2023) also reported that digital storytelling improves learners' digital competence and learning engagement across different educational settings. Nevertheless, these investigations generally focused on language learning, social studies, or digital literacy, while its implementation in Islamic Religious Education (PAI) remains relatively limited. Within the field of Islamic Religious Education, previous studies have mostly examined the effectiveness of digital media, interactive learning platforms, or game-based learning in improving students' learning motivation, conceptual understanding, and character education. Although these studies have contributed significantly to the modernization of PAI instruction, they have rarely integrated gamification and digital storytelling simultaneously within a single instructional framework. Furthermore, religious literacy has generally been treated as a supporting aspect of character education or religious understanding rather than as the principal learning outcome.

Therefore, the present study addresses these research gaps through three major contributions. First, it develops and implements an integrated learning model that combines gamification and digital storytelling within a structured Islamic Religious Education learning framework, allowing students not only to participate actively in learning activities but also to construct and communicate religious understanding through meaningful digital narratives. Second, unlike previous studies that mainly evaluated motivation, engagement, or academic achievement, this research places religious literacy as the primary dependent variable, encompassing students' ability to understand, interpret, contextualize, and apply Islamic values in everyday life. Third, this study is conducted in a public elementary school located in a regional area, a context that has received relatively little attention in previous empirical research, which has predominantly been undertaken in urban schools or higher education institutions. Consequently, this research contributes both theoretically and empirically by extending the application of innovative digital pedagogies to strengthen religious literacy in elementary Islamic Religious Education.

Thus, this study is expected to contribute theoretically to the development of technology-enhanced Islamic education and practically to provide teachers with innovative, engaging, and meaningful instructional strategies to improve students' religious literacy in a sustainable manner.

RESEARCH METHODS

This study employed a mixed-methods approach with an explanatory sequential design, combining quantitative and qualitative methods to comprehensively examine the effectiveness of integrating gamification and digital storytelling (Sugiyono, 2021) in Islamic Religious Education (PAI). The research was conducted at SD Negeri 124 Kota Bengkulu, involving elementary school students as the primary participants. The quantitative component used a quasi-experimental design with a non-equivalent control group, in which one class was assigned as the experimental group receiving gamification and digital storytelling-based instruction, while another class served as the control group receiving conventional teaching methods. Pre-test and post-test instruments were administered to measure students' religious literacy levels before and after the intervention.

The qualitative component was conducted to support and deepen the quantitative findings through classroom observations, semi-structured interviews with teachers and selected students, and documentation analysis. These qualitative data aimed to explore students' learning experiences, engagement, and the process of internalizing religious values

during the implementation of the instructional model. The integration of both approaches allowed for a more holistic understanding of not only the outcomes but also the learning processes involved, (Zhou, 2024).

The population of this study consisted of all students at the selected school there were 182 students, while the sample was determined using purposive sampling a total of 46 students were sampled, focusing on classes that met the research criteria. Data collection instruments included a religious literacy test developed based on cognitive, affective, and behavioral indicators, observation sheets to assess student engagement, and interview guidelines to capture in-depth responses. The validity of the instruments was ensured through expert judgment, while reliability testing was conducted using appropriate statistical techniques, (Al-Buraiki, 2024).

The quantitative data in this study were analyzed using descriptive and inferential statistics to measure the effectiveness of integrating gamification and digital storytelling in improving students' religious literacy. Descriptive statistics were used to describe students' learning outcomes through mean scores, percentages, and standard deviations obtained from the pre-test and post-test results. Furthermore, inferential statistics were employed to determine whether there were significant differences before and after the treatment. The paired sample t-test was used to examine the significance of differences between students' pre-test and post-test scores within the same group, while the independent sample t-test was applied to compare the learning outcomes between the experimental and control groups. The use of quasi-experimental statistical analysis is considered effective in evaluating instructional interventions in educational research because it allows researchers to measure learning improvement and treatment effects systematically (Gopalan, Rosinger, & Ahn, 2021).

