






Analysis of Factors that Influence Student Preferences for Online Learning

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ABSTRACT

Background. Online learning is a learning system that is not conducted face-to-face between teachers and students. Preference is a tendency made for one thing compared to another. Therefore, one's view on online learning will also vary. The quality and quantity of learning materials that are in accordance with the curriculum, standards, competencies, and student needs will differentiate students' preferences for online learning.

Purpose This research aims to find out the reasons why students prefer online learning or not, and also to find out the factors that significantly influence the effectiveness of online learning. On the other hand, to analyse the appropriate strategy used in the use of media so that it is suitable for learning and can also be accessed by all individuals.

Method. The method used in this research is quantitative. A method in which data is collected in the form of testable numbers. The data obtained is the number of responses. The data is obtained from the distribution of questionnaires containing questions regarding the analysis of factors affecting students' preferences for online learning. The statement presented in the questionnaire is a form of google form. The data will be processed through the oneway anova test on the SPSS application which was previously imported into excel.

Results. The result of this study states that online learning can be done in schools. Online learning is also a way of learning without face-to-face in sharing information or communicating. Online learning has advantages and disadvantages depending on various factors that influence students' preferences for online learning. In addition, it also provides a strategic overview for teachers and students of the situation and what things will be prepared later.

Conclusion This research can be concluded that the preference or choice of each student is different depending on how he/she views the subject. Online learning can be run effectively with good cooperation. Online learning will be implemented if there is support from all parties, be it students, teachers, parents, and even schools. Adjustment in learning is also easier for female students than male students.

KEYWORDS

Analysis, Online, Preferences

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INTRODUCTION

Analysis is the process of understanding, explaining, or breaking down something by dividing it into smaller



pieces (Abuhassna, 2022, 2022; Al-Azzam, 2020; Almendingen, 2021). So that we can know the relationship between one and the other. Analysis of factors influencing students' preference for online learning is the process of identifying and evaluating various factors that will be able to influence the choice of students to take part in online learning (Bhagat, 2019; Bhaskaran, 2023; Bontchev, 2020). Online learning that is often carried out during covid 19 provides different views from teachers and students. This is because some teachers and students feel that they do not understand the learning material and some enjoy learning with this pattern (Alonso-García, 2021; Ariffin, 2021; Banks, 2022). Online learning that can be done using various online media will often make it difficult for students and teachers who have limited internet. These factors will affect things related to students' preference towards online learning.

Preference is a person's choice or inclination towards something that is being compared. This will illustrate one's personal values and goals (Bumblauskas, 2021; Cheng, 2020; Gherheş, 2021). The effects of preferences will have psychological and economic impacts. Preferences are often likened to the manifestation of individual interests and well-being. Students' preference for online learning is the choice or tendency of students to follow learning that is carried out indirectly or online through various specific applications (Bouilheres, 2020; Bramer, 2020; Conde, 2020). Students' preference for online learning is influenced by various factors. Starting from the availability and ease of access to facilities and infrastructure, quality and quantity of learning materials. Teachers' ability and skill in using technology, students' motivation, interest and discipline. The condition and situation of each student will influence the choice or inclination towards online learning.

Formal education will require learning. Learning is a process of interaction between teachers and students during the school process in formal places. School as a place to provide knowledge can now be done without face-to-face interaction. Learning is a form of assistance provided by teachers so that the process of acquiring knowledge can occur (Szopiński, 2022; Yu, 2020). This will provide students with mastery of skills and behaviour as well as the formation of attitudes and beliefs. Online learning is learning that is carried out without face-to-face meetings but using introductory media such as computers, the internet, or gadgets. This method will provide opportunities for students and teachers to conduct learning anywhere and anytime without having to be physically present in the classroom or room (Shreaves, 2020; Swartzwelder, 2019). Online learning will require supporting systems and information and communication technology. It requires strategies, methods, media, and evaluations that suit the learners and learning materials.

