

THE EFFECTIVENESS OF DIGITAL LEARNING MEDIA IN EDUCATIONAL TRANSFORMATION: A SYSTEMATIC LITERATURE REVIEW ON IMPROVING STUDENT MOTIVATION, ENGAGEMENT, AND LEARNING OUTCOMES

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Abstract: Advances in information and communication technology (ICT) have driven significant transformations in education, particularly in the learning process. Integrating technology into learning is crucial to addressing the challenges of education in the digital era, which demands more innovative, interactive, and student-oriented learning. This study aims to determine and analyze the effectiveness of digital learning media in driving transformation in the learning process based on the results of a systematic literature review. The literature identification process resulted in 45 articles, which were then selected into 21 articles relevant to the research focus. The analysis results indicate that digital learning media plays a significant role in increasing student engagement, motivation, and active participation, as well as encouraging a shift in learning towards a student-centered approach. Digital media can also support the development of critical thinking skills, independent learning, and mastery of 21st-century skills. With the support of teacher mentoring and a conducive learning environment, the integration of digital learning media has proven effective in improving the quality of learning and addressing the challenges of educational transformation in the digital era.

Keywords: Effectiveness of digital learning media, learning transformation, systematic literature review, digital education, learning motivation

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INTRODUCTION

Advances in information and communication technology continue to change in line with the increasingly sophisticated era. Education aims to provide students with knowledge, skills, and attitudes so they can develop their potential and be prepared to face future challenges. In the educational process, student learning outcomes are an indicator of the success of the learning process (Suyuti et al., 2023). Therefore, efforts to improve student learning outcomes have become a top priority for many countries worldwide (Yahya et al., 2023). The world of education is required to continuously transform with the times, one way of doing this is by integrating technology into the learning process (Syafaatussalamah et al., 2025). The development of information and communication technology (ICT) has driven significant changes in various aspects of life, including education. In the educational context, technological innovation enables the transformation of learning methods from traditional to more modern and interactive (Sulistiyowati et al., 2024).

The role of technology in education is increasingly important because it can increase the effectiveness and efficiency of the learning process (Jaya et al., 2024). Advances in information and communication technology have opened the door to changes in the way students learn and participate in the learning process (Rongcai et al., 2025). The use of digital media is not just a trend, but has become a necessity to adapt teaching methods to the learning styles of today's students who are already familiar with technology (Widyastuti et al., 2023). The use of media in the learning process can be an intermediary for teachers or educators to disseminate designed ideas and a means of communication in conveying messages to students (Alifah et al., 2023). According

to (Kurnia et al, 2022) In the learning process, there is a reciprocal communication process between teachers and students. However, media that is less varied and innovative can cause low student engagement, thus impacting decreased motivation and learning outcomes. Therefore, low student motivation and learning outcomes need to be immediately addressed through improving the learning process. Many students experience a decrease in learning motivation, some daydream, some sleep, and their minds are not focused on the lessons delivered by educators. Low student motivation and learning outcomes are phenomena that must be immediately addressed by improving the learning process (Hermansah et al. , 2025) . The effectiveness of digital media utilization is evident in its ability to support learning motivation, facilitate active student engagement, and strengthen learning outcomes in various learning contexts. Student learning outcomes are a crucial indicator in assessing the success of the learning process (Herawati et al. , 2025) .

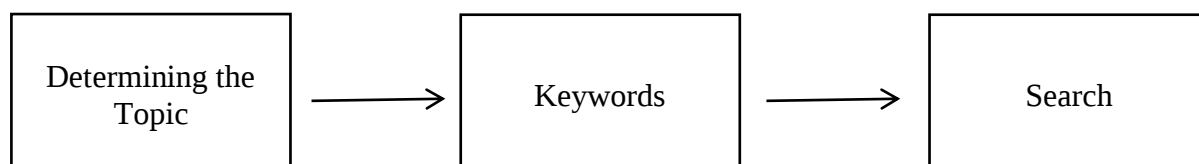
Digital learning requires not only materials but also platforms that adapt to students' learning styles (Anugraswari et al., 2025) . Digital learning media, with its interactivity, offers significant potential for developing critical questioning skills in students (Rachmah et al. , 2025) . Through features such as immediate feedback, simulations, interactive quizzes, and dynamic visualizations, students act not only as recipients of information but also as active learners. Students with high learning motivation tend to be more thorough, enthusiastic, and focused during learning (Syafaatussalamah et al., 2025) . Therefore, to obtain a comprehensive overview of the effectiveness of artificial intelligence-based learning media in driving digital learning transformation, this study employed a Systematic Literature Review (SLR) approach to review and synthesize previous research findings. Using the SLR method, researchers conducted a structured and systematic review and identification of related articles (Patterns et al. , 2025) .

