

THE MEDIATION ROLE OF ONLINE LEARNING MOTIVATION ON THE USE OF SOCIAL MEDIA ON STUDENT LEARNING SATISFACTION

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Abstract

Learning by utilizing technology is nothing new in the world of Indonesian education. Apart from that, mastery of technology among students also enables high internet use, one of which is social media. This research aims to analyze the influence of the use of social media (Social Media Utilization) on student satisfaction (Student Satisfaction) at State Vocational Schools in Gianyar Regency, Bali Province, Indonesia. This research method uses a quantitative approach, ex post facto type. The research sample was 345 respondents, there were 28 vocational schools in Gianyar district consisting of 8 public vocational schools and 20 private vocational schools as research locations. Based on the data, it shows that there is a significant influence of social media use on learning satisfaction of 0.031. This research concludes that the quality of educational services has a significant effect on online learning motivation, the higher the quality of educational services will have an effect on increasing online learning motivation, and the use of social media does not have a significant effect on online learning motivation, the higher the intensity of social media use cannot influence increasing motivation. online learning. However, the use of social media has a significant effect on learning satisfaction. The novelty of this research shows that the higher the intensity of social media use, the greater the influence on learning satisfaction.

Keywords: Motivation, Online, service quality, Social Media, Pedagogy, Learning satisfaction

Introduction

Education is the most important thing for all countries to develop quickly (Muchtar & Suryani, 2019). The mission of education is to support national development in the broadest sense, developing skilled human resources who will acquire knowledge and technology by development needs. Increasing individual potential as human resources who contribute to the empowerment of society and the nation is the essence of the educational process. Problems can arise from input, process to output. Curriculum problems are substantive problems, while the practice and implementation of education are technical problems. The Covid-19 pandemic poses new challenges for education in Indonesia. Since the spread of the Covid-19 pandemic in March 2020 in Indonesia (Usui, 2021).

One study showed that student motivation to learn is strongly related to student dropout rates, determination, motivation, and commitment to completing an online degree, and success rates (Raheem, 2017). Other studies show that understanding what influences students' perceived learning helps educators to improve the quality of online learning in elements such as instructional design, delivery, and evaluation, to ultimately improve the student learning experience. (Irawati &

Jonathan, 2020). Additionally, the literature review confirmed a strong relationship between participants' satisfaction and autonomous motivation with their technology use (Wibawa, 2017). The findings also reveal that perceived satisfaction is influenced by the quality of the course, its production value, and its effectiveness (Irawati & Jonathan, 2020). Another study that is used as a reference is a study that shows that the perceived usefulness and convenience of a type of technology determines the behavioral intention to use it (Judge, 2018).

All parties undergoing distance or online learning experience panic, both teachers and students, technical problems are one of the many obstacles and problems in the online teaching and learning process. The technical problems encountered usually range from quota and signal constraints to application constraints, including the large number of tasks given during the Covid-19 pandemic (Udin, 2020). Therefore, in fact, in general, they are not yet ready to carry out distance or online learning, especially as many students complain about failing to understand the material presented online. This is considered normal because both students and teachers do not have the transition and ability to adapt from learning like this.

There are at least three factors that influence students' ability to complete online learning, namely external, internal and contextual factors. Some external factors include time constraints, family pressure, lack of support in the surrounding environment and financial problems. This is related to the context of students' mentalities who have constraints and demands regarding the tasks they are given continuously. This may also affect the psychological aspects of the student. Apart from that, there are also internal factors related to discipline in managing time, this is also related to how students can prepare their discipline to focus on their learning. Meanwhile contextual factors are more likely to be application media that is not user friendly, lack of mastery of the use of technology, feelings of isolation due to having to learn independently and lack of a structured presence that can guide you directly (Annisa Putri & Rino, 2023) (Kedia & Mishra, 2023).

These three factors greatly influence distance or online learning activities, of course this also influences later learning assessments. Therefore, the effectiveness of learning programs is not only viewed in terms of the level of learning achievement, but must also be viewed in terms of the processes and facilities used. The effectiveness of a learning method is a measure related to the level of success of a learning process. With this, whether a learning process is successful or not can be seen from the student's satisfaction in seeing the facilities used and comfort in applying the learning method. Because student comfort and satisfaction in conducting online learning will have an impact on students' ability to understand learning (Zheng et al., 2020).

