

Digital Learning Innovation for Primary School Children in the Age of Technology

Yulya Muharmi¹, Nella Novita²

¹Universitas Lampung, ²SD Negeri 24 Pasaman
Corresponding Author: ymuharmi@gmail.com

Abstract: The very rapid development of digital technology affects various aspects of life, including the world of education. Innovation in the learning of elementary school age children is very important to adapt to these changes. This research aims to analyze the use of educational technology, such as interactive learning applications, online platforms and other digital devices, in improving the quality of learning. The research results show that the appropriate use of digital technology can increase learning effectiveness and raise student motivation. Several effective learning strategies, such as Project Based Learning, Flipped Classroom, and Gamification, have been proven to attract students' attention and create a fun learning experience. This research provides recommendations for teachers to integrate technology effectively in the learning process to create a more interactive and productive learning environment.

Keywords: Learning Innovation. Primary School Children, Digital Era

Introduction

Education in the digital era has significant differences with education in the previous era. This is due to the increasingly dominant role of technology in everyday life, including in the learning process. Learning in the digital era can be done online or offline, and utilizes various technologies, such as smartphones, tablets, laptops or computers. Education is an important factor in building the future of the nation. In today's digital era, technological developments have a huge impact on the way students learn and study. Learning innovation is very important to be developed so that students can adapt to various technological advances in this digital era (Rizal, 2023). Education until now is believed to be a foundation or a very effective foundation for shaping human personality for the better so that the need for continuous improvement regarding the quality of education to be able to produce a more qualified young generation that can be useful for the nation and state (Hasriadi, 2022).

Education in this digital era has benefits such as: a more modern learning curriculum, improved learning outcomes with digital data analysis, can create an interesting and collaborative learning atmosphere, and can make it easier to evaluate the learning outcomes of students (Maulani, 2022). However, the adoption of technology in education does not always go smoothly. Although technology can improve learning effectiveness, new challenges, such as unequal access to technology, limited digital literacy, and the knowledge gap between teachers and

Article info:

Received 30 January 2025; Received in revised form 25 February 2025; Accepted 28 February 2025

Published by Corolla Education Centre Foundation on behalf of Studies in Elementary Education. This is an open-access article under the CC BY-SA license.

students in terms of technology use, are issues that need to be considered (Nuraeni et al., 2024).

Creativity and innovation are two key elements in meeting the challenges and capitalizing on the opportunities offered by the digital age. Creativity is the ability to think of new ideas, think outside the box, and come up with creative solutions to complex problems. According to Teresa Amabile, a psychologist, describes creativity as the process of generating original and useful ideas that are implemented in action. Meanwhile, innovation involves tangible steps to implement those creative ideas into products, services, or processes that provide added value (Meilita et al., 2023).

Based on the above explanation, it is expected to contribute in several aspects. Firstly, the research results can help policy makers and educational institutions in implementing learning innovations in this digital era. Second, this research can serve as a foundation for the development of training programs for teachers in the use of digital technology, so that teachers can be more effective in teaching and integrating digital skills in the learning process.

Material and Method

A literature study strategy, using methods such as journal data collection procedures, was the research method used. A literature review is the research methodology used in this study. The purpose of this study is to collect and examine data from various literature sources to answer the research questions that have been developed. Literature study is a way to collect information or references about the research subject. Descriptive analysis technique is applied to the data that has been obtained. The descriptive analysis approach involves first describing the facts, followed by analyses that offer more than adequate explanations and insights.

Results and Discussion

Currently, teaching and learning activities are changing into digital-based learning interactions. Therefore, changes in teaching and learning activities in each generation require learning strategies that are relevant to existing technological developments. There are a number of strategies in teaching and learning activities that can be carried out by teachers or teachers in the digital era like today, including developing models, carrying out evaluations and innovations in learning with the help of digital media. Basically, with the development of technology, it is hoped that teachers and students will be able to gain convenience in teaching and learning activities. So that the goals to be achieved can be obtained optimally and meaningful and inspiring teaching and learning activities can be realized.

Education is a field that is constantly evolving and adapting to the needs and demands of the future. One of the important aspects in ensuring the effectiveness of education is that using innovative learning approaches becomes essential in engaging learning. The digital generation requires a different approach in their education, they

respond more to learning that allows them to actively participate, collaborate and take initiative in lessons.