The analysis showed that the use of digital learning media plays a significant role in increasing student motivation, engagement, and learning outcomes. Interactive and varied media can encourage active student participation and develop critical thinking skills, particularly questioning skills. Therefore, according to (Yuliana et al., 2024) These learning activities require active learning, participation, and interactive communication between educators and students.

Based on this background, this research focuses on answering the following main question: How effective is digital learning media in driving the transformation of the learning process in education based on the results of a systematic literature review? This research also aims to comprehensively analyze the effectiveness of digital learning media in increasing student motivation, engagement, and learning outcomes, as well as encouraging the transformation of the learning process to be interactive, innovative, and student-centered, based on the results of a systematic literature review.

METHOD

This research uses the Systematic Literature Review (SLR) method, a study conducted to analyze various literature selected from several sources to form conclusions and generate new ideas (Kurnia et al, 2022) . The purpose of applying SLR in this study is to identify, review, and draw conclusions from all research findings relevant to the topic under study, using systematic steps that will be explained below. According to (Rachim et al., 2024) the purpose of the Systematic Literature Review (SLR) method is to identify, review, and draw conclusions based on all research findings related to the topic under study. The steps of the Systematic Literature Review (SLR) used in this study are as follows :



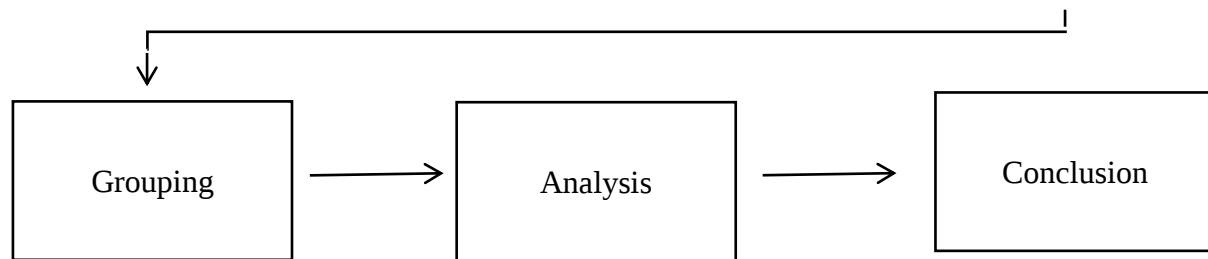


Figure 1. SLR Research Model

Articles were obtained through a Google Scholar search using the keywords "Effectiveness of Digital Learning Media in Educational Transformation" and "Systematic Literature Review on Improving Student Engagement and Learning Outcomes." This initially yielded 45 articles. According to (Syafaatussalamah et al., 2025) selection was conducted through a process of identification, screening, and eligibility to ensure relevance to the research topic. From these steps, the researchers were able to narrow down 21 relevant articles.

Inclusion and Exclusion Criteria

Inclusion and exclusion criteria facilitate the selection of appropriate and inappropriate data for this study (Anugraswari, 2025) . The following are the inclusion and exclusion criteria applied.

Table 1: Article Inclusion and Exclusion Criteria

Inclusion	Exclusion
A document that focuses on the effectiveness of using AI in improving the quality of learning and digital learning transformation.	Documents that are irrelevant and not directly related to the application of AI in education and AI in digital learning.
The criteria or conditions that make a study/article worthy of inclusion in research or review.	Criteria or reasons why studies/articles were excluded or not included in the research.
Articles are either open access or published in journals.	Publications that are not journal articles (for example technical reports) and publications that do not have full-text access.
Articles published between 2020 and 2025 (over the last 5 years).	Articles published before 2020 and after 2025 (beyond the last 5 years).
Articles published in Indonesian and English.	Articles published in languages other than Indonesian and English.