So the problem that can be discussed in this research is how to describe the role of online learning motivation (Online Learning Motivation) in mediating the influence of social media use (Social Media Utilization) on student learning satisfaction (Student Satisfaction) at State Vocational Schools in Gianyar Regency, Bali Province?

Literature Review

The development of this research also raises variables that are antecedents of students' online learning motivation, namely perceived service quality. In addition, the variable social media use (Social Media Utilization) is tested to see its role as a determinant of online students' motivation to study online, considering the intensity The use of social media among teenagers is high, this is the second update in this research. This research explains the influence of service quality (Perceived Service Quality), use of social media (Social Media Utilization) on student learning satisfaction with student motivation to study online as mediation(de Jong et al., 2021)(Sun et al., 2023).

The learning system is not carried out face to face, but uses a platform that can help the teaching and learning process carried out even remotely.

Online learning is one way to overcome educational problems regarding the implementation of learning. The definition of online learning is a learning method that uses an interactive model based on the Internet and a Learning Management System (LMS). Such as using Zoom, Google Meet, Google Drive, and so on. Online activities include webinars, online classes, all activities are carried out using the internet and computer networks (Simanihুরু et al., 2019).

The characteristics of students in online learning activities are (Hasanah et al., 2020)(Indriani, 2021): (1) Eager to learn: Student enthusiasm during the learning process is strong or high for independent learning. When learning online, the criteria for complete understanding of the material in learning are determined by the students themselves. Knowledge will be discovered by themselves, and students must be independent. So that the independence of each student's learning makes the difference in learning success different; (2) Literacy towards technology: apart from independence in learning activities, the level of students' understanding of the use of technology. When online learning is one of the successes of conducting online learning. Before online learning, students must master the technology that will be used. The tools commonly used as a means of online learning are computers, smartphones or laptops. Technological developments in the 4.0 era have created many applications or features that are used as online learning tools; (3) Interpersonal communication skills: in these characteristics students must master communication skills and interpersonal skills as one of the conditions for success in online learning. Interpersonal skills are needed to establish relationships and interactions between other students. As social creatures, we still need interaction with other people even though online learning is carried out independently. Therefore, interpersonal skills and communication skills must continue to be trained in social life; (4) Collaborate: understand and use interaction and collaboration learning. Students must be able to interact with other students or with lecturers in a forum that has been provided, because in online learning it is the students themselves who carry it out. This interaction is needed especially when students have difficulty understanding the material. Apart from this, interaction also needs to be maintained in order to train their social spirit. So that the spirit of individualism and anti-socialism is not formed within students.

As technological advances enable greater connectivity among learners, contemporary learning theories, particularly social constructivism, have increasingly informed teaching and learning practices in online distance learning contexts. Constructivist principles that include the

concepts of collaboration, interaction and dialogue, where context and the situated nature of learning are integral considerations, have proven to be an important foundation in the development of successful online learning communities. Motivation has been identified as a key factor in developing and maintaining a sense of community as well as learning and achievement in online contexts. The concept of motivation is very closely related to engagement and motivation must be ensured in order to achieve student engagement). Among the challenges that come along with online education is the lack of instructors with online teaching experience. Instructor presence, that is, teaching practices that can be observed by students usually in a live setting, is an important factor that determines student motivation in the virtual classroom(Nikolopoulou et al., 2021).

Middle and junior high school students, use social media to connect with each other on homework and group projects. For example, Facebook and similar social media programs allow students to gather outside of class to collaborate and exchange ideas about assignments. Some schools are successfully using blogs as a teaching tool, which has the benefit of strengthening skills in English, written expression, and creativity (O'Keeffe, GS, Clarke-Pearson, K., Mulligan. 2012) International Society for Technology in Education (ISTE) states digital citizenship as an important aspect of educational technology (Martin, F., Wang, C., Petty, T. 2018). Ribble lists 9 elements of digital citizenship under the Protect, Respect, and Educate framework. Figure 1 represents 9 elements of digital citizenship based on the Ribble conceptual framework (Ribble, M. 2011).