The research on analysing the factors that influence students' preference for online learning has a deep reason to be researched. This reason is in the form of knowledge of what factors influence students' choice to learn online. It is also supported by the knowledge of the most dominant factor in influencing students' preference for online learning. This statement will affect the quality of online learning implementation. In addition, it will also provide an overview for teachers to know the positive and negative impacts of online learning for students. This research will also help teachers to identify the right strategy, method, and online learning implementation for students. On the other hand, teachers will also analyse how much improvement or decline occurs in the learning process and the quality of learning from students when doing online learning.

Analysing the factors that influence students' preference for online learning will play an important role in improving the quality of education. This analysis will help schools, teachers, parents and students to know the factors that will influence students' choice to learn online. Online learning is no stranger to education. In 2019, the covid 19 outbreak provided a new way of learning so that there was no direct interaction (Limbers, 2021; McWatt, 2021). This factor analysis will give teachers, schools, parents and students an overview of online learning. The non-face-to-face way of

learning will give students and teachers a practical impression. This analysis will help various parties to provide suggestions and recommendations in improving the quality and effectiveness of online learning.

This research makes a significant contribution in analysing the factors that influence students' preference for online learning. Improving the quality and effectiveness of online learning by adjusting the factors that influence students' preferences. It will also be able to increase the positive impact of usage and reduce the negative impact of online learning. This factor analysis will also provide appropriate strategies, methods, media, and evaluation in online learning (Robles, 2019; Sena, 2019; Spencer, 2021). It should also consider student characteristics, compatibility with learning and curricula, and the learning environment. When the use of online learning can be fulfilled well, it will increase student satisfaction and overcome difficulties in online learning. All parties involved can also provide suggestions and recommendations to the implementation of online learning. In this study, the researcher will identify the benefits of online learning to students. In addition, it describes how effective online learning is for students.

This research will provide new innovations from previous research. In the previous research (Al-Mawee, 2021) regarding Student's perspective on distance learning during COVID-19 pandemic: A case study of Western Michigan University, United States (Student perspectives on distance learning during the COVID-19 pandemic: A case study of Western Michigan University, United States). The difference between previous research is on students' perspectives on online learning which focused on the covid 19 period. The difference here appears in the analysis of the factors that influence students' preferences or perspectives on online learning. This difference is more about the form of students' views on online learning. So that it can make students interested in learning online rather than face-to-face.

Considering the reasons, the researcher aims to answer several questions that arise. Firstly, what are the factors that influence students' choice of online learning? Second, what are the positive and negative impacts of online learning for students? Third, what is the level of satisfaction and difficulties experienced by students in online learning? With this study, the researcher hopes that every student or teacher who conducts online learning is able to maximise the use appropriately and correctly. In addition, hopefully this research will be able to provide assistance and contribute in facing and identifying problems, obstacles, challenges, and impacts caused by the implementation of online learning. Furthermore, hopefully this research can be taken into consideration for further research. Hopefully, further research can explore the discussion of this research. On the other hand, thank you to all parties who have taken part in this research.

RESEARCH METHODOLOGY

Research Design

This study uses a quantitative research design which is a presentation of data in the form of numbers with a statistical process. The questions inputted were 20 items with a total of 25 respondents. Questions are presented in the form of a questionnaire that will be distributed. The questionnaire is in the form of google form which has been filled in with questions that use good and correct language (Ashraf, 2020; Campa, 2021). So it is easy to understand and the implementation of collecting responses will also be fast. The questions presented are related to the analysis of factors influencing students' preference for online learning. This method is used in order to formulate the results of the questions and the views of the subjects easily. Quantitative method is a way of collecting data in the form of numbers that can be measured. The research stages started with the presentation of 20 questions and the questionnaire form is presented in Google form. The results of the

questionnaire distribution will be managed through SPSS. The researcher will review the highest answer that appears in the statement.

Research Procedure

This study will conduct a series of systematic steps to collect, analyse, and provide an understanding of the data collected. The research starts from asking permission from teachers and students who will be used as subjects. Then each detail of the researcher's question until it reaches the acquisition of filling which is considered to meet the target. On the other hand, researchers use language that is good and easy to understand so that it can be understood by teachers and students. This will make it easier for respondents to respond to questions so that the time used is fairly short. This process will make it easier for researchers to test data and examine various problems faced by teachers in using online learning.