RESULT

The results of the literature identification conducted through the Systematic Literature Review (SLR) method using specific keywords yielded 45 articles. These articles were then regularly selected based on inclusion and exclusion criteria and their suitability to the research focus and title, resulting in 21 relevant articles. To facilitate understanding of the results of this screening process, the researchers present a summary of the selected articles in the following table.

Table 2: Articles Reviewed

No	Author Name and Year of Publication	Method	Level	Measured Aspects	Research results
1	Dega KSA, Arif W (2025)	Systematic Literature Review (SLR)	General students (elementary school, middle school, high school and college students)	learning outcomes (cognitive), student motivation and focus (affective), active participation and involvement (psychomotor), and media effectiveness and appeal	The use of interactive PowerPoint in primary and secondary education has been shown to improve student learning outcomes, motivation, and engagement.
2	Asman Jaya, Kasmawati, Lilianti, Rahma, Herlian (2024)	Qualitative	General students (elementary school, middle school, high school and college students)	student interest and learning achievement, level of involvement and activeness in learning, student creativity, effectiveness of Canva use	Technology-based learning (Canva) is effective in increasing student interest, engagement, creativity, and learning outcomes, but requires support from technology access and teacher readiness to be optimal.
3	Aulia Brilinda Anugraswari (2025)	Systematic Literature Review (SLR)	General students (elementary school, middle school, high school and college students)	the effectiveness of AI in improving student learning, AI support for teacher performance, and the challenges of implementing AI in education.	AI improves learning effectiveness, but its success depends on infrastructure readiness, teacher competence,

					and data security.
4	Cicik Sulistyowati, Nuraini Asriati (2024)	Systematic Literature Review (SLR)	General students (elementary school, middle school, high school and college students)	teaching effectiveness, student learning experience and engagement, independent learning and critical thinking skills, teacher digital competence, quality and innovation of teaching methods, student digital literacy, and the level of collaboration and inclusiveness of learning.	The integration of digital tools and technologies significantly improves the effectiveness of teaching and the quality of students' learning experiences, characterized by increased engagement, digital literacy, learning independence, critical thinking, and collaboration.
5	Mohammad Iqbal Afandi, Hamdan Tri Atmaja, Ellianawati Ellianawati & Decky Avrilianda (2025)	systematic literature with PRISMA	Elementary School Grade 6	cognitive learning outcomes, student motivation and interest in learning, participation and emotional involvement, effectiveness of multimodal and interactive material presentation, and readiness of infrastructure, teachers, and curriculum in supporting the use of hypermedia.	Hypermedia significantly improves student learning outcomes, motivation, interest, and engagement, with its effectiveness depending on teacher readiness, infrastructure, and curriculum support.
6	Dian Syafitri, Khairunnisa, Naura NR, Zara Septiyana, Yarisda Ningsih (2025)	systematic literature review.	Elementary School	student learning interest, level of student involvement and focus in learning, effectiveness of	Digital learning media effectively increases student interest,

				various forms of digital media, suitability of media to student characteristics, teacher support, and media integration in the curriculum.	engagement, and focus, with success depending on the suitability of the media to the students, teacher support, and curriculum integration.
7	As Syafaatussalamah , Deandra Eka Salsabilla (2025)	Literature Review	Elementary School	student learning motivation, participation and attention in learning, active student involvement, as well as the effectiveness of digital media and teacher/infrastructure readiness in supporting interesting and contextual learning.	Digital media is effective in increasing student motivation, participation, and engagement, although its success depends on teacher competence and infrastructure availability.
8	Hermansah, Jakaria (2025)	Systematic Literature Review (SLR)	Elementary School	student motivation and enthusiasm for learning, academic achievement or attainment, and the level of student involvement and active participation in learning using digital media.	Digital learning media effectively increases students' motivation, engagement, and learning achievement in elementary schools.
9	Indra Kurniawan, M. Zabeta (2025)	Qualitative	SDN 1 Jaya Mulya	student motivation and understanding, the effectiveness of digital media (video and PowerPoint) in delivering material, as well as teacher readiness and the	Digital media such as videos and PowerPoint are effective in increasing student motivation and