Operationally, the quantitative procedure began by administering a pre-test to both the experimental and control groups to identify students' initial religious literacy levels. Afterward, the experimental group received instruction integrating gamification elements such as points, rewards, quizzes, challenges, and interactive digital storytelling, while the control group received conventional instruction. At the end of the treatment sessions, both groups completed a post-test. The resulting scores were then processed statistically to determine the effectiveness and significance of the instructional treatment. The integration of quantitative procedures in mixed-methods educational research enables researchers to

obtain measurable evidence regarding learning improvement and intervention effectiveness (Shi, Tong, & Long, 2021).

Meanwhile, qualitative data were analyzed using an interactive analysis model consisting of data reduction, data display, and conclusion drawing. Operationally, qualitative data were collected through classroom observations, interviews with teachers and students, and documentation during the learning process. In the data reduction stage, the researcher selected and focused the data relevant to students' engagement, motivation, participation, and religious value internalization during the implementation of gamification and digital storytelling. The reduced data were then organized and displayed systematically in narrative and thematic forms to facilitate interpretation. Finally, conclusions were drawn by identifying recurring patterns, themes, and relationships emerging from the qualitative findings. The interactive qualitative analysis model is widely used in mixed-methods educational studies because it provides deeper explanations regarding students' learning experiences and behavioral changes during instructional interventions (Molina-Azorin & Feters, 2021).

The findings from both quantitative and qualitative data were subsequently integrated during the interpretation stage to produce comprehensive conclusions regarding the effectiveness of the proposed instructional approach. Quantitative findings explained the extent of improvement in students' religious literacy achievement, whereas qualitative findings provided contextual explanations about students' engagement, participation, and internalization of religious values during the learning activities. The integration of both forms of data is a key characteristic of mixed-methods research because it strengthens the validity and depth of educational research findings (Zhou, Zhou, & Machtmes, 2024; Gierus et al., 2025).

Overall, this methodological framework was designed to provide robust empirical evidence on how the integration of gamification and digital storytelling can enhance students' religious literacy, while also offering practical insights into its implementation in elementary school PAI learning contexts.

RESULTS AND DISCUSSION

A. Integration of Gamification and Digital Storytelling in Islamic Learning

The integration of gamification and digital storytelling was implemented in the learning process to create an interactive, engaging, and meaningful learning environment

for fifth-grade students at SDN 124 Kota Bengkulu. The instructional design combined game-based elements, including points, badges, rewards, quizzes, and collaborative challenges, with digital storytelling that presented Islamic narratives through multimedia content consisting of text, images, audio, animation, and video. The learning activities were designed to encourage students' active participation while simultaneously facilitating their understanding of Islamic values embedded in the instructional materials.

From classroom observations and interviews, students demonstrated high enthusiasm and active engagement throughout the instructional sessions. They participated more actively in discussions, completed learning missions collaboratively, and showed greater motivation to accomplish each learning task. The game mechanics fostered a competitive yet collaborative atmosphere, while the digital stories enabled students to relate religious concepts to real-life situations.

The effectiveness of the instructional approach was confirmed by quantitative findings. Table 1 presents the descriptive statistics of students' religious literacy scores before and after the intervention.

Table 1. Descriptive Statistics of Students' Religious Literacy Scores

Test	N	Mean	SD	Minimum	Maximum
Pre-test	46	71.41	6.46	60	85
Post-test	46	82.39	6.84	70	95

The descriptive analysis indicates a substantial improvement in students' learning achievement after the implementation of the integrated instructional model. The mean score increased from 71.41 in the pre-test to 82.39 in the post-test, representing an average improvement of 10.98 points.

To examine whether the improvement was statistically significant, a paired sample t-test was conducted.

Table 2. Paired Sample t-test Results

Variable	Mean Difference	t	df	Sig. (2-tailed)
Post-test – Pre-test	10.98	17.244	45	.000

The paired sample t-test revealed a statistically significant difference between students' pre-test and post-test scores ($t = 17.244$, $p < .001$). Since the significance value was far below the 0.05 threshold, the null hypothesis was rejected, indicating that integrating gamification and digital storytelling significantly improved students' learning outcomes.

Furthermore, the effectiveness of the intervention was evaluated using the normalized gain (N-Gain).

