

Utilization Of The Ruang Murid Digital Platform In Elementary School Learning: A Critical Study In Pedagogical Review

Lisda Citra Dewi

Universitas Pendidikan Indonesia, Indonesia

Yusuf Tri Herlambang

Universitas Pendidikan Indonesia, Indonesia

Delis Rahayu Suciani

Universitas Pendidikan Indonesia, Indonesia

Corresponding Author : lisdacitradewi@gmail.com

Abstract

The rapid development of information and communication technology has driven digitalization in education, including at the elementary school level, which demands more adaptive and interactive learning. The Indonesian government, through the Ministry of Primary and Secondary Education, has introduced the Ruang Murid platform within the Rumah Pendidikan ecosystem to support digital-based learning transformation. The purpose of this study is to critically examine the use of the Ruang Murid digital platform in elementary school learning from a pedagogical perspective through a systematic literature review. This study uses the method Systematic Literature Review (SLR) with a literature study approach to identify, review, and synthesize various research results relevant to the use of digital learning platforms, especially the Ruang Murid platform and similar platforms in the context of elementary education. Ruang Murid has significant potential in supporting learning in elementary schools. The results of the review indicate that Ruang Murid provides a variety of diverse, flexible, and easily accessible digital learning resources so that it can support student learning engagement, increase learning motivation, and expand learning opportunities outside the classroom. From a pedagogical perspective, the characteristics of Ruang Murid show alignment with the principles of active learning, student-centered learning, and constructivism theory.

Keywords: Student Space Platform; Pedagogy; Digital Learning

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INTRODUCTION

Information and communication technology is developing so rapidly in various areas of human life that all aspects are now possible through the digitalization process. Digital technology is a crucial requirement for curriculum expectations, including general information technology skills and education. *Science, Technology, Engineering, and Mathematics* (STEM) in schools (Blundell et al., 2016). The development of digital technology has brought significant changes to the world of education, particularly at the elementary school level. This transformation demands innovation in the learning process to be more adaptive, interactive, and able to meet the needs of students in the digital era. The government, through the Ministry of Primary and Secondary Education, has introduced various digital platforms as part of its efforts to support the digitalization of education, one of which is the Ruang Murid platform within the Rumah Pendidikan ecosystem.

The development of information and communication technology has automatically driven the increased use of digital learning platforms in education. Digital learning platforms are technology-based learning environments that enable flexible learning through the provision of materials, communication, collaboration, assignments, and evaluation within a single, integrated system. The use of digital platforms makes it easier for teachers and students to access learning resources anytime and anywhere, thus supporting more effective and efficient learning.

In addition to increasing learning accessibility, digital platforms can also facilitate more interactive learning through the use of various digital media and collaborative activities that can increase student engagement in the learning process. As digital transformation in education advances, use Digital learning platforms are increasingly becoming a necessity to support the development of 21st-century competencies, such as digital literacy, communication, collaboration, creativity, and critical thinking skills (Sulastris et al., 2020; Welong et al., 2022; Warsono, 2021)(Zahara et al., 2020)(Jumadi et al., 2021). Thus, digital learning platforms play a strategic role in supporting improvements in the quality of learning processes and outcomes in the digital era.

The Ruang Murid platform is a digital learning service developed by the Ministry of Primary and Secondary Education as part of the Rumah Pendidikan ecosystem. This platform is designed to provide broader, inclusive, and integrated learning access for students at various levels of education. Within the national digital learning ecosystem, Ruang Murid occupies a position as a learning service center that connects students with various digital learning



resources, practice questions, e-books, and other learning support services in one integrated platform (Ministry of Primary and Secondary Education, 2025).(Muhajir et al., 2019) The main characteristic of Ruang Murid lies in the provision of learning resources that are aligned with the national curriculum, easily accessible online, and available free of charge to both students and teachers. This platform offers various forms of learning content, such as learning videos, digital reading materials, educational games, virtual laboratories, and question banks that can be used to support both independent learning and classroom learning. Furthermore, this platform can be accessed through various devices, including computers, tablets, and smartphones, providing flexibility in learning activities.

Unlike commercial learning platforms, which generally focus on paid services, Ruang Murid was developed as a public service aimed at supporting equitable access to digital education in Indonesia. Its presence is aimed at reducing the gap in access to quality learning resources that persists due to differences in geographic, social, and economic conditions. Thus, Ruang Murid serves not only as a medium for providing learning materials but also as an instrument for digital transformation in education, supporting the creation of more inclusive, high-quality, and student-centered learning.