Research Subjects

The subjects of this study were teachers and also selected students from various institutions. The role of the researcher is as a responding data collector who answers questions given to teachers and students. This research will be very important because online learning is a form of adjustment and innovation in the world of education in the digital era. The emergence of the pandemic calls for changes in learning patterns from face-to-face to long-distance. So it has the potential to increase access, affordability, and equality of education for all students without being limited by time and distance. It will also explain the positive and negative effects of online learning.

Research Ethics

Research requires ethics in its implementation, so that there is good communication between researchers and subjects. Ethics in research in the form of norms, manners, behaviour, principles that a researcher holds in carrying out actions during research. The implementation of research ethics will have a positive impact on researchers. This will make it easier for researchers to conduct research and also collect information. In addition, there is a sense of security and comfort in conducting research so that information is conveyed and received easily. This will speed up and save time used. This access contains consent and permission from individuals to conduct research. The data collected will be kept safe from being recognised as someone's property. The research is conducted fairly without favouring any individual. This research also does not impose its will on the subject so that there is no sense of threat. In addition, the researcher gives appreciation to all those who have helped in the implementation of the research.

Data Collection Technique

The data collection process in this study uses the help of google from which aims to provide convenience in answering and recapitulating all answers easily. In addition, it will also be able to save time, energy, and costs. This is because google form is shared in the form of a link on the research subject's whatsapp. The collected data will be entered into a table with the form of responded results using percentages on each statement. These results are then also inputted into excel in the form of numbers to go to the next stage. The next stage is to enter the data into SPSS to facilitate the data processing process. The purpose is to show the response of the subject to the analysis of factors affecting students' preference for online learning.

