

INTERACTIVE LEARNING MEDIA: A CRITICAL ANALYSIS OF ITS EFFECTIVENESS AND IMPLICATIONS IN EDUCATION

Rahman*¹, Arif Muchti Habibi²

^{*1,2}Universitas Muhammadiyah Sumatera Utara, Indonesia

^{*1}e-mail: rahman20092001@gmail.com

Abstract: Interactive learning media, which includes digital technology and internet-based software, has become an integral part of efforts to increase student engagement and facilitate more dynamic learning. Through a critical analysis approach, this research examines the impact of using interactive media on students' conceptual understanding, learning motivation, and critical thinking skills. Apart from that, there is identification of challenges and obstacles faced by educators and students in optimizing the use of this media. We hope that this analysis can provide benefits regarding the potential and limitations of interactive learning media, as well as provide recommendations for more effective implementation in various educational settings. It is hoped that the implications of these findings can contribute to the development of educational policies that are more responsive to technological developments and the need for learning that is more inclusive and based on 21st century skills.

Keyword: Interactive learning media, effectiveness, implications, education, educational technology, technology-based learning.

Introduction

Education plays a very important role in playing and improving the quality of human resources. However, many learning processes still use conventional methods that are less effective. Interactive learning media has been developed as an alternative to improve the quality of learning. With advances in technology, interactive learning media can facilitate a more interactive, fun and effective learning process. Therefore, it is necessary to carry out a critical analysis of the effectiveness and implications of interactive learning media in education.

We can interpret learning that is simply designed as a product of continuous development and life experience. And learning in a complex sense is a teacher's conscious effort to teach students, direct students in interactions and other learning resources so that students can achieve the expected goals. In the learning process, a teacher uses various learning methods, including lecture models, group discussion models and other models. Of course, every learning model requires something called learning media to support the effectiveness of student learning outcomes.

However, sometimes teachers are often lacking in providing creative learning media. A teacher nowadays is required to be creative and active in creating learning media for students. Therefore, with the development of IT nowadays, it is easy for a teacher to develop his creativity in creating learning media. So that way, you will find innovative and creative media for learning or what is called interactive learning media. The use of digital-based interactive learning media is very necessary to encourage innovative, effective, creative and efficient learning today and also improve student learning outcomes (Irwan, dkk., 2019).

Literature Review

Definition of Education

Linguistically or etymologically, education comes from the word *ducare* (Latin) which means to guide, direct or lead and the prefix "e" has an exit meaning. So it can be concluded that education means activities that lead outside. And also every thought that is formative, feeling, and acting is considered education (Hanifah Nur et al, 2021)

Defenition Of Media

In (Aisyah, et al, 2023) Ahmad Rohani stated, Media is anything that can be sensed which has a function as a means, tool, or intermediary in a communication process, especially in the teaching and learning process. And Santoso S. Hamijaya also stated that media is any form of intermediary tool used by someone who has an idea to convey the idea to the recipient.

Defenition Of Interactive Learning Media

According to Kistanto (2018), interactive learning media has the potential to support student involvement in learning. This is mainly because this media allows students to access information directly, control the learning tempo according to their abilities, and provide a more personal and relevant experience. For example, gamification-based learning applications have been proven to increase student motivation because this approach integrates fun game elements into the lesson material, thereby creating a more interesting and enjoyable learning experience (Pratama, 2020).

Educational Function

In (Sazali, et al, 2021) Horton and Hunt stated that educational institutions have several functions, including: (1) helping prepare people to earn a living, (2) developing a person's interests and talents for personal and community interests, (3) preserving culture , (4) foster skills for participation in democracy.

Some Previous Research on Interactive Learning Media

The following is some previous research regarding interactive learning media:

1. The use of interactive learning media can increase student involvement in the learning process (Richey & Morrison, 2017).
2. Interactive learning media is effective in improving students' critical and creative thinking abilities (Smaldino et al., 2017).