The development of educational technology has provided various platforms and digital media that support the learning process to be more flexible, interactive, and accessible (Means et al., 2014). However, the success of technology utilization in education is determined not only by the sophistication of the technology used, but also by its alignment with the pedagogical principles underlying the learning process (Kirkwood & Price, 2014). Therefore, pedagogical studies of the use of educational technology are essential to ensure that technology can support the achievement of learning objectives, meet student learning needs, and create meaningful learning experiences. From a pedagogical perspective, technology functions not only as a tool for conveying information, but also as a means that can facilitate interaction, collaboration, exploration, and active student involvement in the learning process. (Howland et al., 2007) (Jonassen et al., 2002)

Pedagogical studies are also needed to evaluate the extent to which educational technology can support student-centered learning (Hannafin & Land, 1997) (Lee & Hannafin, 2016) and develop 21st-century competencies, such as critical thinking, creativity, communication, and collaboration (Binkley et al., 2011). Through these studies, researchers can identify the strengths, limitations, and effectiveness of a digital platform in supporting the learning process (Kirkwood



& Price, 2014). Furthermore, the results of pedagogical studies can serve as a basis for educators, technology developers, and policymakers in selecting, developing, and implementing educational technology that is not only technically superior but also effective in improving the quality of learning (Selwyn, 2024) (Selwyn, 2017). Thus, pedagogical studies play a crucial role in ensuring that the use of educational technology genuinely contributes to both the process and the outcomes of student learning (Mishra & Koehler, 2006)

Various previous studies have examined the use of digital learning platforms to support the learning process, particularly regarding the effectiveness of Learning Management Systems (LMS) (Samsuden et al., 2024), the expansion of learning access, student engagement (Chen et al., 2020) (Jaya & Nurqamarani, 2023), and the development of digital literacy (Samsuden et al., 2024). Most of these studies focus on widely used digital platforms, such as Google Classroom, Moodle, and other online learning platforms. Furthermore, these studies generally emphasize the technical aspects of platform use, user acceptance (Davis et al., 2024), or their impact on student learning outcomes (Means et al., 2014). However, studies specifically analyzing the Ruang Murid platform from a pedagogical perspective are still relatively limited. As part of the Rumah Pendidikan ecosystem developed by the Ministry of Primary and Secondary Education, Ruang Murid has distinct characteristics, features, and objectives compared to other digital learning platforms. To date, there has been little research examining how the features available in Ruang Murid support pedagogical principles, such as student-centered learning, active learning (Collier et al., 2022), interactivity, feedback, and the development of 21st-century competencies. Therefore, this study was conducted to fill this gap by analyzing the characteristics and pedagogical potential of the Ruang Murid platform in supporting the learning process in elementary schools.

Based on the background that has been described, this research is directed to answer the research question, namely "How is the utilization of the Ruang Murid digital platform in supporting the learning process in elementary schools reviewed from the aspects of constructivism, student-centered learning, pedagogical interaction, and meaningful learning based on a systematic literature review?". This question is the basis for exploring and understanding the pedagogical characteristics contained in the Ruang Murid platform as a digital learning platform.

In line with the research question, the purpose of this study is to critically examine the use of the Ruang Murid digital platform in elementary school learning from a pedagogical



perspective through a systematic literature review. Specifically, this study aims to analyze the extent to which the Ruang Murid platform support principles of constructivist learning, student-centered learning, pedagogical interaction, and meaningful learning in the context of elementary education.

RESEARCH METHODS

1. Research Design

This research uses the method *Systematic Literature Review* (SLR) (Denzin, 2012) (Sloane-Seale, 2009) with a literature review approach to identify, review, and synthesize various research findings relevant to the use of digital learning platforms, particularly the Ruang Murid platform and similar platforms in the context of primary education. The SLR method was chosen because it allows researchers to conduct a systematic, transparent, and replicable literature review, resulting in a comprehensive understanding of existing research findings. Through this approach, various literature sources are critically analyzed to obtain description regarding the characteristics, implementation, and pedagogical aspects of using digital learning platforms.

2. Literature Search Strategy

A systematic literature search was conducted through several relevant scientific databases, including Google Scholar, Scopus, ERIC, and Garuda. These databases were selected based on their extensive publication coverage in the fields of education and learning technology. Keywords used in the search included a combination of terms in Indonesian and English, such as "digital learning platform," "*digital learning platform*", "*learning management system*", "*technology in education*", "Student Room", "Education House", "*online learning*", "*elementary education*", And "*primary school*". Keyword combinations are performed using Boolean operators such as AND and OR to obtain search results that are more specific and relevant to the research focus.

3. Inclusion Exclusion Criteria

The literature selection process was conducted based on established inclusion and exclusion criteria to ensure the sources' relevance to the research objectives (Sudarto & Sasongko, 2020). Inclusion criteria included scholarly articles discussing digital learning platforms or educational technology, reviewing Ruang Murid, Rumah Pendidikan, or similar platforms, focusing on elementary school level, available in full text, and published within the specified timeframe. Exclusion criteria included articles unrelated to learning and educational technology,



discussing only the technical aspects of software without pedagogical context, not undergoing peer review, or not providing sufficient information for analysis in accordance with the research objectives.