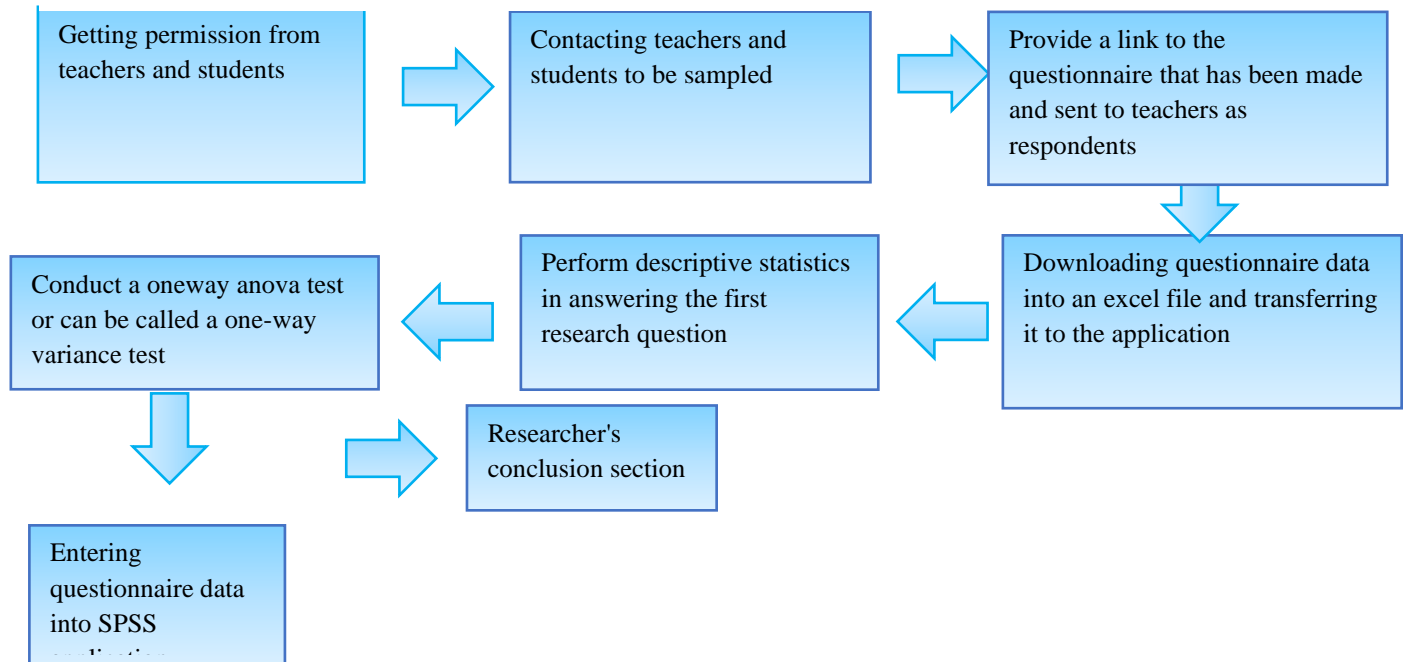
Table 1 Sample Population

NO	Department of	Number of Participants	Percentage
1.	Teacher	10	40%
2.	Students	15	60%

Table 1 Rincian Sampel Penelitian

No	Choice Category	Tier Number
1	Strongly Agree (5)	>90%
2	Agree (4)	70-80%
3	Disagree (3)	50-60%
4	Strongly Disagree (2)	0-40%
Total		100%

Figure 1 Data collection and data analysis tools



RESULT AND DISCUSSION

Online learning is learning that is conducted without face-to-face meetings between teachers and students. Online learning can be done by utilising information and communication technology. For example, the internet, social media, applications, and specialised platforms in delivering materials and interacting with students. Analysing the factors that influence students' preference or inclination towards online learning is the reason why students prefer or do not prefer online learning. Learning certainly has advantages and disadvantages compared to face-to-face learning. Online learning has various benefits. Starting from practical, flexible, efficient, up to date, and can develop the skills and independence of learners. However, online learning also has disadvantages, such as limited infrastructure, lack of social interaction, concentration and motivation problems, and academic cheating.

Table 3 Teachers' responses to the analysis of factors influencing students' preference for online learning

NO	Question	SS (%)	S (%)	TS (%)	STS (%)
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1	The quality factor of online learning content strongly influences students' preference for online learning	60%	40%	0%	0%
2	The level of interactivity of online learning platform can be a key factor in attracting students' interest	27%	73%	0%	0%
3	The availability of adequate online resources can increase students' preference for online learning	40%	53%	7%	0%
4	Time flexibility in online learning is one of the significant factors for student preference	47%	47%	6%	0%
5	Strong technical support from platform providers can help influence students' preference for online learning	47%	47%	6%	0%
6	Personalisation of online learning can help students feel more engaged and motivated	40%	60%	0%	0%
7	Stable internet connection factor is very important in creating a good online learning experience for students	53%	47%	0%	6%
8	Clarity of instruction and navigation in online learning platform can increase students' preference for online learning	53%	47%	0%	0%
9	Adequate and understandable use of technology can help increase students' satisfaction with online learning	47%	53%	0%	0%
10	Adequate support and training for teachers in implementing online learning can help optimise student preferences	40%	60%	0%	0%

The explanation from the table above is the response of teachers to the statement regarding the analysis of factors that influence students' preference for online learning. The question with the highest response states that the quality of online learning content greatly influences students' preference for online learning with 60% strongly agreeing and 40% agreeing. This is because good and correct content will make students more interested, understand, and motivated to pay attention and learn. Online learning content is a material, media, and method used in online learning. So as to produce efficient and effective learning to be done. The content must also be in accordance with the objectives or curriculum in learning. On the other hand, it must also be interesting and varied, such as using pictures, videos, words, or other media. As an evaluation material, of course, it requires practice questions and various examples of questions to hone students' abilities according to the needs and characteristics of students.

Table 4 Student responses to the analysis of factors influencing student preferences for online learning

NO	Question	SS (%)	S (%)	TS (%)	STS (%)
1	The availability of interesting online learning materials affects students' preference for online learning	40%	60%	0%	0%

2	The interactivity factor in the online learning platform can help students to be more enthusiastic in learning	40%	60%	0%	0%
3	Ease of access to online resources is an important factor in determining students' preference for online learning	53%	47%	0%	0%
4	Flexibility of online learning time makes students prefer online learning	47%	40%	13%	0%
5	Fast and efficient technical support from the platform provider helps improve students' online learning experience	47%	53%	0%	0%
6	Students are more motivated to learn online when learning materials can be customised to their needs	53%	47%	0%	0%
7	A stable internet connection is necessary for students to learn effectively online	60%	40%	0%	0%
8	Clear instructions and easy navigation in online learning platforms make students more comfortable learning	53%	47%	0%	0%
9	The use of user-friendly technology helps students feel more comfortable in online learning	53%	40%	7%	0%
10	Support and guidance from teachers in using the online learning platform help increase students' preference for online learning.	53%	33%	14%	0%