				availability of infrastructure that supports digital learning.	understanding, but their success depends on teacher competence and infrastructure availability.
10	Aisya Herawati, Melva Zainil (2025)	quasi-experiment	General students (elementary school, middle school, high school and college students)	student learning outcomes, student engagement and participation, and understanding of concepts and interactive learning experiences through the use of digital media.	Digital learning media effectively improves student learning outcomes, engagement, and conceptual understanding compared to conventional methods.
11	Fathiyah Rachmah, Najwa Laika Putri Abdi, Niken Widy Astuti, Farhan Dwi Syah Putra, Zulfa Dewina (2025)	Systematic literature	General students (elementary school, middle school, high school and college students)	the effectiveness of digital media in developing critical questioning skills, media characteristics and interactivity, learning implementation strategies, as well as teacher competence, environmental support, and technology access that influence the success of media use.	Effective digital learning media supports the development of students' critical questioning skills, with success influenced by media characteristics, implementation strategies, teacher competencies, and technology access.
12	Hasna Nur Alifah, Umi Virgianti, Muhammad Imam Zamah Sarin, Dicky	Systematic Literature Review (SLR)	Elementary School	student learning outcomes, understanding of the material, level of student focus and	Digital learning media effectively improves learning

	Amirul Hasan, Fina Fakhriyah, Erik Aditia Ismaya (2023)			engagement, and the effectiveness of digital media in making learning more interesting and in line with the needs of the times.	outcomes, understanding, focus, and student engagement in thematic learning in elementary schools.
13	Any Widyastuti (2023)	Literature study	Sipala I Elementary School, Makassar	student involvement and active participation, learning motivation, understanding of Islamic Religious Education material, as well as the effectiveness of digital media and teacher/infrastructure readiness.	Digital learning media effectively increases student engagement, motivation, and understanding in Islamic Religious Education learning, with success depending on the infrastructure and teacher competence.
14	Afdal Kurniawan, Adrias Adrias, Salmains Safitri Syam (2025)	Systematic Literature Review (SLR)	Elementary School	student motivation and enthusiasm for learning, active involvement in learning, effectiveness of digital material presentation, and adaptation of media to students' learning styles and individual needs.	Digital learning media effectively increases students' motivation, engagement, and learning flexibility, as well as supporting the presentation of interesting and individual-oriented materials.
15	Muhammad Rizali Rachim,	Systematic Literature	General students	student motivation and interest in	Augmented Reality (AR)

	Agus Salim, Qomario (2024)	Review (SLR)	(elementar y school , middle school , high school and college students)	learning, activeness and involvement in learning, understanding of concepts through AR visualization, and the effectiveness of AR implementation related to infrastructure and learning content.	effectively increases student motivation, activeness, and engagement, as well as facilitating concept understanding and creating interactive and engaging learning experiences.
16	Aulia Brilinda Anugraswari (2025)	Systematic Literature Review (SLR)	General students (elementar y school , middle school , high school and college students)	student engagement and participation, understanding of the material, the effectiveness of AI- based learning media, as well as implementation challenges related to infrastructure, teacher competence, and data protection.	AI-based learning media effectively increases student engagement and understanding, but its success depends on teacher competence, infrastructure, and data protection.
17	Budi Kurnia (2022)	Systematic Literature Review	General students (elementar y school , middle school , high school and college students)	student learning discipline in online learning, the influence of internal and external factors, and the role of parents and teachers in supporting learning discipline.	Student learning discipline is very important in determining the success of online learning, with parents and teachers playing an important role as supporters.
18	Octaviona Fadilatul Khotimah (2023)	Systematic Literature Review	General students (elementar	student engagement and development of students' digital	digital transformation in learning

			y school , middle school , high school and college students)	skills in learning through the use of digital learning media.	media has been proven to increase student engagement and develop their digital skills
19	Wahyudi1, MDY, Jenuri, Catur Budi S, Dina MS, Okta Veza (2023)	Literature Study	General students (elementary school , middle school , high school and college students)	student learning outcomes, learning motivation, and student interest in learning through the use of multimedia in learning.	The use of multimedia in learning can increase students' motivation, interest, and learning outcomes, with effectiveness influenced by multimedia design, teaching methods, student characteristics, and the learning environment.
20	Suyuti, Paulina MEW, M. Abdun J, Muhammad L., (2023)	Systematic Literature Review	General students (elementary school , middle school , high school and college students)	improving student learning outcomes, developing cognitive and critical thinking skills, and the effectiveness and efficiency of the learning process through the use of technology in education	The use of technology in education has been proven to be effective in improving student learning outcomes, especially in cognitive skills and critical thinking, and makes the learning process more efficient and effective when

