



# Challenges and Benefits of Using Google Sites in Elementary School Learning: A Review of the Literature

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## Abstract

The use of Google Sites media in elementary school learning is an innovation that supports an interactive and independent learning process. This study is a literature review of 10 articles that discuss the integration of Google Sites in basic education, obtained through databases such as Google Scholar, DOAJ, and SINTA. Articles were selected based on inclusion criteria in the form of a focus on the elementary level, available in full text, and published in the 2020–2024 range. The results of the study show that this media is able to increase student motivation, learning independence, and collaboration. However, challenges such as limited infrastructure, lack of teacher training, and lack of students' digital literacy are still the main obstacles. This study contributes to providing a comprehensive overview for the development of digital media implementation policies and strategies in primary schools

## 1. Introduction

The development of information and communication technology has changed many aspects of life, including education. In this digital era, learning must adapt to the needs of the 21st century that emphasizes creativity, collaboration, critical thinking, and communication. One of the media that can bridge this is Google Sites. Google Sites is a free platform from Google that allows teachers to present materials in the form of text, images, videos, and interactive links. The use of this platform in elementary learning has been proven to help improve student understanding and engagement in learning. Setianingsih et al. (2024) recorded an increase in N-Gain of 0.52 for critical thinking and 0.56 for digital literacy through the use of Google Sites. This shows that technology not only serves as a tool, but also as an active learning environment. In practice, Google Sites also gives teachers the flexibility to organize thematic and cross-subject learning. This supports the principle of an independent curriculum that prioritizes flexibility and independence. However, behind its advantages, the implementation of Google Sites also faces real obstacles such as limited internet networks, device availability, and lack of adequate teacher training in the field of technology. There has been no literature review that systematically discusses the benefits and challenges of using Google Sites in the context of elementary schools in Indonesia. Therefore, this research was conducted to fill these gaps and provide literature-based recommendations that can be used by policy makers, teachers, and academics to develop relevant and effective digital learning strategies.

**Kajian Literature**

1. *Theoretical Framework:* The integration of ICT in learning is rooted in the theories of constructivism and connectivityism. Digital learning allows students to build knowledge through self-paced exploration and collaboration. The TPACK model is used to evaluate teachers' readiness to integrate technology.
2. *Related Studies:*

Tabal

Yes	Author and year	Focus of the study	Benefit	Tantangan	Recommendations
1.	Setianingsih et al. (2024)	Digital literacy & critical thinking	N-Gain 0.52 & 0.56	Device access	Teacher training
2.	Widyahumaniora (2023)	Student collaboration with Google Sites	More effective group projects	Teachers haven't mastered the features yet	Technical assistance
3.	IRJE (2022)	Distance learning in elementary school	Flexible accessible materials	Limited internet connection	School infrastructure
4.	Didactics (2025)	Constructivism in writing descriptors	Increased expression of ideas	Lack of creativity of teachers	Curriculum integration

**2. Method**

This study uses a library research method with a content analysis approach. This study focuses on scientific articles that discuss the integration of Google Sites in the context of learning in elementary schools. Data was collected through systematic searches using the keywords "Google Sites", "Elementary School", and "digital learning media" on databases such as Google Scholar, DOAJ, and SINTA.

Inclusion criteria include:

1. Articles focused on using Google Sites at the elementary school level;
2. Available in full text;
3. Published between 2020 and 2024 to maintain the relevance of the data.

A total of 10 articles that met the criteria were analyzed in depth to identify the benefits, challenges, and recommendations presented by each study. To improve the validity and reliability of the analysis, source triangulation was carried out by comparing findings from various journals and paying attention to the diversity

**3. Results and Discussion**

**Benefit:**

Of the 10 studies analyzed, 8 studies stated that the use of Google Sites increases students' motivation to learn, both through the presentation of interesting material and through project-based independent activities. A total of 6 studies noted an increase in student collaboration, especially when working on group projects that require communication and cooperation. In addition, 5 studies show that this media makes it easier to access learning materials outside of school hours, thus supporting the concept of lifelong learning. Another emerging benefit is increased learning independence and students' ability to navigate digital content, which is an important aspect of digital literacy in the 21st century. With an intuitive design and collaborative features, Google Sites provides a structured yet flexible learning experience that fits each student's learning style.

### Challenge:

However, the challenges faced are also not few. A total of 7 studies highlighted infrastructure limitations such as unstable internet networks and inadequate devices, especially in schools in remote areas. In addition, 6 studies highlight the lack of technical and pedagogical training for teachers, which leads to the use of Google Sites features not being optimal. Another problem that arises is the low digital literacy of students, which has an impact on the effectiveness of media use. Students who are not yet familiar with digital site navigation take a long time to adapt. This shows the need for gradual and sustainable integration of digital education in the curriculum.

### Analysis Theoretis:

This discussion is strengthened by the TPACK model, which underlines the importance of integration between content knowledge, pedagogy, and technology in implementing digital learning. In this case, teachers need to receive support and training to be able to build an effective and contextual learning site. In addition, the theory of connectivity explains that digital learning allows students to build knowledge through connections and information networks, so that Google Sites can be a very relevant means to learning needs in the digital era.

### 3.1. Conclusion

Based on the results of a literature review of ten relevant articles, it can be concluded that the use of Google Sites in elementary school learning has a significant positive impact. This media is able to increase learning motivation, encourage student independence, strengthen collaboration, and develop digital literacy. Google Sites' interactive, accessible, and flexible nature of organizing materials makes it a learning tool that meets the needs of 21st-century education. However, the challenges in implementing Google Sites are still quite large, especially related to the limitations of technology infrastructure, such as uneven internet networks and lack of digital devices in schools. In addition, teacher readiness, both from the technical and pedagogical side, is an obstacle that needs to be overcome immediately through structured and continuous training. Drawing on the TPACK framework and connectivity theory, the study confirms that the success of Google Sites integration depends not only on technological sophistication, but also on teachers' ability to effectively manage digital learning, as well as systemic support from schools and governments in providing adequate facilities. Therefore, strengthening the digital literacy of teachers and students, improving infrastructure, and developing policies that support technology-based learning are important steps to optimize the use of Google Sites and other digital media in elementary schools.

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