Innovative learning needs to be designed to realize learning that is not monotonous and boring. So that students are able to balance the functions of the left and right brain in thinking and acting. The use of technology-based learning materials is one of the challenges for an educator. Where must be able to use technology well in order to attract the attention and arouse the motivation of students.

The development of technology will produce a more interactive and fun learning and facilitate the learning process for both teachers and students. Proper utilization of digital learning can increase the productivity of learning activities, if teachers use the following basics of Digital learning utilization (Sitompul, 2022).

1. Web Course, viz: The use of the internet for learning purposes, where all learning materials, discussions, consultations, assignments, exercises and examinations are fully delivered via the internet. The learning process is fully conducted through the use of e-mail, chat rooms, bulletin boards and online conferences.
2. Web Centric Course, where some learning materials, discussions, consultations, assignments and exercises are delivered via the internet, while exams and some consultations, discussions and exercises are conducted face-to-face. In this form, face-to-face presentations are less than the use of the internet. The center of learning activities shifts from classroom activities through internet activities.
3. Web Enhanced Course, viz: The use of the internet for education, to support the improvement of the quality of learning activities in the classroom. This form is also known as web lite course, because the main learning activities are face-to-face in the classroom. This form is more dominant in face-to-face activities than the use of the internet as a learning medium.

Digital learning can also be interpreted as the process of teaching and learning activities carried out through computer networks or networks that are usually run using the internet. Therefore, with the internet, digital-based teaching and learning activities do not only depend on educators because access to knowledge or information is more complete and wider. So that teaching and learning activities can be carried out anywhere and anytime (Agusta et al., 2022).

In education, learning media is a tool used by teachers to help them provide information to students in the form of materials during teaching and learning activities. Educators use educational multimedia as a means to impart knowledge in a way that is clear and easily understood by students. If teachers use well-developed media students will have no difficulty in understanding the lesson content.

Pictures, instructional videos, illustrated stories, and Power Point presentations are some of the learning resources used. The categories of advanced teaching techniques/strategies are as follows.

1. Project-based Learning: The strategy allows students to collaborate in groups and create projects related to the subject matter being learnt. An approach that allows

students to actively participate in the learning process, develop critical thinking skills, and enhance creativity.

2. **Flipped Classroom:** One digital-based learning model is the flipped classroom. The flipped classroom is an innovative learning model that reverses the traditional learning system where lessons are taught in class and assignments are done at home. In the flipped classroom model, teaching materials are delivered by the teacher through videos accompanied by assignments that must be done by students at home (Cahya, 2023).
3. **Gamification:** A strategy of incorporating game aspects to increase student engagement and motivation in the classroom. For example, to increase student understanding and motivation, teachers can use activities, videos or games that match the lesson topic (Barokah et al., 2024).
4. **Contextualized Learning:** This strategy provides opportunities for students to learn in an environment that can be applied in everyday life. Instructors can create scenarios that encourage critical and analytical thinking in their students by using learning resources. **Problem-Based Learning:** This strategy allows students to learn by solving issues related to the subject matter being examined. Tutors can assign tasks that require the application of concepts and skills learnt in class.
5. **Co-operative Learning:** This strategy allows students to practice group work and collaboration. Instructors can give students assignments that require them to communicate and work as a team to help them become more collaborative and critical thinkers.
6. **Online Learning:** This strategy allows students to learn online by using media such as text, images, and videos. Teachers can provide resources to students and discuss with them through online learning tools.
7. **Technology-based Learning:** This strategy allows students to learn using technology such as computers, tablets, or smartphones. A teacher can use learning apps to assign material and discuss with students.
8. **Environment-Based Learning:** This strategy allows students to learn by developing their ability to adapt to the surrounding environment. Instructors can create scenarios that encourage critical and analytical thinking in their students by using instructional resources.
9. **Character Based Learning:** This strategy allows students to learn by developing character traits related to everyday life. Instructors can create scenarios that encourage critical and analytical thinking in their students by using instructional resources.

