



## Use of Learning Resources, Media, and Technology at the Education Unit of SDN 2 Karangtengah

Aussie Mediaswati<sup>1</sup>, Sigit Wibowo<sup>2\*</sup>, Cecilian Novalinda S.<sup>3</sup>, Moh. Ade Sohibul Maula<sup>4</sup>,  
Yosua Arya Tama<sup>5</sup>

State University of Malang, Jl. Semarang No. 5 Malang, East Java, Indonesia

\*Author of correspondence, Email: sigit.wibowo.fip@um.ac.id

### Abstract

This study aims to describe the utilization of learning resources, learning media, and learning technology at SDN 2 Karangtengah. Through observation and interview methods, data were obtained on the types, effectiveness, and challenges in using these three elements. The observation results show that teachers have utilized package books or modules and visual teaching materials as the main learning resources. Learning media used include images, props, and digital quizzes such as Quizziz. Learning technology is utilized through the use of laptops, projectors and internet connections to support interactive learning. Obstacles faced include limited equipment, lack of teacher training, and students' readiness to deal with technology. Nevertheless, teachers show creativity in making their own media and utilizing the environment as an alternative to learning. This study concludes that the utilization of learning resources, media and technology at SDN 2 Karangtengah is quite effective, but needs to be improved through the provision of facilities and continuous training. This result is expected to be a reference in developing learning strategies in elementary schools.

**Keywords:** learning resources, learning media, learning technology, SD

### 1. Introduction

This study aims to describe the utilization of learning resources, learning media, and learning technology at the Education Unit of SDN 2 Karangtengah. Through observation and interview methods, data were obtained on the types, effectiveness, and challenges in using these three elements. The observation results show that teachers have utilized package books or modules and visual teaching materials as the main learning resources. Learning media used include images, props, and digital quizzes such as Quizziz. Learning technology is utilized through the use of laptops, projectors and internet connections to support interactive learning. Obstacles faced include limited equipment, lack of teacher training, and students' readiness to deal with technology. Nevertheless, teachers show creativity in making their own media and utilizing the environment as a learning alternative.

The degree of up-to-date material referenced by looking at the proportion of the last 10 years and referring to the primary literature. Problems and objectives, as well as the usefulness of research written narratively in paragraphs, do not need to be given special subheadings. Similarly, operational definitions, if deemed necessary, are also written narratively. This study concludes that the utilization of learning resources, media and technology in the UPT Education Unit of SDN 2 Karangtengah is quite effective, but needs to be improved through the provision of facilities and continuous training. This result is expected to be a reference in developing learning strategies in elementary schools. Education is the main foundation in shaping students' character and skills from an early age. In the context of learning in primary schools, teachers play an important role as facilitators who not only deliver material, but also create a This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. fun and

meaningful learning experience. One of the efforts that can be made is to optimize the use of learning resources, learning media, and learning technology in an appropriate and integrated manner. Learning resources are no longer limited to textbooks, but have developed into various forms such as the surrounding environment, digital media, and online platforms. Meanwhile, learning media serves as a tool that facilitates the delivery of information and strengthens student understanding through visual and interactive approaches. Learning technology, especially ICT-based, is increasingly important in supporting the flexibility and effectiveness of the teaching and learning process, especially after the COVID-19 pandemic which encourages massive digital adoption in education (Pakpahan & Fitriani, 2020).

The degree of up-to-date material referenced by looking at the proportion of the last 10 years and referring to the primary literature. Problems and objectives, as well as the usefulness of research written narratively in paragraphs, do not need to be given special subheadings. Similarly, operational definitions, if deemed necessary, are also written na Namun, pada kenyataannya masih ditemukan berbagai tantangan, seperti keterbatasan fasilitas, rendahnya literasi digital, serta kesiapan guru dan siswa dalam memanfaatkan teknologi secara optimal. Nirmala et al. (2023) menunjukkan bahwa banyak guru di tingkat sekolah dasar masih membutuhkan pelatihan dalam penggunaan media berbasis teknologi. Oleh karena itu, penting dilakukan kajian yang menelusuri praktik nyata penggunaan ketiga elemen tersebut di sekolah dasar sebagai dasar untuk meningkatkan mutu pembelajaran. Artikel ini bertujuan untuk mendeskripsikan penggunaan sumber belajar, media, dan teknologi pembelajaran di UPT Satuan Pendidikan SDN 2 Karangtengah serta menganalisis tantangan dan solusi yang dihadapi guru dalam pelaksanaannya. Penelitian ini diharapkan dapat memberikan kontribusi terhadap pengembangan praktik pembelajaran yang efektif, kontekstual, dan adaptif terhadap perkembangan zaman.