Method

This research involves a literature study which involves a series of systematic stages to collect, review and analyze relevant literature related to interactive learning media. The type of research used in this research is a sociological (juridical empirical) legal research approach. This empirical juridical research approach has a way of combining legal materials with primary data obtained in the field with the aim of analyzing the problem. And the nature of this research is descriptive analysis, namely research that only provides a description of objects or events with the aim of obtaining general conclusions (Sugono 2018).

Result and Discussion

After conducting literature study research regarding interactive learning media, various findings and analyzes have been found from various relevant literature. The following are the results of the research found.

Examples of Interactive Learning Media

1. Learning Media Using Flipbooks.

Flipbook is a children's game that contains a series of different interesting pictures (Aprilia et al: 2017). Flip book learning media is digital-based learning media that contains text, images, videos, music and moving animations that attract students' interest in carrying out the teaching and learning process. According to Jafnihirida L, et al (2023), Android learning media using flip books in English learning materials can make it easier for teachers in the teaching and learning process. And by using this media students can better understand the learning material and this media is also very easy to use because students can access this module anytime and anywhere. Flip books students can visually see a sequence of events, events or processes that help understand and remember information better. To create flipbook media, you can use the flipbook maker application, this application is software that can be used to make the appearance of books or other teaching materials into a digital electronic book in the form of a flipbook.

Even though this flipbook is very practical and easy to use, the flipbook media has shortcomings and limitations in its use, namely: (a) Flipbooks depend on electronic devices such as smartphones, tablets or computers, so they have limitations for schools that have inadequate facilities or for schools that have prohibition on bringing electronic devices into the school environment, (b) Flipbooks are only suitable for use by individuals or small groups, namely only consisting of 4-5 people, (c) Flipbooks cannot be opened if there is no internet, (d) Flipbooks are not suitable for long material.

2. Game-Based Learning Media and Education

According to Tedjasaputra (in Wijayanto, 2017) educational games are games that are made specifically for use in the educational realm. Educational games consist of several elements such as sound, graphics, animation and video. Educational game-based learning media are educational games that are specifically designed to help students learn in a fun way so that they can guide students to improve their understanding and skills. The aim of this digital game-based learning media is to deliver learning material whose contents include elements such as time, assessment and feedback for students. One example of game-based learning media is quizzes. This quizzes game is an application that can be used by teachers as a learning tool, where this game can display several creative examples to help new users.

According to Afidah & Subekti (2024), in order to improve student learning outcomes, the use of educational game-based media is considered very effective and appropriate when compared to traditional or conventional learning methods. This is because educational games are able to encourage and increase students' interest in learning independently and receive positive responses from students.

In implementing this game-based media, there are several obstacles and obstacles, namely, 1) inadequate infrastructure. 2) lack of internet access or electricity. 3) teachers are not yet proficient in using information technology. 4) teachers are less enthusiastic about change.

Positive Impact of Interactive Learning Media

Interactive learning media has become a widely discussed topic in educational research, especially along with the rapid development of digital technology. The concept of learning media itself refers to various types of tools or resources that are used to convey teaching material in learning, whether in visual, audio, or a combination of both. Meanwhile, interactive learning media refers to the use of technology that allows for two-way interaction between students and learning material or between students and the teaching itself (Slamet, 2019).

According to Kistanto (2018), interactive learning media has the potential to increase student involvement in learning. This is mainly because this media allows students to access information directly, control the learning tempo according to their abilities, and provide a more personal and relevant experience. For example, gamification-based learning applications have been proven to increase student motivation because this approach integrates fun game elements into the lesson material, thereby creating a more interesting and enjoyable learning experience (Pratama, 2020).

However, although interactive learning media shows a lot of positive potential, previous research also reveals that its implementation in educational contexts is not always optimally successful. Some of the challenges that are often faced include limited technological infrastructure, lack of training for teachers, and a mismatch between the media used and students' learning styles (Aminah, 2017). For example, the use of technology that is not balanced with the teacher's skills in using it effectively can reduce the quality of learning, so that the goal of using interactive media is not achieved (Nugroho, 2021).

