Jurnal Iqra'
Kajian Ilmu Pendidikan

E-ISSN: 2548-7892 & P-ISSN: 2527-4449

Volume 8, Number 2, December 2023

The Effectiveness of Using Microsoft Office Sway Media on Students' Digital Literacy

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ARTICLE INFO
Article history:
Received
December 14, 2022
Revised
September 05, 2023
Accepted
Noember 27, 2023

ABSTRACT

Microsoft office sway is a learning media that is a presentation tool, created and played online. The following research was conducted to know the effectiveness of sway on student digital literacy in online learning after the covid-19 pandemic. This research is quantitative research with a quasi-experimental method. The design used is the Nonequivalent Control Group Design. In this study, the population used was 4th-semester students of the PGSD UNIPMA study program. The sampling technique used in this research is purposive sampling. The sample used in this study was 30 students in the experimental class and 30 in the control class. Furthermore, the instruments used in this study were tests and questionnaires. Test the hypothesis in this study using the t-test. Based on the research activities, it was found that the Microsoft Office Sway media was effective on students' digital literacy.

Keywords: *Digital Literacy, Microsoft Sway, Online Learning*

Journal Homepage http://journal.iaimnumetrolampung.ac.id/index.php/ji/

INTRODUCTION

The development of technology and information has brought students as the current generation to enter the world of digital literacy. The current development of technology and information is expected to be able to spur students to better utilize digital literacy in the academic field. One of the advantages that can be taken from the development of technology and information is that students can access educational information that is more up-to-date. Activities can be carried out by utilizing digital media, such as computers, laptops, or smartphones connected to the internet network that can be easily accessed by citizens in the world of education. Students in this era of cyber society like to access information sites on the internet access online games to use social media and applications that facilitate friendship in sophisticated gadgets. Today's student life is like incomplete if you don't carry sophisticated gadgets.

Student needs for digital media are increasingly becoming a primary need. Digital media can be created, viewed, communicated, modified, and stored on digital electronic devices such as: software, digital images, videos, web pages, websites, social media, digital data, digital audio, and E-books (Aslan & Shiong, 2023; Baryanto et al., 2023; Indriyani & Munajah, 2022; Parwata et al., 2023). Digital media technology covers the basic skills needed in the digital media industry (Reed & Mcgrew, 2019). Students have a high dependence on always looking for information on the internet. However, the lack of knowledge about digital literacy is a serious obstacle in its application.

Digital literacy is a series of media literacy movements designed to increase individuals' control over the media they use to send and receive message, (Argawati & Suryani, 2020; Mega, 2022). Digital literacy is the ability to understand and use information in various formats, (Spires et al., 2018;). Digital literacy is a condition of internet and social media access. Yahya, 2019 stated that digital literacy is one of the components in computer, Internet, telephone, PDA and other digital equipment skills. Digital literacy refers to an effort to recognize, search, understand, assess and analyze and use digital technology. Competence to take advantage of the digital world (digital competence) is called digital literacy, (Spante et al., 2018; Rusydiyah et al., 2020).

In the implementation of the student's inability to define ICT as the ability to locate, evaluate, and use the required information appropriately. Furthermore, the use of gadgets and telecommunication devices for students is only limited to playing games and accessing social media, reading posts on social media, and not infrequently sharing (reposting) a post without knowing with certainty the elements of truth in it. In addition, the facts about students who access the internet through the provided wifi network have not been able to correctly place, evaluate, and use the information needed from the internet, all information presented on the internet is assumed to be true. Students use the internet to play games and access their respective social media.

Digital literacy is very important for students in the lecture process during the Covid-19 pandemic. The importance of digital literacy skills so that someone is able to use cognitive and technical skills in utilizing technology appropriately. In addition, by having good digital literacy skills, it is hoped that someone can convey messages or information to others as well as collaborate and contribute to this learning.