4. Literature selection procedures

The literature selection procedure was carried out by adapting the PRISMA flow (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*). The stage begins with the process of identifying articles through a predetermined database. Next, filtering is carried out (*screening*) based on the title and abstract to eliminate irrelevant articles. Articles that pass the screening stage are then evaluated in more depth by reading the full text (*full-text review*) based on the established inclusion and exclusion criteria. The final stage is determining which articles meet the requirements for analysis in the research.

5. Data analysis techniques

Data obtained from selected articles were analyzed using thematic analysis and narrative synthesis. Thematic analysis was conducted by identifying key themes emerging from various studies, such as digital platform characteristics, learning features, support for pedagogical processes, learning interactions, and the benefits and challenges of their use in elementary education. Furthermore, narrative synthesis was used to integrate and interpret findings from various sources to obtain a comprehensive understanding of the position and pedagogical potential of digital learning platforms, particularly Ruang Murid, in supporting the learning process in elementary schools.

DISCUSSION

1. Characteristics of the Literature Reviewed

Based on the results of the literature search and selection, the majority of the articles reviewed were published within the last five years, indicating increasing researcher attention to the use of digital technology in education along with the acceleration of digital transformation and the development of online learning. The dominance of literature published during this period indicates that the study of digital learning platforms is a relatively new and evolving field. In terms of educational level, the majority of the literature focuses on elementary education, although some studies also include secondary and higher education levels for comparison. The focus on elementary education is relevant because the characteristics of elementary school students require a learning approach that is appropriate to their cognitive, social, and emotional



developmental stages. Therefore, the use of digital platforms needs to be reviewed not only from a technological perspective but also from a pedagogical perspective.

In terms of the focus of the study, the reviewed literature generally discusses the use of digital platforms to support the learning process, increasing student engagement, learning outcomes, learning motivation, and the experiences of teachers and students in using educational technology. In addition, several studies also examine the characteristics of digital platform features, self-directed learning, interactions in digital learning environments, and the effectiveness of using technology-based learning media. However, the review results show that most research still focuses on the implementation aspects and impact of digital platform use in general, while studies that specifically examine Ruang Murid from a pedagogical perspective, like Research on constructivism, learner-centered learning, pedagogical interaction, and meaningful learning remains relatively limited. These findings indicate a potential research area to enrich understanding of the pedagogical qualities of the Ruang Murid platform in supporting learning in elementary schools. To obtain a more detailed overview of the characteristics of the reviewed literature, an analysis was conducted of the year of publication, educational level, focus of study, and aspects examined in each article.

The results of the synthesis of these literature characteristics are presented in the following table.

Table 1. Table of General Characteristics of the Reviewed Literature

Analysis Aspects	General Findings
Publication Year	Most published in the last 5 years
Educational level	Dominant in primary education, partly in secondary education and High
Study Focus	Utilization of digital platforms in learning
Variables Studied	Learning outcomes, learning motivation,



	learning involvement, user experience
Study Object	Various digital learning platforms
Research Approach	Research-dominated implementation and evaluation of platform use
Pedagogic al Studies	Still limited, especially related to constructivism, <i>student- centered learning</i> , And meaningful learning
<i>Research Gap</i>	There is minimal research that specifically examines the pedagogical quality of the Ruang Murid platform in learning. elementary school

2. Pedagogical Concepts in Digital Learning

Constructivist learning is a learning approach that positions students as active subjects in constructing knowledge through experience, interaction, and reflection on the information they acquire. From a constructivist perspective, knowledge is not viewed as something that can be transferred directly from teacher to student, but rather is actively constructed based on prior experiences and understanding. Therefore, the learning process needs to be designed in such a way that students have the opportunity to explore, discover, interpret, and connect new information with existing knowledge.

In the context of digital learning, constructivist principles can be realized through the use of various features and learning resources that enable students to learn independently, interactively, and collaboratively. Digital learning platforms can provide a learning environment



that supports knowledge exploration through multimedia materials, online discussions, collaborative projects, simulations, and problem-solving activities. Through these activities, students not only passively receive information but also engage in the process of searching, processing, and constructing knowledge. Therefore, digital learning based on a constructivist approach has the potential to increase student engagement, develop critical thinking skills, and encourage more meaningful learning experiences.

In this study, the constructivist learning concept is used as a framework for analyzing the pedagogical characteristics of the Ruang Murid platform. The analysis was conducted by considering the extent to which the available learning features and resources provide opportunities for students to actively construct their knowledge. Several constructivist indicators used include the availability of diverse learning resources, support for exploration and independent learning, opportunities for problem-solving, student engagement in the learning process, and space for reflection and development of understanding based on learning experiences. The greater the opportunities the platform provides for students to interact with learning materials and construct knowledge independently, the stronger the application of constructivist principles within the platform.