					integrated appropriately.
21	Dyan Y, Achmad B, Arico AS, Siti S, Niken PS (2024)	Quantitative	Student	student learning outcomes, as seen through a comparison of pretest and posttest scores, as well as student interest and involvement in learning through the use of Quizizz-based learning media.	The use of Quizizz learning media has a significant effect on improving student learning outcomes, as indicated by a real difference between pretest and posttest scores with an influence level of 14.4%.

Based on the application of the Systematic Literature Review (SLR) method, 21 scientific articles were identified that met the inclusion criteria and were relevant to the research focus on the effectiveness of digital learning media and artificial intelligence-based technology in transforming the learning process. These articles were published between 2020 and 2025 and covered various levels of education, from elementary school to university.

In terms of research methods, the majority of studies used the SLR approach and systematic literature review, along with qualitative, quantitative, and quasi-experimental methods. The research subjects were predominantly general students, with a significant focus on elementary education, demonstrating the importance of digital media in building motivation and engagement in learning from an early age.

The synthesis of results showed that digital learning media consistently had a positive impact on the learning process. Improvements were seen in student learning outcomes, motivation and interest in learning, engagement and active participation, and conceptual understanding. Media such as interactive PowerPoint, Canva, multimedia, hypermedia, Augmented Reality (AR), Quizizz, and AI-based media were proven to be more effective than conventional learning because they were able to provide interactive and engaging learning.

In addition to improving learning outcomes, digital learning media also plays a role in developing critical thinking skills, questioning skills, digital literacy, independent learning, and student collaboration. However, the effectiveness of digital media implementation is greatly influenced by infrastructure readiness, teacher competence, curriculum support, and technology access and security.

Overall, the results of this SLR indicate that digital learning media are effective in driving the transformation of the learning process toward more innovative, interactive, and student-centered learning, making them relevant for application in today's educational context.

These findings serve as the basis for further analysis of the selected articles to obtain a more comprehensive picture of the characteristics and focus of existing research. Next, the 21 articles

that passed the Systematic Literature Review (SLR) selection method were systematically analyzed through data extraction and grouping based on educational level, research method, and study focus category. This process aims to produce a more structured and in-depth research mapping regarding the effectiveness of digital learning media in driving the transformation of the learning process in education.

Based on the results classification of the analyzed articles, the discussion of the research findings is divided into three main aspects:

1. Classification of Education Levels

Table 3: Classification of Education Levels

Educational level	Number of Articles	General Information
Elementary school	10	Dominantly discusses digital media to increase motivation, engagement, and learning outcomes.
General students (elementary school, Junior high school, high school and college students)	9	Covering across levels (elementary school–college students), focusing on digital technology, AI, AR, and multimedia
Student	1	Focus on learning outcomes and engagement through Quizizz
Specific Class Elementary School	1	Focus on hypermedia for sixth grade elementary school

The classification results show that the most research was conducted at the elementary school level, with 10 articles, focusing on the use of digital learning media to improve student motivation, engagement, and learning outcomes. Furthermore, 9 articles discussed general students across levels (elementary school–university students) emphasizing the use of digital technologies, such as AI, AR, and multimedia. Meanwhile, research at the university level and specific elementary school classes was represented by only one article each, focusing on the use of Quizizz and hypermedia. These findings indicate that the study of digital learning media is still dominated by elementary education, while research at the higher education level and specific classes is still limited.

