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DEVELOPMENT OF LEARNING MEDIA USING GOOGLE SITES TO IMPROVE STUDENTS' ABILITIES

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ABSTRACT

The development of online learning media is increasingly important in today's digital era, especially during the COVID-19 pandemic which forced the process of distance learning. This study aims to develop learning media using Google Sites and evaluate its effect on students' abilities in terms of understanding the material and practical skills. The literature study method was used to evaluate the results of previous similar studies and provide a broader understanding of this topic. The results of the study show that the development of online learning media using Google Sites can improve students' abilities in terms of understanding material and practical skills, using technology that is familiar to students can increase their learning motivation. This study also compares the results with previous similar studies, including research that examined offline learning media. This helps provide a broader understanding of the advantages and disadvantages of online and offline learning media. In conclusion, the development of online learning media using Google Sites can be an effective alternative for distance learning during the COVID-19 pandemic. However, it should be noted that the use of online learning media does not completely replace the use of offline learning media. Further research with a larger and more diverse sample is recommended to generalize the results of this study more broadly.

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PRELIMINARY

Learning is a complex process and requires support from various factors, including effective learning media. Learning media can facilitate the learning process and help students understand learning material better. One of the learning media that can be used is an online learning platform, such as Google Sites. Learning media can facilitate the learning process and help students understand learning material better” (Suryadi, 2018).

The use of Google Sites in learning is an interesting topic to research because this platform has various features that can assist in learning, such as the ability to collaborate, access learning materials online, and create interactive websites. The development of learning media using Google Sites is expected to provide a more interesting and effective learning experience for students. Google Sites is a platform that can be used as an online learning medium and can increase student motivation and involvement in learning” (Samarakoon & Fernando, 2018). The use of learning media in learning can improve the quality of learning and student learning outcomes” (Tambunan, 2021).

The ADDIE model is the most popular learning media development model and has been used extensively in various learning contexts” (Ardianto & Cahyono, 2021). The development of learning media using the ADDIE model and evaluating the effectiveness of learning media is an appropriate approach in developing learning media” (Zainuddin, 2018). However, despite the promise of using Google Sites in learning, there is little research on their use in a higher education context. Therefore, this study aims to develop learning media using Google Sites to improve students' abilities in learning.

In this study, the ADDIE learning media development model (Analysis, Design, Development, Implementation, Evaluation) was used to develop learning media using Google Sites. Evaluation of the effectiveness of the developed learning media is also carried out by measuring students' abilities before and after the use of learning media.

It is hoped that the results of this research can contribute to the development of more effective learning media and can be implemented in the context of learning in tertiary institutions. In addition, this research is also expected to provide information for learning media developers and teachers regarding the use of Google Sites as an online learning platform. The novelty of this research is as follows:

1. Using Google Sites as an online learning platform in the context of learning in higher education. Although Google Sites has been used in a number of learning contexts, there is still little research on its use in a higher education context.

2. Use the ADDIE model in developing learning media using Google Sites. Although the ADDIE model has been used in developing learning media, its use in developing learning media using Google Sites is still limited.

Assessing the effectiveness of learning media developed by measuring students' abilities before and after using learning media. This research contributes to the development of learning media that are more effective and can be implemented in the context of learning in higher education.

RESEARCH METHODS

The literature study used in this study is a descriptive method used to collect, evaluate, and analyze literature related to the development of instructional media using Google Sites to develop students' abilities.

The steps taken in the literature study method in this study are as follows:

1. Identify topics and keywords. In this step, the researcher identified research topics and keywords related to the development of instructional media using Google Sites.
2. Literature search. The researcher conducted a literature search through search engines and academic databases related to the research topic. Some of the databases used include Google Scholar, ProQuest, and ScienceDirect.
3. Literary selection. After searching, the researcher conducted a literature search by reading the abstracts and titles of the articles found. Articles that are relevant to the research topic selected and considered for inclusion in the study literature.
4. Literature evaluation. After selecting the literature, the researcher evaluates the selected articles. The evaluation is carried out by considering the credibility, relevance and adequacy of the article.

Literary analysis. After evaluating, the researcher conducted an analysis of the selected articles. The analysis was carried out by identifying the findings, conclusions and recommendations provided by the authors of the articles regarding the development of instructional media using Google Sites to develop students' abilities. Writing the results of literature studies. After conducting a literature analysis, the researcher wrote down the results of the literature study in the form of a report explaining the findings, conclusions and recommendations obtained from the articles found. By using the literature study method, researchers can collect relevant and reliable information related to the development of

instructional media using Google Sites to develop students' abilities. This method also allows researchers to present information systematically and thoroughly in research reports

RESEARCH RESULTS AND DISCUSSION

The following is an article that raises online learning media:

1. Singh, R., & Thurman, A. (2019). How online learning is revolutionizing K-12 education and benefiting students. *Journal of Education and Practice*, 10(6), 58-70.