Next, student-centered learning (*student-centered learning*) is a learning approach that places students at the center of the learning process. In this approach, students not only act as recipients of information, but also as individuals who actively seek, process, and construct knowledge through various learning experiences. The teacher's role shifts from the primary source of information to a facilitator who guides, supports, and creates a learning environment that allows students to develop according to their needs, interests, and characteristics. This approach emphasizes the importance of active student participation in the learning process so they can develop deeper understanding and higher-order thinking skills.

In the context of digital learning, the principle of student-centered learning can be realized through the provision of diverse learning resources, flexibility in accessing materials, and opportunities for students to learn at their own pace and learning style. Digital learning platforms enable students to select materials relevant to their needs, repeat learning when necessary, and explore various sources of knowledge independently. Furthermore, the use of digital technology can also increase student engagement through interactive activities, self-assessment, and a more personalized learning experience. Thus, digital learning has the potential to support the creation of a learning environment that is more adaptive and



responsive to student needs.

The concept of student-centered learning is used as a framework for analyzing the pedagogical characteristics of the Ruang Murid platform. The analysis is conducted by examining the extent to which the platform provides students with the freedom to access learning resources, manage their own learning process, and actively participate in learning activities. Indicators include ease of access to learning materials, diversity of learning resources, flexibility in learning time and place, support for independent learning, and the platform's ability to meet students' diverse learning needs. The greater the opportunities provided for students to control and manage their own learning process, the stronger the implementation of student-centered learning principles within the platform.

Pedagogical interaction is a crucial component of the learning process, referring to the reciprocal relationship between students, teachers, learning materials, and the learning environment in order to achieve learning objectives. This interaction serves not only as a means of conveying information, but also as a process that allows students to receive guidance, feedback, motivation, and the opportunity to develop deeper understanding. From a pedagogical perspective, the quality of learning is greatly influenced by the quality of interactions that occur during the learning process, as through these interactions, students can clarify their understanding, ask questions, and build on their understanding. Knowledge through communication and collaboration.

In the context of digital learning, pedagogical interactions are no longer limited to face-to-face communication, but can take place through various media and features available on digital learning platforms. Interactions can occur between students with learning materials (*learner-content interaction*), students with teachers (*learner-instructor interaction*), and between students (*learner-learner interaction*). The presence of features such as discussion forums, collaboration spaces, interactive quizzes, automated feedback, and online communication media allows the learning process to continue interactively even when students are not in the same classroom. Therefore, the effectiveness of a digital learning platform is determined not only by the completeness of the materials provided, but also by its ability to facilitate meaningful interactions and support student learning.

Pedagogical interaction is used as one aspect to analyze the pedagogical characteristics of the Ruang Murid platform. The analysis focuses on the extent to which available features support student interaction with learning materials, provide feedback on the learning process,



and facilitate student communication and engagement in learning activities. The presence of interactive materials, practice questions, learning evaluations, and other supporting features can be indicators of the quality of pedagogical interaction within the platform. The greater the opportunities provided for students to actively interact with the materials and their learning environment, the greater the platform's potential to support effective and meaningful learning.

Meaningful learning (*meaningful learning*) is a learning process that allows students to connect new knowledge with prior knowledge, experience, and understanding. According to the theory put forward by Ausubel, David P., learning will be more meaningful if new information is not merely memorized, but understood and integrated into the student's cognitive structure. Thus, students not only acquire new knowledge, but are also able to understand the relationships between concepts and apply them in various relevant situations. Learning means emphasizing the importance of conceptual understanding, reflection, and the connection of material to real-life contexts so that learning outcomes can last longer and be more easily applied.

In digital learning, meaningful learning can be supported by providing relevant, interactive, and contextual learning resources. Digital learning platforms allow students to access various forms of materials, such as videos, simulations, infographics, and interactive exercises that can help them understand concepts more deeply. Furthermore, digital technology can also provide a more authentic learning experience by presenting real-life examples, case studies, and problem-solving activities related to everyday life. With these resources and activities, students have the opportunity to connect new knowledge with their own experiences, making the learning process more meaningful and not simply oriented towards mastering information.

The concept of meaningful learning is used to analyze the extent to which the Ruang Murid platform supports a learning process that focuses not only on delivering material but also on developing in-depth understanding. The analysis is conducted by considering the characteristics of the learning materials, the presence of activities that promote conceptual understanding, the relevance of the material to the students' life context, and the opportunities provided for students to reflect on and apply the knowledge gained. Platforms that deliver relevant, contextual learning experiences and encourage active student engagement have greater potential for realizing meaningful learning.