Figure 1. Ribble Concept Digital Citizenship Elements (Ribble, M. 2011)

The most popular social media sites as of January 2021 are as follows: Facebook (2.74 billion users), YouTube (2.29 billion users), WhatsApp (2 billion users), Facebook Messenger (1.3 billion users), Instagram (1.22 billion users), Whatsapp (1.21 billion users), Tik Tok (689 million users), QQ (617 million users), Douyin (600 million users), Sino Weibo (511 million users) (Statista, 2021). Social media is a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that enable the creation and exchange of user-generated content. As internet and smartphone technology becomes more advanced, social media also grows rapidly.

Research methods

The research method used in this research is a quantitative approach with an ex-post facto type research design. A quantitative approach is used because the data collected is expressed in the form of numbers or qualitative data that is added up (scoring). This research looks for the causal influence of exogenous variables on endogenous variables. Apart from that, the data collection technique used is a questionnaire technique, data collection consists of 5 questionnaires for the variables of educational service quality, use of social media, teacher pedagogical teaching technique competency, online learning motivation, and student learning satisfaction, but this research is limited in terms of use of social media. The research instrument was developed based on the theories explained in the previous chapter and uses a Likert scale. In preparing the instrument, the instrument grid is first created, then continued with writing the instrument items and conducting trials.

This research design model will place service quality, use of social media, teacher pedagogical teaching technique competence as exogenous variables, while online learning motivation as a mediating variable and student learning satisfaction as an endogenous variable. In this case, the initial research carried out analyzed the relationship between the research variables of social media use through the mediation of online learning motivation and student satisfaction, which can be seen in Figure 2 below.

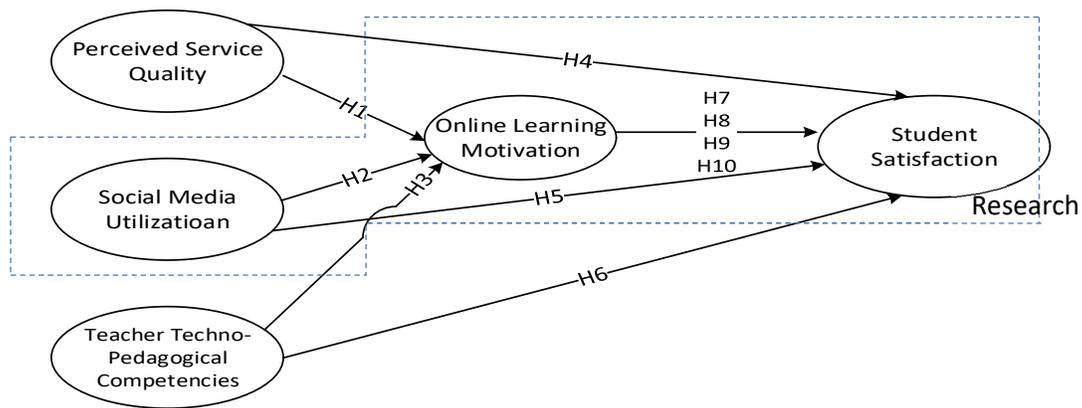


Figure 2. Relationship between research variables

Trials were carried out to test the validity and reliability of the research instruments. In addition, data analysis uses Partial Least Square (PLS) to analyze paths which are widely used in behavioral studies. PLS is used in models that have more than one independent variable or dependent variable and is generally used with relatively small sample sizes.

This research was conducted at State Vocational High Schools (SMKN) in Gianyar Regency, especially at SMKN which has a Tourism major. Gianyar Regency is famous as the center of Balinese culture and carving arts. In Gianyar there are dozens of tourist objects and attractions which are almost never empty of tourist visits. These tourist attractions are in the north to south of Gianyar Regency, starting from Payangan, Tegallalang, Tampaksiring, Ubud, Gianyar, to Blahbatuh and Sukawati. There are 28 vocational schools in Gianyar district, consisting of 8 public

vocational schools and 20 private vocational schools. Table 1 is the number of each vocational school in each sub-district in Gianyar district.