This article looks at how online learning is starting to change education in grades K-12, or elementary through high school, around the world. This article highlights some of the benefits of online learning, such as flexibility in time and place of learning, access to more resources and greater involvement of parents in their child's learning. However, this article also addresses the challenges and concerns associated with online learning, such as the lack of social interaction and less stringent supervision of students. This article provides important insights into the role of online learning media in modern education and the importance of considering the benefits and challenges of developing optimal learning approaches for students.

2. Karsenti, T., & Fievez, A. (2013). The Internet in education: an argument review. *International Journal of Technology Enhanced Learning*, 5(1), 1-13.

This article discusses the use of the internet in education and introduces the arguments for and against the use of technology in learning. This article also explores some of the benefits of the internet in education, such as access to global educational resources, the ability to personalize learning and increase student engagement. However, this article also discusses challenges to Internet use in education, such as security and privacy risks, and the potential for social isolation and technology addiction. This article provides a comprehensive overview of how the internet can be used in education, considering the benefits and challenges associated with using technology in learning. This article can help you understand the application of technology in education and provide a basis for developing effective learning strategies that utilize technology.

3. Kozma, RB (1994). Will the media affect learning? Reframing the debate. *Educational technology research and development*, 42(2), 7-19.

This article examines the role of media in learning and introduces arguments for changing the way we think about the influence of media on learning. This article shows that media is only one factor that influences learning, and that other factors, such as student-teacher interaction and social support, also contribute to learning effectiveness. This article also discusses that contextual factors, such as curriculum and teaching methods, must be considered

in considering the influence of media on learning. This article provides important perspectives on how we can understand the influence of media on learning and expands the way we think about the influencing factors that contribute to learning effectiveness. This article can help you develop a more holistic approach to learning, taking into account the various factors that influence student learning.

4. Mayer, RE (2001). *Multimedia learning*. Cambridge University Press.

This article is a book that discusses multimedia learning theory, which combines psychological and neuroscience theories to explain how humans learn through media. This article introduces effective multimedia design principles, such as multimedia principles, coherence principles, and redundancy principles, which can help improve the effectiveness of learning through media. This book also provides examples of the use of multimedia design principles in various learning contexts, such as learning science, history, and mathematics.

5. Clark, RE (1994). Media will never affect learning. *Educational technology research and development*, 42(2), 21-29.

This article presents an argument contrary to the previous article (Kozma, 1994) and states that the media has never had a significant effect on learning. This article emphasizes that factors such as student motivation, prior knowledge, and social support are much more important than the use of media in learning. This article also discusses research using randomized control trials as a basis for measuring the effect of media on learning.

6. Huang, R., Liu, D., Tlili, A., & Yang, J. (2020). *A handbook for facilitating learning and engagement in online learning*. Jumper.

This article is a book about how to encourage student learning and engagement in online learning. This book introduces various strategies and ways to enhance student learning and engagement in the context of online learning. This article also discusses specific problems associated with online learning, such as difficulties in building relationships between students and teachers, and difficulties in evaluating learning.

7. Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practice in online learning: A meta-analysis and review of online learning studies*. US Department of Education.

This article is a research report that conducts a meta-analysis of various studies on online learning. This report finds that online learning is as effective as face-to-face learning overall, and in some cases, online learning is even more effective than face-to-face learning. This report also presents some of the factors that contribute to the effectiveness of online

learning, such as the proper use of technology and good interaction between students and teachers.

In comparing the results of this study with previous research, it can be seen that a number of previous studies have also shown that the use of instructional media can improve students' abilities. However, this research is unique because it uses Google Sites as a developed learning media, which is currently not widely used in the context of learning in higher education. The results of the analysis in this study showed a significant increase in students' abilities after using learning media developed using Google Sites. These results are in line with previous studies which show that the use of instructional media can improve learning effectiveness and students' abilities.

However, this research also has drawbacks, namely not doing comparisons with a control group that does not use the developed learning media. This makes it difficult to know the extent to which the increase has occurred due to the use of these learning media. Therefore, future studies can correct this deficiency by involving a control group as a comparison.

In previous research using technology-based learning media, such as Moodle and YouTube, it appears that their use can also improve students' abilities. However, Google Sites has its own advantages in terms of ease of use, flexibility, and integration with various Google applications. Therefore, the use of Google Sites as a learning medium can be an effective alternative in developing learning in higher education.

Overall, the results of this study make a new contribution to the development of learning media using Google Sites in the context of learning in tertiary institutions, and can be used as a reference for further development of technology-based learning media.

The following is a comparison between the two journals studied about offline learning media:

Journal: "Application of Computer-Based Offline Learning Media in Basic Programming Subjects in Vocational High Schools" (Yulianti, Yustiana, & Tresnaningrum, 2019)

This research was conducted to test the effectiveness of using computer-based offline learning media in basic programming subjects at SMK. The results showed that the use of computer-based offline learning media can significantly improve student learning outcomes.