Table 3. N-Gain Analysis

Mean N-Gain	Category
0.395	Moderate

The average N-Gain score of 0.395 indicates that the instructional model achieved a moderate level of effectiveness in improving students' religious literacy. These findings demonstrate that the integration of gamification and digital storytelling successfully transformed conventional teacher-centered instruction into an interactive student-centered learning experience. Students were not merely passive recipients of information but became active participants who constructed knowledge through exploration, collaboration, and reflective learning activities.

The present findings support recent studies indicating that gamification enhances students' motivation, engagement, and academic achievement by incorporating game mechanics into educational contexts (Zainuddin et al., 2023). Similarly, digital storytelling facilitates meaningful learning by integrating multimedia resources with narrative structures that improve learners' cognitive processing and emotional engagement (Robin, 2021; Yang & Wu, 2021). The combination of these two approaches provides complementary pedagogical advantages: gamification increases behavioral engagement, whereas digital storytelling promotes conceptual understanding and value internalization.

From the perspective of Constructivist Learning Theory, students actively construct knowledge through meaningful learning experiences rather than passively receiving information. Likewise, Mayer's Cognitive Theory of Multimedia Learning explains that combining verbal explanations with visual and auditory information enhances information processing and long-term memory retention. Consequently, integrating gamification and digital storytelling provides an instructional environment that promotes both cognitive and affective learning outcomes.

B. Enhancing Elementary Students' Religious Literacy

The primary objective of this study was to determine whether the integrated instructional model could improve elementary students' religious literacy. Religious literacy in this research encompasses students' ability to understand Islamic concepts,

interpret religious messages, apply religious values in everyday life, and demonstrate positive religious attitudes during learning activities.

The quantitative findings demonstrated a significant improvement in students' religious literacy after the implementation of the intervention. The increase in mean scores, supported by the statistically significant t-test results, confirms that students acquired a deeper understanding of Islamic teachings through the integrated learning model.

Qualitative findings further strengthened these statistical results. Classroom observations revealed that students became more confident in expressing religious opinions, actively participated in discussions, and were able to relate Islamic stories presented through digital media to their daily experiences. Interview data also indicated that students found the learning activities more enjoyable than traditional lecture-based instruction. They reported that interactive quizzes, rewards, and digital narratives helped them remember Islamic values more effectively.

Teachers participating in the study also observed substantial improvements in students' classroom participation and comprehension. According to the teachers, students were more willing to ask questions, collaborate with peers, and reflect upon the moral messages conveyed through digital storytelling. These behavioral changes indicate that religious literacy extends beyond cognitive achievement to include affective engagement and value internalization.

The statistical findings support these qualitative observations. The significant increase from a mean score of 71.41 to 82.39, together with the moderate N-Gain score (0.395) and highly significant paired sample t-test result ($p < .001$), demonstrates that the integrated instructional model effectively enhanced students' religious literacy.

These findings are consistent with recent studies emphasizing that digital pedagogical innovations positively influence religious and character education. Interactive learning environments encourage deeper engagement, allowing students to connect abstract religious concepts with authentic life experiences. Moreover, digital storytelling provides meaningful contexts that facilitate moral reasoning, while gamification maintains learners' motivation throughout the instructional process.

The findings also align with Self-Determination Theory, which suggests that learners become more intrinsically motivated when instructional activities satisfy their

needs for competence, autonomy, and relatedness. Gamification fulfills students' need for competence through rewards and achievement systems, whereas storytelling nurtures relatedness by connecting learners emotionally with religious narratives. This combination encourages sustained engagement and deeper learning.

Overall, the integration of gamification and digital storytelling not only produced statistically significant improvements in students' religious literacy but also fostered meaningful learning experiences characterized by higher motivation, stronger classroom participation, improved critical understanding of Islamic teachings, and greater internalization of religious values. These results indicate that the proposed instructional approach offers an innovative and effective pedagogical model for strengthening religious literacy among elementary school students in Islamic educational settings.

CONCLUSION

This study demonstrates that the integration of gamification and digital storytelling is an effective instructional approach for enhancing elementary students' religious literacy in Islamic education. The quantitative findings revealed a statistically significant improvement in students' religious literacy, as evidenced by the increase in the mean score from 71.41 on the pre-test to 82.39 on the post-test. The paired sample *t*-test further confirmed that the improvement was statistically significant ($t = 17.244, p < .001$), while the N-Gain score of 0.395 indicated a moderate level of instructional effectiveness. These findings suggest that integrating game-based learning elements with digital storytelling can substantially improve students' understanding of religious concepts and their ability to interpret and apply Islamic values in meaningful contexts.