Next, create a hypothesis to check whether there is a significant influence of social media use (X2) on learning satisfaction (Y2) which is mediated by online learning motivation (Y1). This hypothesis is stated in a pair of statements:

H₀ : there is no significant influence of X2 on Y2 through the mediation of Y1.

H₁ : there is a significant influence of X2 on Y2 through the mediation of Y1.

The analysis results in Table 5 show the relationship coefficient value $X2 \Rightarrow Y1 \Rightarrow Y2$ of 0.015 is not significant at the 5 percent test level. This fact shows that H₀ cannot be rejected, which means that the use of social media through the mediation of online learning motivation has not had a real effect on the learning satisfaction of State Vocational School students in Gianyar Regency, so this hypothesis is rejected.

Table 1. Number of Vocational High Schools (SMK) in Gianyar Regency

Subdistrict	Amount	
	Country	Private
1. Sukawati	3	3
2. Blahbatuh	0	3
3. Gianyar	1	6
4. Tampaksiring	1	1
5. Ubud	1	6
6. Tegallalang	2	0
7. Payangan	0	1
8. Total	8	20

Source: Vocational School Basic Data

Results and Discussion

In this research, the use of social media was tested to see its role as a determinant of students' online learning motivation. In addition, testing the mediating role of students' online learning motivation on the influence of these independent variables on student learning satisfaction variables was also carried out. The results and discussion of this research may include statistical analysis and findings resulting from testing these variables. Statistical analysis can provide an overview of the data distribution of each research variable, such as mean, median, mode, standard deviation, variance, range, minimum and maximum values, and total scores.

Statistical analysis can include hypothesis testing, such as the T test, F test, and Chi-square test, to see whether there are significant differences between research variables. Apart from that, regression analysis can also be carried out to see how much influence the independent variable has on the dependent variable. Meanwhile, the findings from this research can provide a broader

understanding of the factors that influence student learning motivation and student learning satisfaction in the context of online learning. These findings can provide recommendations for policy makers in the education sector to improve the quality of online learning and improve online learning policies. Apart from that, the findings from this research can also contribute to further research in the field of student learning motivation and student learning satisfaction in the context of online learning.

Descriptive statistical analysis aims to describe the distribution of data by presenting the mean, median, mode, standard deviation, variance, range, minimum and maximum values, and total scores. Descriptive statistical analysis in this research was carried out with the help of the SPSS version 25.0 for Windows application. A summary of the analysis results describing the data distribution of each research variable is presented in Table 2 below.

Table 2. Results of Descriptive Statistical Analysis

Statistics	Variable				
	X.1	X.2	X.3	Y.1	Y.2
Mean	134,988	125,653	138,375	115,506	131,228
Median	132	124	136	112	128
Mode	132	124	136	112	128
Standard Deviation	11,717	12,814	14,173	11,165	12,659
Variance	137,283	164,204	200,879	124,654	160,239
Range	66	72	65	53	63
Minimum	99	83	105	87	97
Maximum	165	155	170	140	160

Information:

X1 =Quality of Education Services

X2 =Use of social media

X3 =Teacher Pedagogical Teaching Technique Competency

Y1 =Motivation for Online Learning

Y2 =Student Learning Satisfaction

Based on the results in table 3, the frequency distribution and categorization of each research variable will be described next.

Social media usage data obtained from the results of measurements on respondents after analysis showed that the maximum score achieved by respondents was 155 which is also the Ideal Maximum Score (SMI), while the minimum score achieved by respondents was 83 from the lowest score possible, namely 31. Range /reach (R) of data from the social media usage variable is 72. Next, a frequency distribution table for the social media usage variable is compiled with the following steps.

1) Determine the number of classes (k)

$$\begin{aligned}
 k &= 1 + 3.3 \text{ Log } n \\
 &= 1 + 3.3 \text{ Log } 259 \\
 &= 8.96 \text{ (rounded up to 9)}
 \end{aligned}$$

2) Determining the length of the interval class (p)

$$p = \frac{R}{k} = \frac{72}{9} = 8,00 \text{ (rounded up to 9)}$$

Based on these results, Table 3 presents the frequency distribution for the Social Media Use variable data as follows.