The learning process carried out during the Covid 19 pandemic provided many changes to every teaching and learning activity. The learning system is usually carried out face-to-face, but as a support effort in breaking the chain of Covid-19 spread, learning is carried out online or remotely. Online learning connects students with separate learning resources to be able to communicate, interact and collaborate, (Spires et al., 2018). Online learning creates independence for students in building knowledge and collaboration by utilizing internet media and digital classes, (Kurniawati et al., 2019). Lecturers and students inevitably have to adapt to new learning patterns, all of which require the use of technology in the learning process. Digital literacy plays a role in the ability to access various quality learning resources. During the pandemic, students have limitations in accessing information sources on campus, so that the sources of information that may be accessed are online-based. Online sources of information that are rich in information, require students to be able to access quality information, as an information supplement for online learning that is followed. The ability of lecturers and students in conducting online learning is very decisive in the success of online learning. Good learning is learning that provides opportunities for educators to get many experiences that are useful for their daily lives (Kostiainen et al., 2018; Ghufron & Hardiyanto, 2017). The innovation of a learning is very dependent on the creativity of educators/lecturers (Hartini et al., 2017). Learning innovation is the novelty of educators in changing learning styles and methods(Marshall & Marshall, 2003). Learning innovation can reduce the work of educators in the academic field (Buitendijk, 2017).

The number of problems that arise because of digital learning as stated in the results of previous research. Research (Cahyani & Jayanta, 2021; Santos & Serpa, 2017) mentions that there are still many students who use the internet as a source of doing academic assignments. The success of the digital literacy assessment is based on the

criteria for completing the task and the time required (Spires et al., 2018; Rusydiyah et al., 2020). The difference between this research and the research that researchers are conducting is that this study aims to determine the effectiveness of using Microsoft office sway on student digital literacy.

The success of the learning objectives can be influenced by the learning media used. Learning media can also stimulate thoughts, attention, feelings, and abilities in learning skills, (Musthofiyah et al., 2021). Media and facilitate interaction between educators and students so that learning is more effective, (Buitendijk, 2017). Learning media has a very important role in supporting the learning process, (Khoiriyah & Sari, 2018; Musthofiyah et al., 2021). Therefore, researchers use Microsoft Office Sway as a learning medium in lectures to improve students' digital literacy. Microsoft Office Sway is a software developed by Microsoft to make presentations easy but attractive. Microsoft office sway is an application that has a variety of attractive templates that have been provided to choose from. In addition to being able to type in course material, Microsoft Sway can also add photos, videos, or links to certain websites to support learning. Giving practice questions can also be easier because Microsoft Office Sway can also be connected to Microsoft Forms to take quizzes or practice questions.

METHOD

This research is a quantitative research using a quasi-experimental approach. In this study, the design used was pretest-posttest control group design research design. This research was conducted on PGSD students in Indonesian language courses at the PGRI University of Madiun. The sampling technique used in this research is random sampling. The instruments used in this research are tests and observations. The test is used to measure and find out how effective the use of Microsoft Office Sway is for students' digital literacy in online lectures after the COVID-19 pandemic. The data analysis technique used statistical techniques, namely the normality test and the T-test homogeneity test in this study using the Independent Samples Test formula. Furthermore, the N-gain test was used to measure the difference between the pretest scores and the post-test scores obtained in each class.

RESULT AND DISCUSSION

Digital literacy ability was measured using instruments in the form of pretest and posttest in the form of description questions consisting of 10 numbers.

Table 1. Digital Literacy Ability Data Statistics

Statistic	Class Experiment I		Class Ekxperiment II	
	Pretest	Posttest	Pretest	Posttest
Average	35,75	78,35	25,34	84,15
Standart Deviation	12,65	14,05	13,15	9,95
Modus	25,00	65,00	25,00	85,00
High Score	50,00	80,00	50,00	90,00
Low Score	3,00	50,00	4,00	60,00

The table below presents the statistical value of the experimental class I, namely the class that applies Microsoft Sway media and the experimental class II that applies Elma's media.

The comparison of digital literacy ability of experimental class I and experimental class II is seen from the average score of each aspect of digital literacy ability on the pretest and posttest results of experimental class I and experimental class II as shown in the table below.