## 2. Method

This research uses a descriptive qualitative approach that aims to describe in detail how the utilization of learning resources, learning media, and learning technology is carried out by teachers at the UPT Education Unit of SDN 2 Karangtengah. This approach was chosen because it can explain learning phenomena naturally and deeply in accordance with the real conditions in the field. Qualitative research is a research method based on the philosophy of positivism or enterpretive used to research certain conditions (Sugiyono, 2019).

The research was conducted at the UPT Education Unit of SDN 2 Karangtengah, which is located in Sananwetan Subdistrict, Blitar City. This school was chosen because it has implemented the use of learning resources and learning technology in the teaching and learning process, although with various limitations. The subjects in this study included classroom teachers, principals, and students. Teachers and principals are the main subjects because they are directly involved in planning, utilizing, and evaluating learning media and technology in the classroom. Meanwhile, students are an additional source of information to determine the impact of using media and technology on learning interest and understanding. Data collection was conducted through three main methods, namely observation, interview, and documentation. Observations were conducted directly in the classroom to observe learning activities and record the use of learning resources, media and technology. Semistructured interviews were conducted with teachers and principals to obtain more in-depth information about their strategies, constraints and solutions. Meanwhile, documentation was conducted by collecting supporting data such as learning photos, teaching tools, and examples of media used during the learning process.

### 3. Results and Discussion

#### 3.1 Result

Based on the results of observations or observations that have been made, it is known that the Education Unit of SDN 2 Karangtengah has shown that the use of learning resources is good. From the observations that have been made, the effectiveness of the use of learning resources can be seen in learning activities, it is known that teachers actively use and utilize learning resources that are available, ranging from textbooks to digital learning resources such as laptops. These learning resources are able to facilitate and accelerate student understanding, then accelerate the teaching and learning process, as well as improve student interaction and learning outcomes.

Several aspects that show the effectiveness of the use of learning resources have been fulfilled according to the results of observations that have been made in class III UPT Education Unit SDN 2 Karangtengah. The first is Relevance, learning resources that have been provided or used during Pancasila Education learning are very relevant or in accordance with the needs of students. When the teacher discusses the symbols of the precepts contained in Pancasila, the teacher uses textbook media to explain it and is assisted by posters or pictures of Pancasila on the blackboard. The second is the right layout and visual learning resources. With the right placement of learning resources, students become faster and easier in understanding the material taught by the teacher. In addition, images or visuals that are interesting and relevant to the material being taught can increase attractiveness and certainly facilitate student understanding of abstract concepts. Third, flexibility where learning resources that are easily accessible anytime and anywhere make it easy for students to learn according to their respective abilities and preferences.

At the Education Unit of SDN 2 Karangtengah, the use of learning media has become an integral part of the teaching and learning process. Teachers at this school utilize various media, such as projectors, laptops, speakers, and internet access, to deliver subject matter. One of the media that is often used is interactive quiz applications such as Quizziz, which makes students more enthusiastic in participating in lessons. The use of this learning media not only increases students' interest in learning but also helps them understand the material better. For example, in thematic lessons, teachers play videos relevant to the material, so students can see first-hand real-life examples of what they are learning. However, there are some obstacles in using learning media, such as limited devices and unstable internet connections. Nevertheless, teachers at SDN 2 Karangtengah Education Unit show creativity and initiative in overcoming these obstacles, such as by creating their own learning materials using applications such as Canva.

#### 3.2 Discussion

Anggita et al. (2024) showed that the use of learning media can contribute to improving student learning outcomes, because students can directly observe the objects of the material presented. Damayanti et al. (2020) emphasized that interactive multimedia-based learning media has the potential to improve student learning outcomes, especially when adapted to their learning styles, such as visual, auditorial, and kinesthetic. In addition, Wardani et al. (2024) stated that the effective use of learning media can improve students' understanding and learning outcomes at the elementary school level.

Overall, the application of learning media in the UPT Education Unit of SDN 2 Karangtengah has shown effectiveness in improving student interest and learning outcomes. With adequate support and innovation from educators, the use of learning media can continue to be improved to achieve more optimal results. The findings from the observation conducted at the UPT Unit of Education SDN 2 Karangtengah show that students and teachers have used learning technology very well, which makes student engagement, understanding, and

motivation from students also increase. We have a positive view of the effectiveness of the utilization of technology that has been carried out by the UPT Unit of Education of SDN 2

Karangtengah in facilitating teaching and learning activities.