The table above is the result of students' responses to the analysis of factors that influence students' preferences for online learning. The question that has the highest response is on the item stable internet connection is needed so that students can learn effectively online with the acquisition of responded strongly agree 60% and agree 40%. This is because the media used in online learning uses the internet. If the internet is not stable, there will be various disruptions in the learning process. A stable internet connection will make it easier for students to access online learning materials, media, and applications smoothly and without interruption. With a stable internet connection, it will be easier for students to interact with teachers and classmates in real time through video conferencing or chat. The evaluation in online learning requires a stable internet connection to avoid missing information. So that students can take online evaluations and tests accurately and honestly.

Table 5 Teachers' responses to the analysis of factors influencing students' preference for online learning through oneway anova test.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
X.1	Teacher	2.500	4	.625	.	.
	Guru	.000	5	.000		
	Total	2.500	9			
X.2	Teacher	1.100	4	.275	1.375	.361
	Teacher	1.000	5	.200		
	Total	2.100	9			

X.3	Teacher	1.600	4	.400	4.000	.080
	Teacher	.500	5	.100		
	Total	2.100	9			
X.4	Teacher	3.100	4	.775	7.750	.023
	Teacher	.500	5	.100		
	Total	3.600	9			
X.5	Teacher	2.400	4	.600	.	.
	Teacher	.000	5	.000		
	Total	2.400	9			
X.6	Teacher	1.600	4	.400	4.000	.080
	Teacher	.500	5	.100		
	Total	2.100	9			
X.7	Teacher	1.600	4	.400	4.000	.080
	Teacher	.500	5	.100		
	Total	2.100	9			
X.8	Teacher	2.400	4	.600	.	.
	Teacher	.000	5	.000		
	Total	2.400	9			
X.9	Teacher	1.600	4	.400	4.000	.080
	Teacher	.500	5	.100		
	Total	2.100	9			
X.10	Teacher	1.600	4	.400	4.000	.080
	Teacher	.500	5	.100		
	Total	2.100	9			

The table above is a sample of responses from teachers that have been processed into SPSS. Total Sum of squares 2,100, df 9, mean square 0.400, F 4,000, and sig 0.080. This is found in the statement that adequate support and training for teachers in implementing online learning can help optimise student preferences. Support and training can improve teachers' abilities and skills in using online learning tools, platforms, and content that suit students' needs and characteristics. This can increase teachers' motivation and creativity in designing and implementing online learning. Learning can also be carried out in an innovative, interactive and interesting way. It can also improve collaboration and communication between teachers, parents and students in the learning process. Therefore, adequate support and training for teachers can have a positive impact on the quality of online learning outcomes.

Table 6 Students' responses to the analysis of factors influencing students' preference for online learning through oneway anova test.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
X.1	Students	2.433	8	.304	1.564	.301
	Students	1.167	6	.194		
	Total	3.600	14			
X.2	Students	2.933	8	.367	3.300	.082

	Students	.667	6	.111		
	Total	3.600	14			
X.3	Students	2.733	8	.342	2.050	.199
	Students	1.000	6	.167		
	Total	3.733	14			
X.4	Students	6.167	8	.771	3.964	.055
	Students	1.167	6	.194		
	Total	7.333	14			
X.5	Students	3.067	8	.383	3.450	.074
	Students	.667	6	.111		
	Total	3.733	14			
X.6	Students	2.733	8	.342	2.050	.199
	Students	1.000	6	.167		
	Total	3.733	14			
X.7	Students	2.600	8	.325	1.950	.216
	Students	1.000	6	.167		
	Total	3.600	14			
X.8	Students	3.733	8	.467	.	.
	Students	.000	6	.000		
	Total	3.733	14			
X.9	Students	5.233	8	.654	7.850	.011
	Students	.500	6	.083		
	Total	5.733	14			
X.10	Students	7.100	8	.888	10.650	.005
	Students	.500	6	.083		
	Total	7.600	14			