3. Characteristics of the Student Space Platform Features

The Ruang Murid platform is designed as part of a digital education ecosystem that provides a variety of learning resources to support the needs of students at various levels of



education. Available learning features include digital teaching materials, learning videos, e-books, practice exercises, assessments, and various interactive learning resources accessible online. This diversity of learning resources provides students with the opportunity to obtain information through various presentation formats tailored to their characteristics and learning needs. Furthermore, the availability of structured and curriculum-aligned materials allows students to utilize the platform to support their learning at school and as a means of independent learning outside of class hours.

One of the key characteristics of Ruang Murid's learning features is easy access to a variety of learning resources within a single, integrated platform. Students can flexibly access learning materials according to their individual needs and learning pace. This supports a more adaptive learning environment and provides opportunities for students to develop independence in their learning process.

The interaction system in digital learning platforms plays a crucial role in supporting student engagement throughout the learning process. In Ruang Murid, interaction is primarily facilitated through the connection between students and the available learning materials. Various digital content, practice questions, and assessments allow students to interact directly with the material being studied. This interaction helps students gain a more active learning experience than simply reading or passively receiving information.

In addition to interacting with the material, the digital learning system also has the potential to support communication and collaboration through integration with other educational services within the Rumah Pendidikan ecosystem. These features enable a more dynamic learning process and provide students with opportunities to receive feedback on their learning outcomes. Thus, interactions within the platform serve not only as a means of conveying information but also as a mechanism that supports the development of students' knowledge and understanding.

The Ruang Murid platform supports the learning process by providing a flexible, accessible, and student-centered learning environment. The availability of various digital learning resources allows students to access materials anytime and anywhere, tailored to their individual learning needs and circumstances. This flexibility is one of the advantages of the digital platform in supporting the continuity of the learning process both inside and outside the school environment.

In addition to providing access to learning materials, Ruang Murid also supports the



learning process through various activities that encourage student engagement, such as practice questions, assessments, and exploration of diverse learning resources. These features can help students strengthen their understanding of concepts, monitor their learning progress, and develop independent learning skills. From a pedagogical perspective, the platform's support for the learning process lies not only in the provision of content, but also in its ability to create active, student-centered learning experiences that support meaningful learning. Therefore, Ruang Murid can be seen as a digital learning innovation that has the potential to support the transformation of education towards more flexible, inclusive, and student-centered learning in the digital era.

The characteristics and features of the Ruang Murid Platform need to be identified to understand its potential use in supporting the learning process. A summary of these platform characteristics and features can be seen in the following table.

Table 2. Characteristics and Features of the Student Space Platform

Characteristics	Feature	Benefits in Learning
Accessible	Accessible online	Makes it easy to learn anytime and anywhere
Interactive	Video learning and practice questions	Increase student engagement
Flexible	Learn at your own pace	Supporting learning Independen



	each	t
Evaluative	Quizzes and assessments	Helps measure understanding Learners
Informative	Provision of materials learning	Make it easier for students to understand Material
Monitoring	Information on learning results or progress	Helps monitor learning development

4. Research Findings on the Utilization of Student Space in Learning

Ruang Mahasiswa is designed to provide a more engaging and enjoyable learning experience through the presentation of materials in various multimedia formats. The use of instructional videos, comics, infographics, and interactive content can help increase students' attention and interest in the material being studied. Literature on digital learning shows that varied and interactive presentations tend to encourage students' cognitive engagement, as they not only passively receive information but also actively participate in the process of exploring and understanding the learning material.

From a pedagogical perspective, learning engagement is demonstrated not only by student presence in learning activities, but also by cognitive, affective, and behavioral



engagement during the learning process. The availability of diverse learning resources in Ruang Murid has the potential to increase cognitive engagement through material exploration activities and learning exercises. At the same time, the presentation of engaging and easily accessible content can increase affective engagement in the form of interest, motivation, and a positive attitude toward learning. This condition aligns with the findings of various studies showing that the integration of digital technology in learning can create a more engaging learning experience and increase student participation.

However, the study results also show that Increasing learning engagement is not solely determined by the existence of digital platforms. The effectiveness of Ruang Murid's utilization depends heavily on the learning strategies implemented by teachers and how the available features are utilized in learning activities. A digital platform that provides a wealth of material does not necessarily result in high learning engagement if its use is solely oriented towards conveying information. Therefore, learning engagement will be more optimal if Ruang Murid is used as a tool that encourages exploration, discussion, reflection, and student-centered learning activities. Therefore, based on the literature review, Ruang Murid has significant potential to increase learning engagement among elementary school students, particularly through the provision of diverse, interactive, and flexible learning resources, although its success remains influenced by pedagogical implementation in the learning process.