Table 3 Frequency Distribution of Social Media Use Variables

No.	Intervals	Frequency	Relative Frequency (%)	Cumulative Frequency (%)
1	80-88	2	0.8	0.8
2	89-97	0	0.0	0.8
3	98-106	16	6.2	6.9
4	107-115	16	6.2	13.1
5	116-124	127	49.0	62.2
6	125-133	36	13.9	76.1
7	134-142	35	13.5	89.6
8	143-151	18	6.9	96.5
9	152-160	9	3.5	100.0
Total		259	100.0	

Based on Table 2, the results of descriptive statistical analysis in Table 3 can be observed that the highest frequency grouping for the Social Media Use variable (X2) is located in the fifth interval with a frequency of 127 (49.0%). The average score/mean () value is 125.653 located in the sixth interval. The median value and the mode are the same as 124 located in the fifth interval. To make it easier to read the table, below is a histogram graph and frequency polygon for the Social Media Use variable (X2). \bar{X}

The results of the sub-analysis confirm that the Education Service Quality model is clearly formed by the five dimensions, with the greatest influence exerted by school academic facilities (0.622). The use of social media is significantly influenced by students' beliefs regarding the role of social media in online learning (0.639). Teachers' pedagogical teaching techniques have a real influence

with the greatest influence being exerted by the teacher's knowledge of learning content (0.626). Perceived student satisfaction with the online learning environment at school has the greatest influence on students' motivation to participate in online learning (0.478). Students' self-confidence influences their motivation (0.297).

The latent variable Attitude (X2.1) of students towards the use of social media in learning is one of two dimensions of Social Media Use (X2). The X2.1 dimension is measured through 12 statement items with the frequency distribution and perception class of the X2.1 measuring items shown in Table 4.

Table 4. Categories/Classes of Student Opinions regarding Attitudes to Use social media.

Item	Short Description	Perception Frequency				Total	Average	Class
		1	2	3	4			
X2.1.1	Like social media (social media)	2	10	242	126	1252	3.29	Very positive
X2.1.2	Be creative when using social media	1	47	263	69	1160	3.05	Positive
X2.1.3	Learn to be better with social media	6	64	249	61	1125	2.96	Positive
X2.1.4	Social media at home	5	106	231	38	1062	2.79	Positive
X2.1.5	Using social media for school assignments	3	57	256	64	1141	3.00	Positive
X2.1.6	Using social media for independent learning	2	51	271	56	1141	3.00	Positive
X2.1.7	Social media is useful for learning	1	27	298	54	1165	3.07	Positive
X2.1.8	Social media is used in classroom learning well	4	30	284	62	1164	3.06	Positive
X2.1.9	Using social media to study after school	4	45	276	55	1142	3.01	Positive
X2.1.10	Using social media for	1	23	261	95	1210	3.18	Positive

Item	Short Description	Perception Frequency				Total	Average	Class
		1	2	3	4			
	independent tasks							
X2.1.11	Using social media for independent projects	3	33	278	66	1167	3.07	Positive
X2.1.12	Agree to use social media while studying at school	3	27	298	52	1159	3.05	Positive

Source: Primary data (2022), analyzed

Table 4 shows the highest average value observed in item X.2.1 and is in the very positive category, indicating students' opinion that they like social media in the activities they carry out. In second place, the item using social media to do independent tasks (X2.1.10) also justifies that social media has been used well. Examination of Table 4 also shows that there are 2 statement items (X2.1.4, X2.1.3) with an average below 3.0. Students think that using social media at home and learning to be better using social media are the items that have the lowest average value even though they are still in the positive assessment class.