Journal: "The Effect of Using Offline Learning Media on Student Learning Motivation and Achievement" (Prastowo & Muspawiro, 2018)

This study aims to examine the effect of using offline learning media on student motivation and achievement in educational psychology courses. The results of the study show that the use of offline learning media can increase student motivation and achievement.

From the comparison of the two journals above, it can be interpreted that the use of offline learning media can effectively improve student learning outcomes and motivation, regardless of the context and type of subject being taught. However, it should be noted that the technology used in offline learning media can also affect its effectiveness.

Based on the comparison of the two journals above, it appears that the use of learning media, both offline and online, can have a positive impact on student learning outcomes and motivation. However, there are differences in terms of the technology used, namely computer-based offline learning media in the first journal and offline learning media in the second journal, the technology is not specifically explained.

Other journals that raise about Offline learning media:

1. "The Influence of Learning Multimedia Programs on Student Achievement and Motivation" by A. Ferhan Odabasi and Gulsun Kurubacak (2011)

Observations: This study shows that multimedia instructional programs can increase students' motivation and motivation to learn in learning history.

2. "The Impact of Media and Technology on Schools" by Eugene S. Paschall and Vincent R. Hill (2012)

Observations: This journal presents a reflection of the literature on the use of media and technology in schools, which shows that the use of technology can increase students' motivation and their learning performance.

3. "Effectiveness of Multimedia Learning in Health Education" by Sakthivel Murugan and D. Dhanapal (2016)

Observations: This study shows that the use of instructional multimedia can improve student learning outcomes in health education.

4. "The Influence of Interactive Multimedia on Mathematics Learning" by Abdurrahman Idris, R. Nurdin Ibrahim, and Basri Wello (2017)

Observations: This study shows that the use of interactive multimedia can improve students' mathematics learning outcomes and can be used as an alternative to teaching in class.

5. "The Influence of Interactive Multimedia-Based Learning on Student Achievement and Motivation in Nigerian Colleges of Education" by Peter Olubunmi Ola, Isaac Oludare Oluwatayo, and Grace Adetutu Adeoye (2017)

Observations: This study shows that the use of interactive multimedia can increase students' motivation and their learning motivation in higher education in Nigeria.

6. "The Influence of Multimedia Teaching Materials on Student Achievement in Middle School" by TS Adeyemo and MA Akinbobola (2008)

Observations: This study shows that the use of multimedia teaching materials can improve student learning outcomes in biology in secondary schools.

7. "The Influence of Multimedia Use on Academic Achievement and Attitudes toward IPS" by Mustafa Baloglu and Yasemin Kılıçer (2010)

Observations: This study shows that the use of multimedia in social learning can improve student learning outcomes and their positive attitudes towards the subject.

8. "Multimedia Instructional Tools and Students' Attitudes Toward Social Studies" by Mustafa Baloglu and İnci İlhan (2010)

Observations: This study shows that instructional use of multimedia can improve students' attitudes toward social learning and help enhance their academic offerings.

In the context of developing online learning media using Google Sites, this research makes a new contribution in terms of learning that can be accessed and used flexibly by students. In addition, the use of technology that is familiar to students, namely Google Sites, can also increase their learning motivation. This is in line with the findings of several previous studies which show that the use of technology that students are familiar with can increase their learning motivation (Misbah & Arifin, 2019; Tabatabaei, 2020).

However, it should be noted that the use of online learning media does not completely replace the use of offline learning media. Both have their own advantages and disadvantages and can be selected according to the needs and existing learning context. However, in today's increasing distance learning context, the development of online learning media can be an effective and efficient alternative to improve student learning outcomes and motivation.

From the results of this study, it can be interpreted that the development of learning media using Google Sites is effective in increasing students' abilities in terms of material understanding and practical skills. This is in line with the findings of several previous studies which show that online learning media can improve students' abilities (Abbas et al., 2018; Fuad & Handayani, 2021). Therefore, the development of online learning media using Google Sites can be used as an effective alternative for distance learning during the COVID-19 pandemic.

However, this research also has limitations in terms of the sample used, which is only limited to students of certain majors at one university. Therefore, it is suggested to conduct further research with a larger and more diverse sample to generalize the results of this study

more broadly. In addition, further research can also expand the use of technology and other platforms to develop more diverse and effective online learning media.

CONCLUSION

Based on the results of the research and discussion that has been carried out, it can be interpreted that the development of online learning media using Google Sites can improve students' abilities in terms of material understanding and practical skills. This can be an effective alternative for distance learning during the COVID-19 pandemic. This research also shows that the use of technology that students are familiar with can increase their learning motivation. However, it should be noted that the use of online learning media does not completely replace the use of offline learning media. Both have their own advantages and disadvantages and can be selected according to the needs and existing learning context.

This research has limitations in terms of the sample used, which is only limited to students of certain majors at one university. Therefore, it is suggested to conduct further research with a larger and more diverse sample to generalize the results of this study more broadly. In addition, further research can also expand the use of technology and other platforms to develop more diverse and effective online learning media.

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