2. Classification of Research Methods

Table 4 Classification of Research Methods

Research methods	Number of Articles	Characteristics
Systematic Literature Review (SLR)	11	Comprehensively assessing the effectiveness of digital media and technology
Study/Literature Review	6	Emphasizes conceptual analysis and previous research findings
Qualitative	2	Exploring experience, teacher readiness, and learning processes

Quantitative	1	Measuring the influence of media on learning outcomes statistically
Quasi-Experiment	1	Comparing learning outcomes before and after treatment

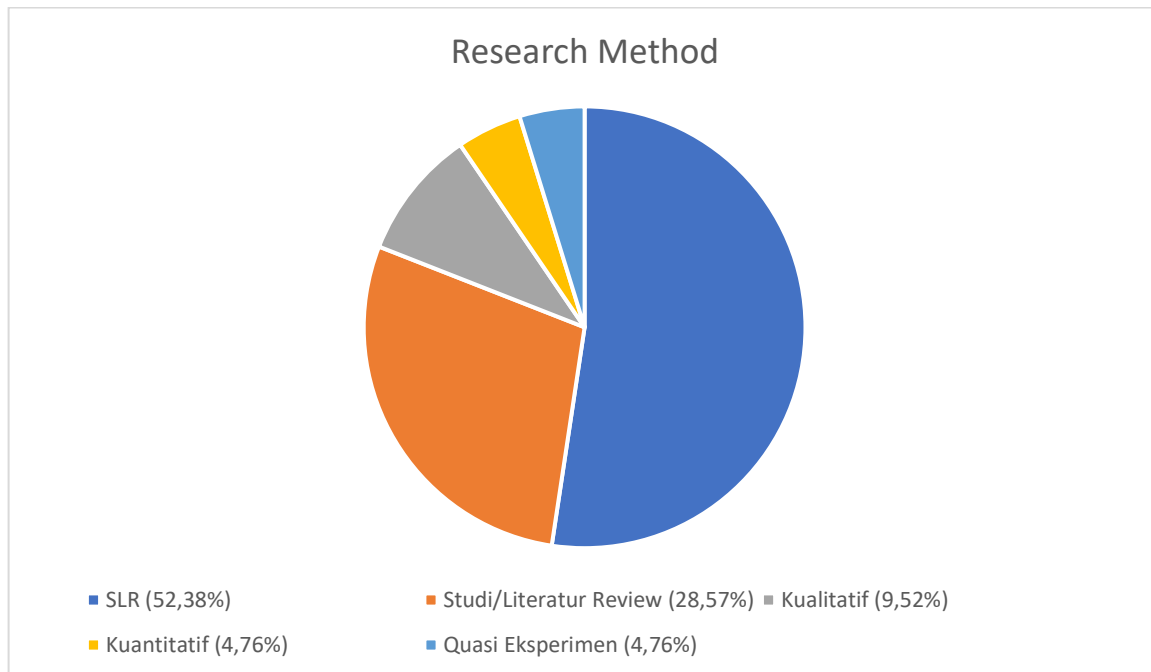


Figure 2 Percentage of Research Method Classification

Based on the results of the research method classification of the 21 articles analyzed, the Systematic Literature Review (SLR) method was the most dominant approach, representing 11 articles, or approximately 52.38%. The dominance of the SLR method indicates that studies on learning media and digital technology are mostly conducted through the synthesis of previous research to obtain a comprehensive picture of their effectiveness and trends in education.

Furthermore, the study/literature review method was used in six articles, or approximately 28.57%. This method emphasized conceptual analysis and strengthening theoretical foundations based on previous research findings. Meanwhile, a qualitative approach was found in two articles, or approximately 9.52%, which focused on exploring learning experiences, teacher readiness, and the process of implementing digital media in the classroom.

Quantitative and quasi-experimental methods were each used in only one article, or approximately 4.76%. Quantitative methods were used to statistically measure the effect of digital learning media on learning outcomes, while quasi-experiments compared learning outcomes before and after treatment.

Overall, the percentage graph shows that literature-based research (SLR and literature studies) dominates more than half of the articles, while empirical research with quantitative and experimental designs remains relatively limited. This indicates an opportunity for further research in the form of empirical studies to directly test the effectiveness of digital learning media in various educational contexts.