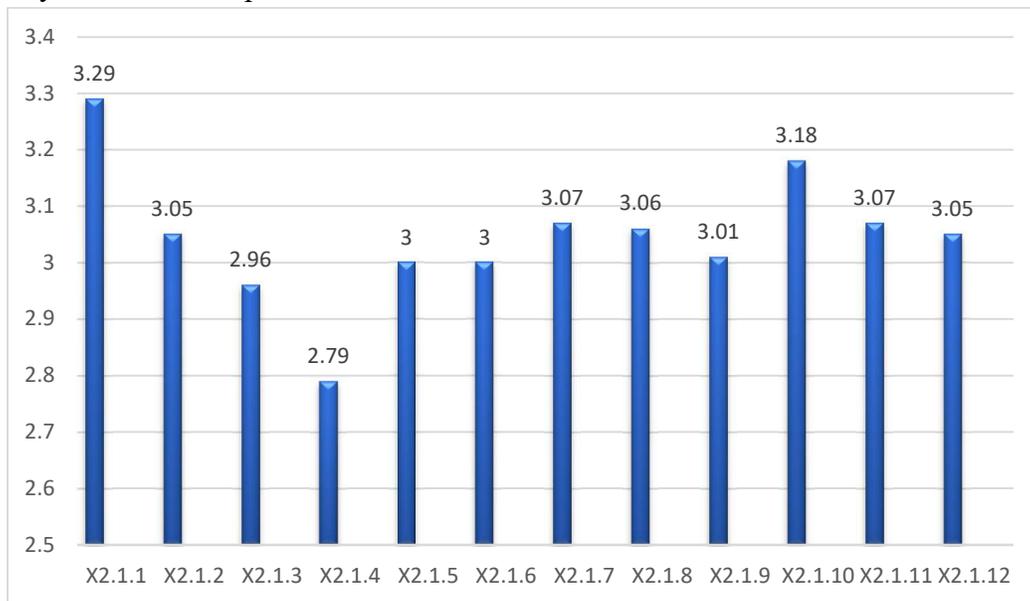


Figure 3. Categories/Classes of Students' Opinions about Attitudes to Using Social Media

The latent variable Social Media Use (X2) in the dissertation model is measured by 2 dimensions, X2.1 and X2.2. A representation of the causal relationship of the two dimensions of X2 is shown in Figure 4 with the results of the initial analysis of the measurement model shown in Table 5.

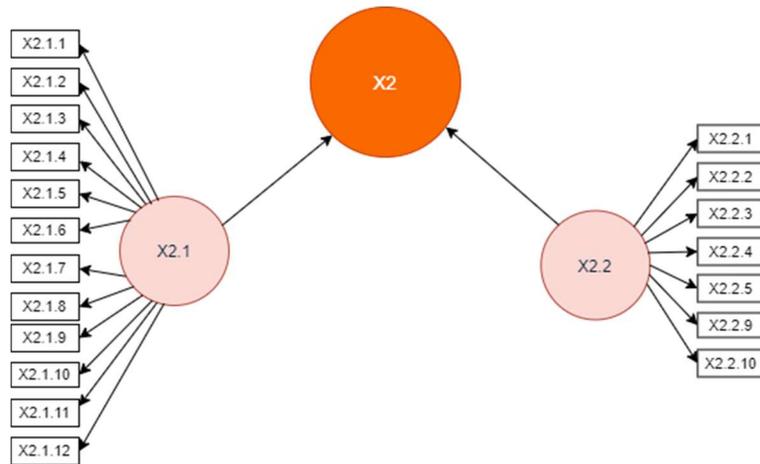


Figure 4. Sub-model Measurement of Social Media Use Variables (X2)

Table 5. Results of Initial Analysis of Social Media Use Measurement Sub-models

Dimensions	Measuring Items		OL value	p value
	Item	Compact Description		
Attitude (X2.1) AVE = 0.388 CR = 0.883	X2.1.1	Like social media (social media)	0.499	0,000
	X2.1.2	Be creative when using social media	0.533	0,000
	X2.1.3	Learn to be better with social media	0.575	0,000
	X2.1.4	Social media at home	0.551	0,000
	X2.1.5	Using social media for school assignments	0.644	0,000
	X2.1.6	Using social media for independent learning	0.615	0,000
	X2.1.7	Social media is useful for learning	0.726	0,000
	X2.1.8	Social media is used in classroom learning well	0.629	0,000
	X2.1.9	Using social media to study after school	0.636	0,000
	X2.1.10	Using social media for independent tasks	0.702	0,000
	X2.1.11	Using social media for independent	0.690	0,000