In our opinion, the use of technology by schools is not merely a supplement to teaching and learning activities, but has become an integral part of creating an engaging, flexible, effective, and efficient learning environment that remains relevant to students. The positive values that demonstrate the effective use of learning technology to support teaching and learning activities are as follows:

a. Increased student engagement with learning technology can increase student engagement in the learning process. The use of interactive media through Quizizz via laptops can attract students' attention and make them more excited and enthusiastic about participating in teaching and learning activities.

b. Better visualization of materials with the help of technology such as projectors and laptops allows for more interactive presentation of learning materials, especially in terms of visuals. Additionally, smart features like the live leaderboard on the Quizizz website make it easier for students to understand and avoid confusion over abstract visuals.

c. Learning becomes more interactive and collaborative. By combining conventional print media with digital technology through laptops, teaching and learning activities become more interactive between teachers and students. The availability of online applications or websites for group projects allows students to discuss and exchange ideas to find the correct answers to problems. This will certainly improve students' understanding of the material and develop their social skills.

d. Training in 21st-century technology skills through the integration of digital technology-based learning indirectly trains students in important 21st-century skills such as the ability to search for information through digital technology, digital literacy, critical thinking, and problem-solving through the use of digital tools. With early exposure to technology, students are equipped with relevant skills that will help them in their future lives.

e. The potential for more personalized learning because, although the use of digital technology is not yet widespread, efforts have been made by teachers at the UPT Satuan Pendidikan SDN 2 Karangtengah to utilize technology in providing learning opportunities that are more tailored to the needs of each student. Through various features and applications available on laptops, teachers can assign tasks with varying levels of difficulty, thereby helping to accommodate different learning styles and paces among students.

In the learning process at UPT Satuan Pendidikan SDN 2 Karangtengah, the use of learning resources, media, and technology has been implemented effectively. However, based on observations and interviews conducted with teachers, there are several challenges that still hinder the optimization of the learning process. These challenges are not only related to the availability of tools or materials but also include teachers' capabilities, access to technology, and students' readiness to face more modern and interactive learning.

One of the main challenges for teachers is the limited time available to prepare media and materials that align with students' characteristics. Teachers often struggle to balance their time between teaching duties, administrative tasks, and developing teaching materials, especially when there are school activities as well. As a result, the learning media used are sometimes not fully varied or maximized in supporting learning activities. Additionally, not all teachers have the same skills in utilizing technology; some are still more comfortable with conventional methods and lack confidence when using digital devices such as laptops, projectors, or interactive learning applications. Teachers in elementary schools often face challenges in using digital learning resources. In this case, teacher training is essential to improve the quality of learning (Nurhasana et al., 2022).

In addition to human resources, school facilities and technology are also limited, such as the number of laptops, projectors, and unstable internet connections. When teachers want to play educational videos or access digital materials, they often encounter obstacles due to slow networks or malfunctioning devices. This also affects students, especially those who are not yet accustomed to using technology, so they often require additional guidance when asked to operate devices such as laptops to take digital quizzes or view presentation materials.

Nevertheless, schools and teachers have ways to address these challenges, such as implementing solutions to overcome existing obstacles. For example, teachers have begun to take the initiative to create their own learning materials using design applications like Canva, which allows them to create visually appealing content. Additionally, teachers utilize simple media from their surroundings and employ learning materials that are not single-use only.

Schools themselves have provided facilities such as school laptops, projectors, and speakers. Furthermore, schools are actively providing training and guidance to teachers on the use of technology in learning. Teachers are given the opportunity to share experiences and methods that have been successfully implemented in the classroom.

Through collaboration among all parties, the success and progress of schools in utilizing learning resources, educational media, and learning technology will be achieved, thereby creating effective learning.

#### 4. Conclusion

Based on observations and interviews at the SDN 2 Karangtengah Education Unit, it can be concluded that the use of learning resources, media, and learning technology has been effective and has played a significant role in supporting the teaching and learning process. Teachers at this school have shown initiative and creativity in using a variety of relevant learning resources that are easily accessible to students. Learning resources such as textbooks or modules, visual materials, and digital content have been actively used, although there are still some technical challenges and resource limitations.

The effectiveness of learning resource utilization can be seen in how teachers select teaching materials that align with students' characteristics and learning objectives. They do not rely solely on textbooks but also enhance the learning process with visual materials or their own creations. This finding is in line with Afifuddin's (2020) research in the Lantanida Journal, which emphasizes that a variety of learning resources tailored to student characteristics can improve student understanding and engagement in learning.