The qualitative findings complement the statistical results by revealing that the instructional approach fostered greater student engagement, motivation, collaboration, and active participation throughout the learning process. The use of digital narratives enabled students to connect religious teachings with authentic life experiences, whereas gamification created an enjoyable and interactive learning environment that encouraged sustained participation. Consequently, the integration of these two pedagogical strategies contributed not only to students' cognitive achievement but also to the internalization of religious values and the development of positive learning attitudes.

From a pedagogical perspective, this study highlights the importance of adopting innovative digital learning strategies in Islamic elementary education. Rather than relying

solely on conventional teacher-centered instruction, educators should design technology-enhanced learning environments that actively involve students in constructing knowledge through interactive experiences. The combination of gamification and digital storytelling provides a promising instructional model for promoting meaningful, engaging, and value-oriented learning that is aligned with the demands of twenty-first-century education.

Despite these promising findings, this study has several limitations. The research was conducted in a single Islamic elementary school with a relatively limited sample size and focused exclusively on short-term learning outcomes. Therefore, caution should be exercised when generalizing the findings to different educational contexts. Future research is recommended to involve larger and more diverse samples across different regions and educational levels, employ longitudinal or randomized experimental designs, and examine additional variables such as students' critical thinking, digital literacy, learning motivation, character development, and higher-order thinking skills. Furthermore, future studies may explore the integration of emerging technologies, including artificial intelligence, adaptive learning systems, augmented reality, or virtual reality, to further strengthen religious literacy and create more personalized and immersive learning experiences in Islamic education.

REFERENCES

- Al-Buraiki, S. A., Al-Siyabi, S. S., & Alghafri, A. S. (2024). Examining the factors behind experimental group superiority in quasi-experimental research: A mixed-methods analysis of MA theses. *International Journal of Learning, Teaching and Educational Research*, 24(9). <https://doi.org/10.26803/ijlter.24.9.1>
- Alomari, I., Al-Samarraie, H., & Yousef, R. (2022). The role of gamification techniques in promoting student learning: A review and synthesis. *Journal of Educational Computing Research*, 60(5), 1073–1104. <https://doi.org/10.1177/07356331211052396>
- Biesta, G. (2021). *World-centred education: A view for the present*. Routledge
- Bond, M., Bedenlier, S., Marín, V. I., & Händel, M. (2021). Student engagement through educational technology: A systematic review. *Educational Technology Research and Development*, 69(4), 1911–1941. <https://doi.org/10.1007/s11423-021-09970-0>
- Chiu, T. K. F. (2023). Applying digital technologies in education: A systematic review. *Computers & Education Open*, 4, 100128. <https://doi.org/10.1016/j.caeo.2023.100128>
- Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. *International Journal of Educational Technology in Higher Education*, 20(1).

- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. *Proceedings of the 15th International Academic MindTrek Conference*, 9–15.
- Dinham, A. (2022). Religious literacy in education: Challenges and opportunities in plural societies. *British Journal of Religious Education*, 44(3), 279–292. <https://doi.org/10.1080/01416200.2022.2034211>
- Fiorella, L., & Mayer, R. E. (2021). *The Cambridge Handbook of Multimedia Learning* (3rd ed.). Cambridge University Press.
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies. *Proceedings of the 47th Hawaii International Conference on System Sciences*, 3025–3034.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Lampropoulos, G., & Sidiropoulos, A. (2024). The impact of gamification on students' learning performance and engagement: A longitudinal study. *Education Sciences*, 14(4), 367. <https://doi.org/10.3390/educsci14040367>
- Looyestyn, J., Kernot, J., Boshoff, K., Ryan, J., Edney, S., & Maher, C. (2021). Does gamification increase engagement with online programs? A systematic review. *PLoS ONE*, 16(3), e0247169. <https://doi.org/10.1371/journal.pone.0247169>
- Majuri, J., Koivisto, J., & Hamari, J. (2022). Gamification of education and learning: A review of empirical literature. *International Journal of Educational Technology in Higher Education*, 19(1), 1–28. <https://doi.org/10.1186/s41239-021-00277-1>
- Meng, Z., & Wang, P. (2024). Research on mixed methods in education: A bibliometric analysis of development dynamics (2003–2023). *Journal of Mixed Methods Studies*. <https://doi.org/10.59455/jomes.38>
- Moore, D. L. (2007). *Overcoming religious illiteracy: A cultural studies approach to the study of religion in secondary education*. Palgrave Macmillan.
- Moore, D. L. (2023). Religious literacy and democratic education: New perspectives for schools. *Journal of Beliefs & Values*, 44(1), 15–29. <https://doi.org/10.1080/13617672.2023.2175823>
- Muhammad Ali Ramdhani, M. A., et al. (2024). Religious literacy and character education in Indonesian Islamic higher education. *Jurnal Pendidikan Islam*, 13(1), 45–61