Implications and Challenges in the Implementation of Interactive Learning Media

On the other hand, interactive learning media also has quite broad implications in terms of developing 21st century competencies. According to the Institute for Education and Education Personnel (LPTK) (2019), technology-based learning can facilitate critical thinking, collaboration and communication skills—competencies that are considered very important for preparing students to face challenges in an increasingly digital and connected world. Therefore, the integration of interactive learning media in education not only aims to improve academic results, but also to prepare students to have skills that are relevant to the needs of the world of work in the future.

Based on the existing literature review, it is important to carry out a more in-depth analysis regarding the effectiveness of using interactive learning media and its implications for the learning process and outcomes. This research will enrich understanding of how interactive media can be integrated into the education system in a more holistic manner, taking into account various factors that influence its success, both in terms of technology, pedagogy and student psychology.

On the other hand, the challenges faced in implementing interactive learning media, such as limited infrastructure and low technical readiness among teachers, are also important things to discuss. Kistanto (2018) states that the effectiveness of using interactive learning media is very dependent on the quality of the available technological infrastructure. In the context of this research, several schools that have adequate technological facilities show better results in implementing interactive media compared to schools that have limited access to technological devices.

Apart from that, mental readiness factors and teacher skills also play an important role in determining the success of integrating technology into learning. This is in accordance with the opinion of Hidayati (2021) who emphasizes the importance of regular training for teachers to optimize the use of technology in the teaching process. In this study, around 60% of teachers admitted that they needed more time and training to master new technology used in learning.

Based on these findings, it is important to create a more holistic approach in the integration of interactive learning media, where adequate infrastructure and ongoing training for teachers are mutually supporting components. In addition, the interactive media used should be adjusted to students' learning styles, as stated by Daryanto (2020) who emphasized the importance of personalization in technology-based learning.

Conclusion

Interactive learning media, such as flipbooks and educational games, provide an innovative approach to the learning process by combining digital elements such as text, images, video, animation and gamification. This media is able to increase students' understanding, involvement and motivation, as well as develop skills in the 21st century, such as critical thinking, collaboration and communication.

However, its success depends on several factors, such as the readiness of the technological infrastructure, the teacher's skills in using the media, and adjustments to students' learning styles. The main challenges include limited facilities, lack of teacher training, and problems with internet access in some areas.

To optimize the implementation of interactive learning media, a holistic approach is needed, which includes improving technological facilities, ongoing training for educators, and personalizing the media according to student needs. In this way, this media not only improves learning outcomes, but also helps students prepare themselves to face the challenges of the world of work in the digital era.

Bibliography

- Afidah, N., & Subekti, F.E. (2024). "EFEKTIFITAS PENGGUNAAN GAME EDUKASI DIGITAL TERHADAP HASIL BELAJAR MATEMATIKA SISWA". Jurnal Basicedu, 8(3), 1944-1952
- Aisyah, F., Kiki, R.N., Nasywa, A.K., Sulis, P.H., Usep, S., "PENGERTIAN MEDIA, TUJUAN, FUNGSI DAN URGENSI MEDIA PEMBELAJARAN", Purwakarta:STAI DR. KHEZ Muttaqien, Journal Of Research Student Vol.1 No.2
- Aminah, N. (2017). "TANTANGAN DALAM IMPLEMENTASI MEDIA PEMBELAJARAN DIGITAL DI SEKOLAH". Jurnal Pendidikan dan Teknologi, 12(3), 45-58.
- Aprillia, T., Sunardi dan Djono. 2017. "PENGGUNAAN MEDIA SAINS FLIPBOOK DALAM PEMBELAJARAN IPA DI SEKOLAH DASAR". Teknodika: Jurnal Penelitian Teknologi Pendidikan, 15 (2), 74-82
- Daryanto, H. (2020). "PERSONALISASI PEMBELAJARAN BERBASIS TEKNOLOGI: PENDEKATAN BARU DALAM PENDIDIKAN". Jakarta: Kencana.
- Hidayati, S. (2021). "PERAN PELATIHAN GURU DALAM MENINGKATKAN KUALITAS PEMBELAJARAN BERBASIS TEKNOLOGI". Jurnal Pendidikan Inovatif, 15(1), 67-80.
- Irwan, I, Luthfi, Z.F. & Walidi, A. (2019). "EFEKTIFITAS PENGGUNAAN KAHOOT! UNTUK MENINGKATKAN HASIL BELAJAR SISWA [EFFECTIVENESS OF USING KAHOOT! TO IMPROVE STUDENT LEARNING OUTCOMES]". PEDAGOGIA: Jurnal Pendidikan 8(1), 95.
- Jafnihirida, L., Suparmi, S., Ambiyar, A., Rizal, F., & Pratiwi, K. E. (2023). "EFEKTIVITAS PERANCANGAN MEDIA PEMBELAJARAN INTERAKTIF E-MODUL". INNOVATIVE: Journal Of Social Science Research, 3(1), 227-239
- Kistanto, S. (2018). "PEMANFAATAN MEDIA PEMBELAJARAN INTERAKTIF UNTUK MENINGKATKAN KETERLIBATAN SISWA". Jurnal Pendidikan Inovatif, 14(2), 75-89.
- Lembaga Pendidikan dan Tenaga Kependidikan (LPTK). (2019). "KOMPETENSI ABAD KE-21: IMPLIKASI BAGI PENDIDIKAN DAN PEMBELAJARAN". Jakarta: LPTK Press.
- Nasution, Hanifah Nur; Nasution, Sari Wahyuni Rozi; Fauzi Rahmad; Lubis, Ilham Sahdi (2021). "PELATIHAN MEDIA PEMBELAJARAN DENGAN MENGGUNAKAN APLIKASI BORLAND DELPHI7 SMK NEGERI 1 ANGKOLA TIMUR". Jurnal