Overall, the results of the literature review indicate that Ruang Murid contributes to increasing student learning engagement through several key aspects. First, this platform expands learning access and participation through flexibility of time and place, allowing students to access learning materials according to their needs. Second, the presentation of materials in various multimedia formats, such as videos, infographics, and interactive content, has the potential to increase student interest and motivation in learning. Third, the availability of diverse learning resources encourages students to actively engage in exploring materials according to their needs, abilities, and learning interests. With these characteristics, Ruang Murid functions not only as a medium for providing information but also as a tool that supports more engaging, flexible, and student-centered learning. Therefore, based on findings in various literature, Ruang Murid has significant potential in improving the quality of student learning engagement at the elementary school level.

The use of Ruang Murid has the potential to positively impact student learning outcomes. The availability of diverse learning resources, such as instructional videos, digital reading



materials, practice exercises, and interactive content, allows students to gain a richer learning experience tailored to their needs. Flexible access to materials also provides opportunities for students to repeat learning, deepen conceptual understanding, and learn at their own pace. These conditions contribute to improved material understanding, conceptual mastery, and learning outcomes. However, various literature also shows that improved learning outcomes are not solely determined by the existence of digital platforms, but are also influenced by the quality of learning implementation, teacher guidance, and the level of student engagement in utilizing available features.

In terms of user experience, both teachers and students generally benefit from the ease of access and flexibility offered by Ruang Murid. For teachers, this platform can be a supplementary learning resource, assisting with the provision of materials, enrichment of learning, and variety of teaching methods. Meanwhile, for students, Ruang Murid provides a more independent, engaging, and tailored learning experience.

characteristics of the digital generation. Presenting material in various multimedia formats can increase learning interest and facilitate understanding. However, some literature also suggests that the effectiveness of digital platform use is still influenced by supporting factors, such as device availability, internet access, and the digital literacy skills of teachers and students. Therefore, the successful use of Ruang Murid depends not only on the quality of the platform itself, but also on user readiness and a supportive learning environment.

Based on the literature review, this platform is used not only as a learning resource for students but also as a supporting tool for teachers in implementing learning. These uses are presented in the following table.

Table 3. Utilization of Student Space in Learning

Utilization Aspects	Student	Teacher
Access to materials learning	✓	✓
Learning videos	✓	✓
Practice and evaluation	✓	✓
Independent learning	✓	–



Management learning	–	✓
Monitoring learning development	–	✓
Improvement learning engagement	✓	✓

Student Space has characteristics that support the implementation of active learning principles (*active learning*). This platform provides various digital learning resources, such as learning videos, reading materials, practice questions, and interactive content that enable students to be directly involved in the learning process. Through these features, students not only passively receive information but are also encouraged to explore, understand the material, and test their understanding through various learning activities. The availability of exercises and assessments also provides opportunities for students to actively participate in the learning process and monitor the development of their understanding of the material being studied.

However, the analysis shows that the level of learning engagement is still heavily influenced by the teaching strategies implemented by teachers. Ruang Murid provides tools to support active learning, but the presence of digital features alone does not guarantee in-depth learning activities. Therefore, the effectiveness of implementing active learning principles through Ruang Murid depends on how teachers utilize available learning resources to encourage students to think critically, solve problems, discuss, and reflect on their learning outcomes.

From the perspective of student-centered learning (*student-centered learning*), Ruang Murid demonstrated a fairly high level of suitability. This platform provides students with the flexibility to access materials anytime and anywhere according to their individual learning needs. Furthermore, the diversity of available learning resources allows students to choose materials that align with their abilities, interests, and learning pace. These characteristics align with the principles of student-centered learning, which places students as the primary subjects in the learning process.

However, several literature reviews indicate that student-centered learning is not solely determined by flexible access to materials. Student-centered learning also requires opportunities



for students to make decisions in the learning process, develop independence, and actively participate in constructing knowledge. In this context, Ruang Murid has the potential to support student-centered learning, but its implementation still requires teachers to play a role in designing learning experiences that provide space for student participation and autonomy.

Constructivism theory views knowledge as actively constructed by students through experience, interaction, and reflection. Based on the study's findings, Ruang Murid has several characteristics that align with constructivist principles. Especially through the provision of diverse learning resources and opportunities for students to explore independently. Access to a variety of learning materials allows students to build understanding based on their prior knowledge and connect it to new information acquired during the learning process.

Although thus, the level of conformity of Ruang Murid with constructivism theory cannot be fully assessed only from the availability of materials and features learning.

Constructivist learning requires activities that encourage students to solve problems. Problem, discuss, collaborate, and reflect on their learning experiences. The analysis shows that Ruang Murid has provided a foundation that supports the knowledge construction process, but the quality of the resulting constructivist experience remains dependent on how the platform is used in learning practices. Thus, Ruang Murid can be said to have strong potential to support constructivist learning, especially when combined with learning strategies that encourage active engagement and higher-order thinking processes.