- Niemi, H., & Multisilta, J. (2022). Digital storytelling promoting twenty-first century skills and student engagement. *Education Sciences*, 12(4), 244
<https://doi.org/10.3390/educsci12040244>
- Piaget, J. (1972). *The psychology of the child*. Basic Books.
- Redecker, C. (2022). European Framework for the Digital Competence of Educators (DigCompEdu): Implementation and recent developments. *Education and Information Technologies*.
- Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory Into Practice*, 47(3), 220–228.
<https://doi.org/10.1080/00405840802153916>
- Robin, B. R. (2021). *The power of digital storytelling to support teaching and learning*. Digital Education Review
- Ryan, R. M., & Deci, E. L. (2022). Self-Determination Theory: Basic psychological needs in motivation, development, and wellness. *Guilford Press*.
- Sadik, A. (2008). Digital storytelling: A meaningful technology-integrated approach for engaged student learning. *Educational Technology Research and Development*, 56(4), 487–506. <https://doi.org/10.1007/s11423-008-9091-8>
- Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. *Educational Psychology Review*, 32(1), 77–112. <https://doi.org/10.1007/s10648-019-09498-w>
- Schunk, D. H. (2022). *Learning Theories: An Educational Perspective* (8th ed.). Pearson
- Shi, Y., Tong, M., & Long, T. (2021). Investigating relationships among blended synchronous learning environments, students' motivation, and cognitive engagement: A mixed methods study. *Computers & Education*, 168, 104193. <https://doi.org/10.1016/j.compedu.2021.104193>
- Shaw, M. (2022). *Worldview literacy as intercultural citizenship education: A framework for critical, reflexive engagement in plural democracy*. *Education, Citizenship and Social Justice*, 18(2), 197–213. <https://doi.org/10.1177/17461979211062125>
- Suh, A., & Wagner, C. (2021). How gamification of an enterprise collaboration system increases knowledge contribution: An affordance approach. *Journal of Knowledge Management*, 25(2), 414–434. <https://doi.org/10.1108/JKM-10-2019-0589>
- Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan Kombinasi (Mixed Methods)*, *SELL Journal*, vol. 5, 2021. h. 201

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- Talan, T., & Kalinkara, Y. (2022). The effect of digital storytelling on student engagement and motivation: A systematic review. *Computers & Education*, 182, 104463. <https://doi.org/10.1016/j.compedu.2022.104463>
- Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. Jossey-Bass.
- Walker, N. C., Chan, W. Y. A., & McEver, H. B. (2021). Religious literacy: Civic education for a common good. *Religion & Education*, 48(1), 1–16. <https://doi.org/10.1080/15507394.2021.1876508>
- Yang, X., et al. (2023). Digital storytelling in education: A systematic review of learning outcomes and pedagogical implications. *Education and Information Technologies*.
- Zainuddin, Z., Chu, S. K. W., Shujahat, M., & Perera, C. J. (2020). The impact of gamification on learning and instruction: A systematic review of empirical evidence. *Educational Research Review*, 30, 100326. <https://doi.org/10.1016/j.edurev.2020.100326>
- Zhou, Y., Zhou, Y., & Machtmes, K. (2024). Mixed methods integration strategies used in education: A systematic review. *Methodological Innovations*, 17(1), 41–49.