3. Classification Based on Research Focus Category

Table 5 Classification Based on Research Focus Category

Focus Category	Number of Articles	Key Indicators
Cognitive Learning Outcomes	18	Academic grades, conceptual understanding, learning achievement
Motivation & Interest in Learning	16	Enthusiasm, interest, passion for learning
Engagement & Participation	5	Activeness, interaction, collaboration
Digital Learning Media	17	Multimedia, Canva, PowerPoint, Quizizz, AR, AI
21st Century Skills	8	Critical thinking, digital literacy, independent learning
Supporting Factors & Challenges	12	Infrastructure, teacher competence, access to technology

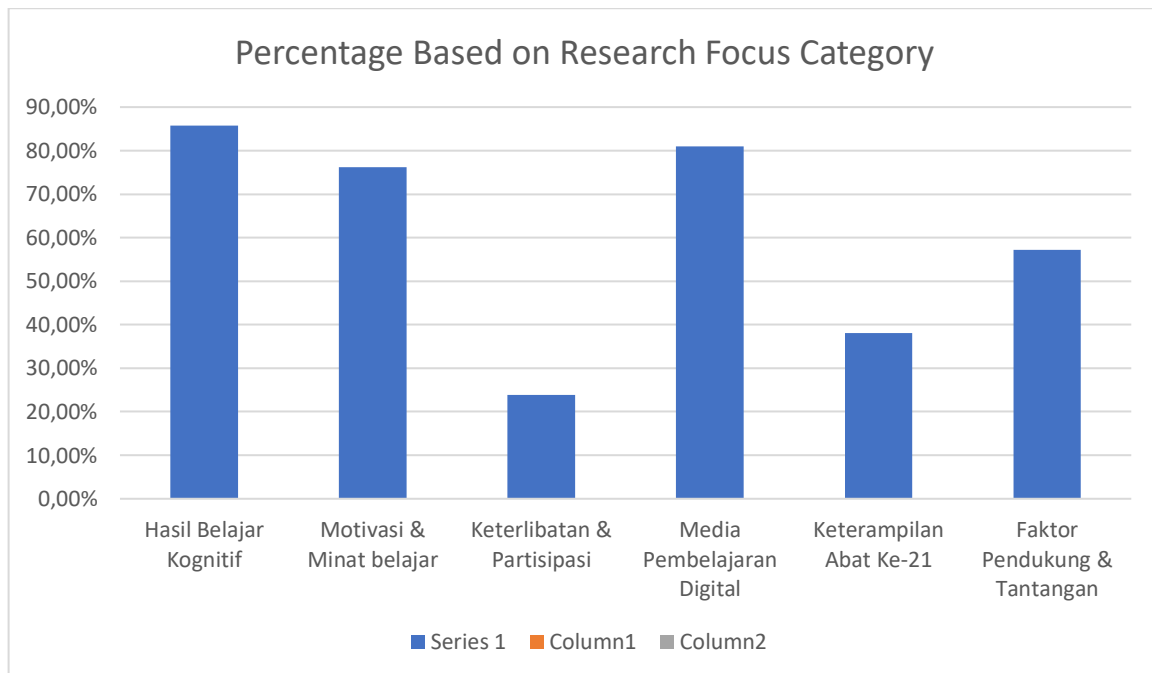


Figure 3 Classification Percentage Based on Research Focus Category

Based on the classification results of the 21 articles analyzed, the most dominant research focus was cognitive learning outcomes, found in 18 articles, or approximately 85.71%. This focus encompassed improving academic grades, conceptual understanding, and learning achievement, indicating that learning success is still largely measured by students' cognitive achievements.

The next focus is digital learning media, which was discussed in 17 articles, or approximately 80.95%. Research in this category highlights the use of various digital media, such as multimedia, Canva, PowerPoint, Quizizz, Augmented Reality (AR), and artificial intelligence (AI), as primary tools for creating more interactive and engaging learning.

The categories of motivation and interest in learning appeared in 16 articles, or approximately 76.19%, indicating that affective aspects are a significant focus in digital learning research. Increasing student enthusiasm, interest, and passion for learning are considered key factors contributing to the success of technology-based learning.

Meanwhile, supporting factors and challenges were discussed in 12 articles, or approximately 57.14%, covering infrastructure readiness, teacher competency, and technology access. These findings confirm that the effectiveness of digital learning media is highly dependent on technical support and human resources.

The 21st-century skills category was found in eight articles, or approximately 38.10%, covering the development of critical thinking, digital literacy, and independent learning. Relatively fewer articles focused on student engagement and participation, with five articles, or approximately 23.81%, highlighting aspects of activeness, interaction, and collaboration in learning.