Dimensions	Measuring Items		OL value	p value
	Item	Compact Description		
Confidence (X2.2) AVE = 0.437 CR = 0.843		projects		
	X2.1.12	Agree to use social media while studying at school	0.633	0,000
	X2.2.1	Use social media wisely	0.624	0,000
	X2.2.2	Use social media according to school directions	0.494	0,000
	X2.2.3	Social media makes learning fun	0.748	0,000
	X2.2.4	Social media makes learning meaningful	0.761	0,000
	X2.2.5	Social media makes it easier to connect with the real world	0.645	0,000
X2.2.9	Social media helps deepen the material	0.639	0,000	
X2.2.10	Social media encourages students to share	0.683	0,000	

Source: Primary data (2022), analyzed

Information:

p : Significance value at $\alpha = 0,05$

Initial inspection of Table 5 shows that the two dimensions of X2 do not have the required AVE values even though the CR values and measuring items are real. Considering the AVE value that does not meet the recommended minimum criteria, gradual elimination of measuring items is carried out, starting from the measuring item with the smallest OL value. The results of the final analysis of the sub-model measuring the latent variable Social Media Use are shown in Table 6. By eliminating several measuring items X2.1 and as is the case with X1, although X2.1 and X2.2 have measuring items whose OL value is <0.70 ; considering its significance and the value is not too far from the recommended lower limit, X2.1.8 and X2.2.10 are retained in the model.

Table 6. Results of Final Analysis of Social Media Use Measurement Sub-models

Dimensions	Measuring Items		OL value	p value
	Item	Compact Description		
Attitude (X2.1) AVE = 0.561 CR = 0.864	X2.1.7	Social media is useful for learning	0.773	0,000
	X2.1.8	Social media is used in classroom learning well	0.674	0,000
	X2.1.10	Using social media for independent tasks	0.800	0,000
	X2.1.11	Using social media for independent projects	0.780	0,000
	X2.1.12	Agree to use social media while studying at school	0.735	0,000
Confidence (X2.2) AVE = 0.602 CR = 0.857	X2.2.3	Social media makes learning fun	0.850	0,000
	X2.2.4	Social media makes learning meaningful	0.869	0,000
	X2.2.5	Social media makes it easier to connect with the real world	0.703	0,000
	X2.2.10	Social media encourages students to share	0.660	0,000

Source: Primary data (2022), analyzed

Information:

p : Significance value at $\alpha = 0,05$

This research cannot prove the mediating role of online learning motivation on the influence of social media use on learning satisfaction, so the hypothesis is rejected. Online learning motivation does not have a mediating role in the influence of social media use on learning satisfaction. Social media use can have a direct and significant impact on learning satisfaction (Kim et al., 2013; Lau, 2017; Rahman et al., 2020) which cannot be explained by learning motivation factors. In addition, online learning motivation does not have a strong influence on learning satisfaction if the use of social media diverts students' attention and time from the subject matter being studied. Motivation for online learning will increase when students perceive learning objectives as more relevant, and their competence in using technology is higher (KJ Kim & Frick, 2011). The Internet occupies a special place in the lives of student respondents. Most respondents cannot leave their phones behind even during class sessions. Majority of them do their homework

over the internet, watch series every day (Talaue et al., 2018). However, it cannot be ignored that the use of social media has a major negative side where students become addicted to using social media (Raut & Patil, 2016). A large number of students are addicted to social media, especially Facebook and there is high participation in social networks which makes students lose focus on academic tasks and negatively impacts their academic results. In addition, Facebook and social media are sources of information and communication among students, and social media has become a part of their daily lives and they use it from 4 to 12 hours a day (Habes et al., 2018; Junco, 2012). Another study found that cell phone use, which is often used to access social media, has a negative influence on students' academic engagement and learning motivation (Lepp et al., 2016).

Conclusion

It can be concluded that the use of social media has no significant effect on online learning motivation. This shows that the higher the intensity of social media use has not been able to influence the increase in online learning motivation. This shows that the increasing use of social media through learning motivation has not been able to influence increasing learning satisfaction. However, the use of social media has a significant effect on learning satisfaction. This shows that the higher the intensity of social media use, the greater the influence on learning satisfaction.

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