Some research related to learning innovation to prepare elementary school-age children to face the digital era is research conducted by (Rizkiyah & Maknum, 2024) with the title variance of innovation and learning strategies in elementary schools Teaching strategies at the elementary school level, such as MI / SD. have important implications for facilitating effective, creative, and innovative teaching processes. So

that teachers can know how to learn, how to apply it well, because the teacher is a facilitator in the learning process and students also become more directed from several studies. The purpose of this research is to analyze the variety of innovations and teaching strategies that can be used in MI to develop teaching effectiveness. Further research was conducted by (Khoirina & Adriyani, 2024) on Digital Era Learning Innovations: Development of Augmented Reality Technology in Elementary Schools. This research aims to develop learning innovations that are integrated with augmented reality technology in the form of augmented reality-based interactive media, as well as knowing the level of student understanding and reciprocity of the developed media.

The form of technological advancement that has penetrated the field of education can be seen from the many digital teaching media that support the learning process both online and offline. This shows that the conventional era is starting to end and switch to the digitalization era. This requirement has a huge impact on educational actors, both practitioners and educators, where changes in the learning system but without careful preparation create obstacles and challenges that penetrate all levels including basic education (Zidan et al., 2023).

Conclusion

The development of digital technology demands changes in the education system. The younger generation must be equipped with technology, critical thinking, creative and collaborative skills. Creative learning tactics such as gamification, project-based learning and flipped classroom can increase student motivation and learning effectiveness. The role of teachers, parents and communities is crucial to create an educational ecosystem that supports the positive utilization of technology, so that students are not only users, but also creators of change.

References

- [1] Agusta, A. R., Lestari, N., & Dkk. (2022). *Pendidikan Inspiratif Era Cybernetics (Strategi Menjadikan Iklim Pembelajaran Bermakna di Era Digital)* (Vol. 4).
- [2] Barokah, A., Laelly, T. A., Febriyanti, U., Novianti, & Apriiani, F. (2024). awalina. *Analisis Literatur: Strategi Pembelajaran Inovatif Untuk Meningkatkan Motivasi Belajar Siswa Sekolah Dasar 1*, 4(4).
- [3] <https://j-innovative.org/index.php/Innovative%0AAalisis>
- [4] Cahya, U. D. (2023). *Inovasi Pembelajaran Berbasis Digital Abad 21* (A. Karim (ed.)). Yayasan Kita Menulis.
- [5] Hasriadi. (2022). Metode Pembelajaran Inovatif di Era Digitalisasi. In *Jurnal Sinestesia* (Vol. 12, Issue 1).
<https://sinestesia.pustaka.my.id/journal/article/view/161>
- [6] Khoirina, A., & Adriyani, Z. (2024). *Inovasi Pembelajaran Era Digital: Pengembangan Teknologi Augmented Reality di Sekolah Dasar*.
<https://jurnaldidaktika.org>

- [7] Maulani, G. (2022). *Pendidikan Di Era* (A. C. Purnomo (ed.)). PT SADA KURNIA PUSTAKA.
- [8] Meilita, I., Surya Timur, L., & Asbari, M. (2023). Pendidikan Melalui Permainan: Membangun Kreativitas dan Inovasi pada Generasi Digital. *JOURNAL OF INFORMATION SYSTEMS AND MANAGEMENT*, 02(05). <https://jisma.org>
- [9] Nuraeni, Salmia, Safitri, A., & Suandi. (2024). nuraeni. *Saraweta: Jurnal Pendidikan Dan Keguruan*, 2(2), 120–131.
- [10] Rizal, A. S. (2023). Inovasi Pembelajaran untuk Meningkatkan Hasil Belajar Siswa di Era Digital. *Jurnal Kajian Keislaman Dan Pendidikan*, 14. <http://e-jurnal.staiattanwir.ac.id/index.php/attanwir/index%0AInovasi>
- [11] Rizkiyah, F., & Maknum, L. (2024). fathia. *Jurnal Ilmiah Pendidikan Dasar (JIPDAS)*, 4(4), 227–234. <https://doi.org/https://doi.org/10.37081/jipdas.v4i4.2005>
- [12] Sitompul, B. (2022). *Kompetensi Guru dalam Pembelajaran Di Era Digital*.
- [13] Zidan, M., Sultan, U., & Tirtayasa, A. (2023). *INOVASI MODEL, STRATEGI ATAU METODE PEMBELAJARAN DI ERA 4.0 YANG SERBA DIGITAL*.