Learning media in this school are also used optimally. Teachers utilize various visual and concrete media, such as pictures, miniature traditional houses, and thematic maps, to help students understand abstract material more concretely. The use of digital media, such as interactive quizzes through Quizziz, makes the classroom atmosphere more dynamic. This is supported by research by Damayanti et al. (2020), which states that interactive media can increase student motivation and learning outcomes, especially at the elementary school level.

On the other hand, the development of learning technology is also beginning to be seen. Teachers utilize laptops, projectors, and internet connections to play videos, present materials, and conduct digital learning evaluations. Students show high enthusiasm when technology is used, although some still require guidance in operating digital devices. Tricahayu et al. (2024) support that integrating technology into learning can enhance learning effectiveness, provided it is supported by the readiness of both teachers and students.

However, there are still a number of challenges that must be addressed, such as teachers' limited time to prepare media, disparities in teachers' technological skills, and a lack of supporting facilities such as adequate devices and stable internet connections. Some teachers also feel less confident in using digital media, as expressed by Nurhasanah et al. (2022) said that

training is important for teachers to be ready to face learning challenges, especially 21st century learning.

Even so, the learning process didn't stop. Instead, teachers and schools kept trying to find creative solutions, like making their own media using the Canva app, using the environment as a learning medium, and guiding students in using technology step by step.

## References

- Afifuddin, M. (2020). Penggunaan Sumber Belajar dan Dampaknya terhadap Hasil Belajar. *Lantanida Journal*.
- Agdiyah, A. F., & Mustopa, S. (2024). Pengaruh Media Interaktif Educaplay pada Pembelajaran Matematika di Kelas III SD. 2(6).
- Aisyah, S., Ramadani, A. F., & Wulandari, A. E. (2025). Pemanfaatan Teknologi Digital sebagai Media Pembelajaran Interaktif untuk Siswa Sekolah Dasar. 3, 388–401.
- Alfianti, S. N., & Rahmah, E. N. (2024). Persepsi Penggunaan Media Pembelajaran Digital dalam Meningkatkan Minat Belajar. *IQ (Ilmu Al-Qur'an): Jurnal Pendidikan Islam*, 7(01), 94–111. <https://doi.org/10.37542/iq.v7i01.1736>
- Anggita, N., Novitasari, R., & Studi Pendidikan Guru Sekolah Dasar, P. (2024). Studi Literatur : Pengaruh Media Pembelajaran dalam Peningkatan Hasil Belajar Siswa Sekolah Dasar. *Jurnal Pendidikan Tambusai*, 8(1), 5654–5658.
- Arif, S. S. (2012). *Media pembelajaran*. Jakarta: Gaung Persada Press.
- Arini, & Sesrita, A. (2024). Proses Pembelajaran dan Media yang di Gunakan di SDN Harjasari. *Karimah Tauhid*, 3(2), 1538–1547. <https://doi.org/10.30997/karimahtauhid.v3i2.11807>
- Cantika, V. M. (2022). Prosedur pengembangan kurikulum (kajian literatur manajemen inovasi kurikulum). *Inovasi Kurikulum*, 19(2), 171–184. <https://doi.org/10.17509/jik.v19i2.44220>
- Cipta, N. H., Rokmanah, S., & Wijayanti, R. S. (2023). Penggunaan Teknologi sebagai Media Pembelajaran di Sekolah Dasar. *Jurnal Pendidikan Tambusai*, 7(3), 23955–23959.
- Damayanti, E., Santosa, A. B., Zuhrie, M. S., & Rusimanto, P. W. (2020). Pengaruh Penggunaan Media Pembelajaran Berbasis Multimedia Interaktif Terhadap Hasil Belajar Siswa Berdasarkan Gaya Belajar. *Jurnal Pendidikan Teknik Elektro*, 9 No 03, 639–645. <https://ejournal.unesa.ac.id/index.php/jurnalpendidikan-teknik-elektro/article/view/36321>
- Eliyantika, E., Witono, A. H., & Jiwandono, I. S. (2022). Penggunaan Media Pembelajaran Guru Kelas IV SDN Kemiri Tahun Pelajaran 2021/2022. *Jurnal Ilmiah Profesi Pendidikan*, 7(3), 1315–1326. <https://doi.org/10.29303/jipp.v7i3.749>
- Fitri, A. N., & Hadi, M. S. (2024). Pemanfaatan Media Pembelajaran Digital Pada Pembelajaran IPS Di Sekolah Dasar. *Jurnal Tarbiyah Dan Ilmu Keguruan Borneo*, 5(2), 133–146. <https://doi.org/10.21093/jtikborneo.v5i2.6995>
- Kementerian Pendidikan Nasional. (2007). Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 24 Tahun 2007 tentang Standar Sarana dan Prasarana... <https://peraturan.bpk.go.id/Home/Details/131991/permendiknas-no-24-tahun-2007>
- Khaira Ummah, K., & Mustika, D. (2024). Analisis Penggunaan Media Pembelajaran Pada Muatan IPAS di Kelas IV Sekolah Dasar. *Jurnal Kependidikan*, 13(2), 1573–1582. <https://jurnaldidaktika.org>
- Nurhasana, P. D., Aryaningrum, K., & Riyanti, H. (2022). Analisis Kesulitan Guru dalam Penggunaan Sumber Belajar dan Media Pembelajaran IPS di Sekolah Dasar Sekecamatan Sukarami Palembang. *Jurnal Pendidikan Dan Konseling*, 4(6), 8251–8258.
- Pakpahan, R., & Fitriani, Y. (2020). Analisa Pemanfaatan Teknologi Informasi dalam Pembelajaran Jarak Jauh. *JISEMAR*, 4(2), 30–36.
- Pamungkas, D. A., Prima, F., & Arisyanto, P. (2020). Sumber Belajar dan Media Pembelajaran dalam Pelaksanaan Kurikulum 2013 di SDN Pidodowetan. *Jurnal Sinektik*, 3(2), 164–170.
- Pendidikan, J., Digital, P., Belajar, T., Jean, K., Tahap, P., Konkret, O., Kelas, S., Sanjaya, I. G. A., Suarni, N. K., & Margunayasa, I. G. (2024). Meningkatkan Hasil Belajar Siswa SD Melalui Penggunaan Media. 5(1).
- Putra, L. D., Fitriyani, D. A., Fatimah, S., & Berlianti, D. S. S. (2023). Pengaruh Penggunaan Teknologi Media Digital dalam Pembelajaran Siswa Secara Kontekstual dan Audio Visual di Sekolah Dasar. *Jurnal Basicedu*, 7(4), 2672–2678. <https://doi.org/10.31004/basicedu.v7i4.5921>
- Ramdani, A., Jufri, A. W., & Jamaluddin, J. (2020). Pengembangan Media Pembelajaran Berbasis Android. *Jurnal Kependidikan*, 6(3), 433–440.
- Subaker, I. W., Suryawan, N., Nirmala Dewi, D. N., & Yusi Armini, N. W. (2022). Penggunaan Media Pembelajaran Daring Pada Siswa Kelas 3 SD Negeri 5 Blahbatuh di Masa Pandemi COVID-19. *Jurnal Penelitian Agama Hindu*, 9843, 20–26. <https://doi.org/10.37329/jpah.v0i0.1610>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung : Alfabeta.
- Syafitri, N. R., Ananda, R., Rizal, M. S., & Surya, Y. F. (2024). Analisis Sumber dan Media Pembelajaran Terhadap Pencapaian Tujuan Pembelajaran IPS di SDN 014 Kumantan. 9(2), 39–50.