Table 2. Average of Every Aspect of Digital Literacy Ability

No	Aspects of digital literacy skills	Average of Each Indicator			
		Class Eksperiment I		Class Eksperimen II	
		Pretest	Posttest	Pretest	Posttest
1	Ability to search the internet	55,14	85,36	40,35	80,43
2	Ability in hypertext directional aspects	17,38	80.25	19,56	82,67
3	Ability to evaluate aspects of information content	20,23	89,89	16.45	87,12
4	Ability in the aspect of compiling knowledge	28.33	90,65	22,15	89,70
Average		**23,18**	**86,53**	**20,51**	**84,98**

Based on the table, it can be seen that the average digital literacy ability pretest score in the experimental class I and experiment II on each indicator is below 75. The average posttest score for digital literacy skills of students in the experimental class II is higher than the experimental class I. Each indicator The questions in the experimental class II have more than 75, in contrast to the experimental class I there are still indicators with an average value below 75. Furthermore, student responses were measured using a questionnaire instrument with four alternative answers, namely strongly disagree (STS), disagree (TS), Agree (S), and Strongly Agree (SS). The questionnaire consists of 14 statement items. Questionnaires were given to students before and after treatment. The results of the analysis of student responses to learning using Microsoft Sway media.

Based on the data above, it was found that students were happy and enthusiastic about digital literacy by using Microsoft Sway media in media lectures and teaching materials development. The results obtained by students' responses using the Elma media were 58.54% and in the experimental class II using the Microsft sway media was 73.3%. As for some students who responded that learning activities using Microsoft sway media is a new thing. Students have great interest in participating in learning activities using Microsoft sway media in media lectures and the development of teaching materials, this can be seen from the responses given by students. Furthermore, the first prerequisite test is the normality test, the normality test is carried out on each experimental class treated using Microsoft Sway media and Elma media. Results The results of the normality test of experimental class data can be seen in the following table.

Table 3. Normality Test Results for Control Class and Experiment Class

Class	Signifikansi	Test Result	Decision
Pretest Class Eksperiment I	0,275	0,275 > 0,05 H_0 recieved	Normal Distributed Data
Posttest Class Eksperimen I	0,115	0,115 > 0,05 H_0 recieved	Normal Distributed Data
Pretest Class Eksperiment II	0,272	0,272 > 0,05 H_0 recieved	Normal Distributed Data
Posttest Class Eksperimen II	0,321	0,321 > 0,05 H_0 recieved	Normal Distributed Data

The next prerequisite test is the homogeneity test. The results of the homogeneity test of the experimental class can be seen in the following table.

Table 4. Result of Homogeneity Test of Control Class and Experiment Class

Test	Significance	Test Result	Decision
Class Eksperiment	0,532	0,532 > 0,05 H_0 recieved	Homogeneous Data

After doing the normality test and homogeneity of variance test so as to get the results of data that are normally distributed and the variances are homogeneous. The next requirement is hypothesis testing using t-test with the following results.

Table 5. Independent Sample Test

Treatment	**$T_{arithmetic}$**	**T_{table}**	**Conclusion**
Microsft Sway media	7,453	2,001	H_0 was rejected / H_1 accepted

From these data, it can be obtained that the significance level of the experimental class given treatment using Microsft Sway media is 0.000. The value of the T test on these results is 7.453. The data obtained from the results of the pretest and posttest were processed using SPSS.18 software.

DISCUSSION

Based on the results of the research above, it is concluded that the use of Microsoft Office Sway is effective for students' digital literacy. In classroom learning activities, the lecturer acts as a facilitator who can facilitate students in learning through the Microsoft Office Sway learning media. The use of Microsoft Office Sway media in the learning process has a positive impact on the implementation of learning activities. In learning activities, students seem to have good enthusiasm when participating in learning activities using the Microsoft Office Sway. Students also seem to have good creativity and broad insight in achieving a deep understanding of the material presented.

Microsoft Office Sway is a platform developed by Microsoft which contains educational content that can be used to access materials, assignments and grades to help an effective learning process. is a social networking-based platform that resembles a blogger in which there are various educational content to access assignments and grades in addition to being useful for lecturers and students to make teaching and learning activities more effective, efficient and organized. Learning activities carried

out online require facilities that support the presentation process. Based on these needs, Microsoft Office Sway can be used as an effective learning medium in increasing digital literacy in students. Microsoft Sway is a product from Microsoft which is a digital story telling application that can be used to create presentation materials, summaries and other interesting documents. Everyone can use the sway app. Educators can make teaching materials, provide complete material for parents, provide a means of storytelling for students, and so on. Based on the results of hypothesis testing that have been discussed previously, it is concluded that Microsoft Sway media is effective against digital literacy in media lectures and teaching materials development. Based on the calculation results of the t-test analysis in the experimental class, it can be seen that the value of tcount = 7.453. The results of this calculation are then consulted with ttable = 2,000 for 5% with dk = 34, if tcount = 7,453 > ttable = 2,000, it means that there is an effect of using Microsoft Sway media on students' digital literacy.