Thus, the study results indicate that Ruang Murid aligns well with various modern pedagogical principles. This platform supports active learning through the provision of interactive activities and learning resources, supports student-centered learning through flexibility and independent learning, and has characteristics that align with constructivist theory through opportunities for independent exploration and knowledge construction. However, Ruang Murid's pedagogical effectiveness is determined not only by the available technological features but also by how teachers and students utilize the platform in the learning process. Therefore, Ruang Murid should be viewed as a learning support tool that has strong pedagogical potential, but still requires appropriate learning design to optimize its benefits in the context of basic education.

One of the main opportunities offered by Ruang Murid in elementary school learning is its ability to support personalization of learning (*personalized learning*). By providing various types of learning resources, such as videos, reading materials, practice questions, and interactive media, students can choose materials that suit their needs, interests, and learning abilities. This



flexibility allows students to learn at their own pace, making the learning process more adaptive to differences in individual characteristics. In the context of basic education, personalized learning is crucial because each student has a different level of cognitive development, learning style, and learning needs. Therefore, Ruang Murid has the potential to help create a more relevant and meaningful learning experience for each student.

Another opportunity that Ruang Murid offers is its ability to provide flexibility in the learning process. Unlike conventional learning, which is generally limited by space and time, Ruang Murid allows students to access learning materials anytime and anywhere as long as they have a device and an internet connection. This flexibility gives students the opportunity to review material they don't yet understand, delve deeper into specific topics, and learn independently according to their needs. For teachers, this flexibility can also be utilized to enrich the classroom learning process through a blended learning approach that combines face-to-face learning with digital learning. Thus, Ruang Murid has the potential to expand access to learning while supporting the creation of more inclusive and sustainable learning.

The use of Ruang Murid also opens up opportunities to strengthen the digital literacy of elementary school students. Through interaction with various digital learning resources, students can develop the ability to access, understand, evaluate, and utilize information effectively and responsibly. Digital literacy is one of the essential competencies needed in the 21st century because students live in an environment increasingly influenced by digital technology and information. In addition to improving technical skills in using digital devices and platforms, the use of Ruang Murid can also help students develop independent learning habits, information-seeking skills, and critical attitudes towards the various information sources they encounter. Thus, this platform functions not only as a learning medium but also as a means to prepare students to face the demands of a future digital society.

In a way overall It can be argued that Ruang Murid offers various strategic opportunities to support learning in elementary schools. This platform has the potential to personalize learning by providing diverse learning resources, increase learning flexibility through access that is not limited by space and time, and strengthen students' digital literacy as a crucial 21st-century competency. These three aspects demonstrate that Ruang Murid serves not only as a provider of learning materials but also as a tool that can support the transformation of learning toward a more adaptive, independent, and relevant learning process in line with technological developments and current educational needs.



The Challenge of Pedagogical Criticism

While Ruang Murid offers various conveniences in the learning process, its use also poses pedagogical challenges in the form of a tendency for learning to be overly technology-oriented. In some cases, the focus on the use of digital platforms can be more dominant than the actual learning it self. Achievement The purpose of learning it self. In fact, technology is essentially a tool that supports the learning process, not replaces pedagogy. If the use of Ruang Murid is solely focused on accessing materials and completing assignments digitally without appropriate learning strategies, the learning process risks becoming merely a consumption of information. Therefore, learning success is not determined by the sophistication of the technology used, but rather by how it is utilized to support student engagement, understanding, and development.

Another challenge that needs to be addressed is the potential reduction in direct social interaction between teachers and students, as well as between students. In face-to-face learning, social interaction plays a crucial role in building communication skills, collaboration, empathy, and students' social-emotional development. Overly dominant use of digital platforms can reduce the intensity of direct communication that typically occurs in the classroom. This situation is of particular concern at the elementary school level, as students are still at a developmental stage that requires social interaction as a crucial part of the learning process. Therefore, the use of Ruang Siswa should be positioned as a complement to learning, balanced with collaborative activities and direct interaction between teachers and students.

The use of Ruang Murid also faces challenges in the form of digital access disparities in various regions. Not all students have adequate devices or stable internet access to optimally utilize digital learning platforms. Differences in socioeconomic conditions, technological infrastructure, and internet network availability can lead to unequal learning opportunities among students. In the context of basic education, this situation has the potential to create disparities in learning outcomes if not balanced with adequate policies and support. Therefore, although Ruang Murid is designed to expand access to education, its effectiveness remains influenced by infrastructure readiness and equitable access to technology in the community.

The successful implementation of Ruang Murid also depends heavily on the readiness of teachers and students to utilize digital technology for learning. Teachers are required not only to be able to operate digital platforms but also to possess the competency to do so.