## Proceedings Series of Educational Studies

- Syahrul, S. (2025). Optimalisasi Penggunaan Media Teknologi dalam Pembelajaran di Sekolah Dasar. *Jurnal Modeling*, 4(1), 1–10.
- Tricahayu, D. M., Sari, R. N., & Wahyuni, L. (2024). Integrasi teknologi informasi dalam pembelajaran sekolah dasar: Peluang dan tantangan. *Innovative: Journal of Social Science Research*, 4(1), 45–52.
- Wardani, N. W., Kusumaningsih, W., & Kusniati, S. (2024). Analisis Penggunaan Media Pembelajaran terhadap Hasil Belajar Siswa Sekolah Dasar. *Jurnal Inovasi, Evaluasi Dan Pengembangan Pembelajaran (JIEPP)*, 4(1), 134–140. <https://doi.org/10.54371/jiepp.v4i1.389>
- Widiastuti, L., Lasmawan, I. W., & Kertih, I. W. (2024). Implementasi Media Pembelajaran Berbasis Teknologi dalam Pembelajaran IPS di Sekolah Dasar. 13(001), 563–572.
- Zulvyanti, R., & Mas, S. (2024). PEMANFAATAN MEDIA PEMBELAJARAN PADA PEMBELAJARAN TEMATIK DI KELAS III SDN SAWOJAJAR 5. 4(5). <https://doi.org/10.17977/um065.v4.i10.2024.13>.