Overall, the percentage graph shows that research on digital learning media is still dominated by a focus on cognitive learning outcomes and media use, while studies emphasizing student engagement and the development of 21st-century skills are relatively limited. This finding opens up opportunities for further research to examine these aspects in greater depth.

The classification results indicate that most of the research was conducted at the elementary school level using a Systematic Literature Review (SLR) approach. These studies generally focused on the use of digital learning media to improve learning outcomes, motivation, and student engagement, demonstrating the importance of technology integration in supporting the learning process at the elementary level.

DISCUSSION

Thus, the classification findings and analysis show that digital learning media not only facilitates the delivery of material in a more engaging and interactive manner but also transforms the learning process into a more student-centered one. With interactive features, dynamic visualizations, and immediate feedback, digital media encourages students to participate more actively, think critically, and develop independent learning skills. The use of digital learning media has many benefits, particularly in increasing student engagement (Widyastuti et al., 2023).

The development of information and communication technology (ICT) has brought significant changes in various aspects of life, including education. (Jaya et al., 2024). From a pedagogical perspective, digital media supports active and constructivist learning approaches. Students are not merely recipients of information but also play an active role in constructing understanding through independent exploration. (Aisya Herawatia, 2025). Learning activity is correlated with or can be influenced by students' interests and motivation. Students with high interests and motivation tend to be more active in learning because they feel involved and excited (Rachim et al., 2024). With this active role, students can explore the material more deeply and critically. Digital learning media designed with independent exploration features allow students to ask questions, research, and test their own understanding, thereby effectively developing critical questioning skills and encouraging more reflective learning. Digital learning media designed with features that support independent exploration have been proven to be effective in developing critical questioning skills (Fathiyah Rachmah, 2025).

Furthermore, the use of digital learning media can create a more immersive, responsive, and flexible learning atmosphere, far surpassing conventional approaches that generally focus on lecture methods (Kurniawan et al., 2025). This shows that the use of digital media not only

increases student engagement but can also contribute to improving their learning outcomes. (Widyastuti et al., 2023) . This shows that digital learning media not only increases student engagement and learning outcomes, but also supports students in mastering the 4C skills: *creativity, critical thinking, collaboration* , and *communication* (Alifah et al., 2023) . Therefore, the use of digital media at the elementary school level not only provides short-term academic benefits, but also equips students with future competencies (Aisya Herawatia, 2025) .

In the context of using digital learning media, teacher guidance plays an important role in directing students' attention to important aspects of digital content, facilitating reflective discussions, and modeling the process of formulating critical questions that can be imitated by students. (Fathiyah Rachmah, 2025) . This mentoring ensures that students are not merely passive recipients of information, but are actively exploring the material and thinking critically . In addition to support from schools and teachers, the results of this study also show that students respond very positively to the use of digital media in learning (Indra Kurniawan1, 2025) .

According to (Syafaatussalamah et al., 2025) There are five main functions of digital learning media that support an effective learning process: first, as a bridge for delivering information visually and audio; second, as a rich and diverse learning resource; third, as a motivator for learning through interactive features; fourth, as a means to achieve more optimal and sustainable learning outcomes; and fifth, as a tool for developing students' cognitive and technological abilities. When these five aspects are well integrated in learning, they will have a positive influence on achieving learning objectives. Therefore, the elaboration of its 5 main functions shows that digital media greatly supports significant changes in student learning outcomes , both cognitively and affectively. The presentation of multimodal, visual, and interactive materials facilitates the understanding of abstract concepts, accommodates various learning styles, and encourages critical and creative thinking skills.

CONCLUSION

Based on the results of a Systematic Literature Review (SLR) of 21 articles, it can be concluded that digital learning media plays a very significant role in transforming the learning process in education. Digital media not only increases student engagement and motivation but also encourages a shift in learning towards a more student-centered, active, and constructive approach. Through interactive and exploratory features, students are able to develop deeper understanding, critical thinking skills, and independent learning. In addition to contributing to improved cognitive and affective learning outcomes, digital learning media also supports the mastery of 21st-century skills (4Cs) as a provision for future competencies. The successful use of digital media is increasingly optimal when supported by teacher guidance and a conducive school environment. Thus, the integration of digital learning media is an effective and relevant strategy to improve the quality of learning and address the challenges of educational transformation in the digital era.

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