Digital literacy is the ability to use technology and information from digital devices both offline and online effectively and efficiently in academics, careers and daily life. digitally effectively and efficiently, (Argawati & Suryani, 2020; Alea et al., 2020). Digital literacy is needed so that people have a critical attitude in responding to any information and interactions that exist. The public needs to be educated regarding the rules and ways of playing that are used when they use social media in their daily life, (Yustika & Iswati, 2020; Buitendijk, 2017). Digital literacy is the ability to efficiently and accurately use digital information technology and information obtained in various contexts, such as academic, career, or everyday life, (Shavab, 2020).

Based on the results of the research above, it can be concluded that the use of Microsoft Office Sway is effective for student digital literacy. In learning activities in class, the lecturer acts as a facilitator who can facilitate learning through Microsoft office sway learning media. The use of Microsoft office sway in the learning process has a positive impact on the implementation of learning activities. In these learning activities students appear to have high enthusiasm when participating in learning activities using Microsoft Office Sway media. Students appear to have good creativity and broad insight in achieving a deep understanding of the material presented. This research is supported by research results which state that the use of Microsoft office sway media is effective and can be used properly. In addition, it is also supported by research results which show that Microsoft sway media is effective for higher order thinking skills (Ika Zutiasari and Kuncahyono, 2021;Yuanta, 2021; Baihaqi, 2020; Wiryanto, 2022; Anggit Merliana, 2021; Kirana, 2022; Rulviana dan Dian, 2022;). Based on this research, the difference between the research that the researchers conducted and the supporting research lies in the variable, namely digital literacy.

Supported by research conducted (Rosidah, 2021) states that the results of using Microsoft 365 in online learning contribute to increasing student literacy. The difference between this research and the research that the researchers did was the subject. In this study the subject was students. Furthermore, research conducted (Nadya et.al, 2022) stated that the use of SPI media had an effect on digital literacy and student learning outcomes on biodiversity. Based on this research, it was found that digital-based media can have a positive effect on students' digital literacy. The difference between this research and the research that researchers did was in the media used. In this study using SPI media and in this study using Sway. Subsequent supporting research, namely that carried out by (Nurcahyo, 2020) which obtained the result that interactive media had an effect on students' digital literacy. The similarity of

this research with the research that the researchers did was that they both used digital-based media on student literacy, but the difference between this research and the research that the researchers did was in the media used.

Based on the results of this research, theoretical and practical implications can be put forward. Theoretically, the use of Sway media is effective for students' digital literacy skills. Whereas practically the results of this study can be used as input for educators to improve or innovate using digital-based media to increase digital literacy in students.

In this study there are still limitations, but with the existence of a limitation it is hoped that improvements can be made for further research. The limitation in this research is that it only examines digital literacy. In addition, this study only involved a limited number of subjects, namely 70 students. So the results cannot be generalized to a larger group.Through the results of the research above, there are several recommendations for further planning and research. The use of Microsoft sway media is effective for students' digital literacy skills. Based on the results of this study, future researchers are expected to be able to use digital-based media, especially Microsoft sway, which is effective in literacy skills, especially digital.

CONCLUSION

The results of the following research can be concluded that the use of Microsoft Office Sway is effective for students' digital literacy in post-covid 19 online lectures. Skills that must be mastered along with the development of era 5.0 require efforts to increase digital literacy. Digital literacy skills need to be honed and cultivated to become a need that is embedded in students.

ACKNOWLEDGEMENT

This research can be a support for lecturers and tertiary institutions to be able to carry out effective technology-based learning following existing developments.

AUTHOR CONTRIBUTION STATEMENT

The following research article manuscripts were compiled with the cooperation of Vivi Rulviana who was in charge of writing the manuscript, Dian Permatasari Kusuma Dayu as evaluator and Diyan Marlina as translator of the manuscript from Indonesian to English.

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