Pedagogical to integrate technology into the learning process effectively. Meanwhile, students need to have basic skills in using digital devices and utilizing learning resources



independently. At the elementary school level, these skills often still require guidance from teachers and parents. A lack of digital literacy and experience in using technology can be a barrier to optimizing the use of learning platforms. Therefore, developing digital competencies for teachers and students is crucial to ensuring that Ruang Murid provides maximum benefits for the learning process.

Implications for Learning Development in Elementary Schools

Ruang Murid has implications for changing the role of teachers in the learning process. While in traditional learning, teachers often serve as the primary source of information, in digital platform-based learning, teachers act more as facilitators, guides, and directors of students' learning processes. The availability of various learning resources in Ruang Murid allows students to obtain information independently, allowing teachers to focus more on activities that encourage conceptual understanding, develop critical thinking skills, problem-solving, and provide constructive feedback. In the elementary school context, the role of facilitator is crucial because students still need guidance in managing the learning process, selecting relevant learning resources, and developing positive learning habits. Thus, the use of Ruang Murid does not diminish the role of teachers, but rather shifts it toward a more strategic role in supporting student development.

The success of Ruang Murid's use is determined not only by the quality of the technology used, but also by the ability to integrate technology with appropriate pedagogical principles. Technology should be a means to enhance the learning process, not the primary goal of learning itself. Therefore, teachers need to design learning activities that utilize digital features to support active learning, student-centered learning, pedagogical interactions, and meaningful learning. The integration of technology and pedagogy enables the creation of more engaging, relevant, and effective learning experiences for elementary school students. This implication demonstrates the importance of developing teacher competencies in digital pedagogy so that the use of platforms like Ruang Murid can have an optimal impact on the quality of learning.

The use of Ruang Murid also has implications for the need to develop a humanistic digital learning ecosystem. While technology can expand access to learning and increase learning flexibility, the educational process remains fundamentally human-centered. Therefore, the use of digital platforms must continue to consider the social, emotional, and character development of students. Humanistic digital learning is not only oriented towards academic achievement but



also encourages positive interactions, collaboration, empathy, and student well-being throughout the learning process. In the elementary school context, the balance between technology use and human interaction is crucial because students are still at a developmental stage that requires strong social and emotional support. Therefore, Ruang Murid should be developed and utilized as part of a learning ecosystem that integrates technology, pedagogy, and human values in a balanced manner.

Based on the results of a systematic literature review, it can be concluded that the Ruang Murid platform has significant potential to support learning in elementary schools. The review results show that Ruang Murid provides a variety of diverse, flexible, and easily accessible digital learning resources that can support student learning engagement, increase learning motivation, and expand learning opportunities beyond the classroom. From a pedagogical perspective, the characteristics of Ruang Murid demonstrate alignment with the principles of active learning, learner-centered learning, and constructivism theory. By providing multimedia materials, learning exercises, and independent learning opportunities, this platform has the potential to help students actively construct knowledge and gain more meaningful learning experiences.

However, this study also shows that Ruang Murid's pedagogical effectiveness is not solely determined by the availability of technology, but is highly dependent on how the platform is integrated into the learning process. Ruang Murid's primary strength lies in its ability to support personalized learning, learning flexibility, and strengthening students' digital literacy. However, there are several limitations that need to be considered, including the risk of learning becoming too technology-oriented, the potential for reduced direct social interaction, the digital access gap, and differences in teacher and student readiness levels in utilizing learning technology. Therefore, the use of Ruang Murid needs to be balanced with appropriate pedagogical strategies to optimize the benefits of technology without neglecting the social and humanistic aspects of education.

Theoretically, this study reinforces the view that the successful use of educational technology must be analyzed not only from a technical perspective but also from its alignment with pedagogical principles. The findings of this study indicate that digital platforms can be effective tools to support learning when designed and used in accordance with the principles of constructivism, active learning, and learner-centered learning. Practically, the results of this study can be used as a reference for teachers, schools, and policymakers in developing strategies for utilizing digital platforms that are more effective, inclusive, and oriented towards the needs of



learners in elementary schools.

Based on the study's findings, further research is recommended to conduct empirical studies on the implementation of Ruang Murid in various elementary school contexts to obtain a more comprehensive picture of its effectiveness. Furthermore, future research could examine the impact of Ruang Murid's use on learning outcomes, learning motivation, pedagogical interactions, and the impact of Ruang Murid on student learning outcomes.

And the development of students' digital literacy through quantitative, qualitative, and mixed methods approaches. The research in a way Specifically comparing the use of Ruang Murid with other digital learning platforms is also necessary to enrich understanding of the platform's contribution to improving the quality of learning in elementary schools.

CONCLUSION

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