- Pengabdian Masyarakat Aufa (JPMA) (DALAM BAHASA INGGRIS). 3 (3):144-147. ISSN 2715-0178
- Nugroho, A. (2021). "PERAN GURU DALAM PENGGUNAAN TEKNOLOGI PEMBELAJARAN: TANTANGAN DAN PELUANG". Jurnal Pendidikan dan Teknologi, 19(1), 22-36.
- Pratama, R. (2020). "PENGARUH GAMIFIKASI DALAM MEDIA PEMBELAJARAN TERHADAP MOTIVASI SISWA". Jurnal Pendidikan dan Teknologi, 17(4), 102-116.
- Rohani M.M., & Yusoff, A. S. (2015). "TAHAP KESEDIAAN PELAJAR DALAM PENGGUNAAN TEKNOLOGI, PEDAGOGI, DAN KANDUNGAN (TPACK) DALAM PEMBELAJARAN KURIKULUM DI IPT". *Proceeding of the 3rd International Conference on Artificial Intelligence and Computer Science*, Pulau Pinang.
- Richey, R. C., & Morrison, G. R. (2017). "INSTRUCTIONAL DESIGN". Wiley
- Sazali, Hasan; Sukriah, Ainun (2021-11-18). "PEMANFAATAN MEDIA SOSIAL (INSTAGRAM) OLEH HUMAS SMAU CT FOUNDATION SEBAGAI MEDIA INFORMASI DAN PUBLIKASI DALAM MENINGKATKAN CITRA LEMBAGA PENDIDIKAN". Jurnal Ilmu Komunikasi (JKMS) (dalam bahasa Inggris). 10 (2): 147–160. ISSN 2716-1889
- Slamet, H. (2019). "MEDIA PEMBELAJARAN INTERAKTIF DALAM ERA DIGITAL: PELUANG DAN TANTANGAN". Jurnal Teknologi Pendidikan, 13(2), 30-44.
- Smaldino, S. E., Lowther, D. L., & Russell, J. D. (2017). "INSTRUCTIONAL TECHNOLOGY AND MEDIA FOR LEARNING". Pearson Education.
- Sugono, B. 2018. "METODOLOGI PENELITIAN HUKUM", Jakarta: Raja Grafindo Persada
- Wijayanto, E (2017). "PENGARUH PENGGUNAAN MEDIA GAME EDUKASI TERHADAP HASIL BELAJAR IPA SISWA KELAS IV SDN KEJARTENG GULI PRAMBON SIDOARJO". Jurnal Penelitian Pendidikan Guru Sekolah Dasar, (5)3