In the table above is the acquisition of responses from students to the analysis of factors that influence students' preferences for online learning. The total sum of squares is 7,600, df 14, mean square 0.888, F 10,650, and sig 0.005. This statement regarding support and guidance from teachers in using online learning platform helps to increase students' preference for online learning. This is because it will help students overcome technical difficulties, such as internet connection, devices, or applications used. Support and guidance from teachers will help students to understand online learning materials, media, and methods provided by teachers. It will also help to increase motivation, concentration, and independence in learning online. Therefore, guidance from teachers to students is needed to help the effectiveness and efficiency of online learning.

Online learning is an online way of providing material or teaching a learning material through a particular platform or application. It is only done remotely without face-to-face learning. Online learning will utilize technology in the form of computers, gadgets, internet, social media, applications, and many more. It is used to access learning materials anywhere and anytime. But even though it looks easy, practical, flexible, efficient, up to date, online learning still has a negative side. The difficulty of internet quota or even internet access at some points will be an obstacle to the running of this online learning. Students have a preference or choice to implement online learning or not. This is also influenced by several factors such as gender, ease of operating the online learning platform, understanding of online learning materials.

Once considered, gender affects the effectiveness of online learning. Women will adapt to online learning more easily than men. This is due to the tendency of discipline, thoroughness, and responsibility in doing online tasks by female students. In addition, it is easy to operate online learning platforms such as zoom, classroom, and many others. This is supported by complete facilities ranging from laptops, gadgets, the internet, or things related to technology. Students who have an understanding of online learning materials will be more enthusiastic and achieve more than other students. This is because the material will not make students confused or not understand. This understanding is influenced by the quality of the material, delivery method, interaction, and feedback provided by the teacher.

Content presentation in online learning must pay attention to quality factors. This will affect students' preference towards online learning. Content that is presented attractively, well, in accordance with learning and curriculum will make students more enthusiastic. This will increase students' interest to learn and be motivated in learning. Quality content has the characteristics of being relevant to the learning material, using pictures, words, varied, and using other media. In addition, the content provides sample questions and also learning evaluations. So that it will be in accordance with the needs and characteristics of students to improve students' understanding and skills. If the content in online learning does not meet these criteria, there will be boredom, wrong material, and even confusion for students when learning. This will have a negative impact on learning outcomes and student achievement during online learning.

Online learning requires a stable internet that can be used anytime so that students can learn effectively online. A stable internet connection will help students to access online learning materials, media and applications smoothly without interruption. This will make it easier for students to interact with teachers and classmates easily. It will also allow students to take evaluations and learning tests honestly and accurately. If the internet connection is unstable, there will be various obstacles in learning which will result in decreased learning outcomes. The support and training provided will help improve the ability and skills of teachers and students in using the tools as media. Support and training can increase teacher motivation and creativity in designing and implementing innovative, interactive and engaging online learning.

CONCLUSION

Online learning is a solution when offline or face-to-face learning is not possible. Online learning will utilize information and communication technology, such as the internet, social media, applications, and special platforms. It is used to deliver learning materials, interact between teachers and students, students and their classmates, as well as students and teachers with learning materials. These media can also be used to provide sample questions, practice questions, and even learning evaluations. Online learning has several advantages in terms of practice, flexible, efficient, up-to-date, and can develop skills. It also makes students independent in learning at home or not in class. However, online learning also has disadvantages or weaknesses. Infrastructure limitations, lack of social interaction, concentration problems, motivation, and even potential academic fraud.

There are several factors that influence students' preference for online learning. Gender is one of these factors, female students will be more likely to be adaptable than male students. The ease of operating the online learning platform will make students enthusiastic in implementing online learning. In addition, facilities such as internet, gadgets, and other media will help students' skills and knowledge in using technology. Understanding of the learning material will make students more enthusiastic and accomplished. So that they do not experience confusion in learning.

AUTHORS' CONTRIBUTION

Author 1: Review; Editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

Author 4: Conceptualization; Project administration.

Author 5: Validation; Writing.

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