

THE EFFECT OF DIGITAL LEADERSHIP AND SERVICE QUALITY ON E-LEARNING STUDENT SATISFACTION THROUGH E-LEARNING STUDENT LOYALTY AT EAST JAVA UNIVERSITY, INDONESIAN

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ABSTRACT

More than a year since Indonesia was hit by the Covid-19 outbreak, which has impacted distance learning. E-learning is one of the University's services that aids in delivering online courses. This study aims to see how the quality of e-learning services and digital leadership affects e-learning student loyalty via e-learning student happiness. The approach employed is a quantitative data gathering strategy that entails delivering questionnaires to active e-learning users at institutions in East Java. WarpPLS 7.0 was used to analyze the data. The findings of this study show that e-learning service quality and digital leadership impact e-learning student satisfaction and loyalty. Likewise, digital leadership and e-learning student satisfaction impact e-learning student loyalty significantly.

Keywords: E-Learning Service Quality, Digital Leadership E-Learning Student Satisfaction, E-Learning Student Loyalty.

I. INTRODUCTION

The Covid-19 outbreak has been in Indonesia for more than a year, and there is still no evidence that it will be over. As a result of the pandemic's negative influence on education in Indonesia, the teaching and learning process is now conducted utilizing the Distance Learning technique, also known as Learning From Home (LFH). According to e-learning industry trends 2017, Asia's entire market is worth US\$7.1 billion, with a 17.3 percent annual growth rate. With an average yearly growth rate of 25% higher than Colombia, Ukraine, and the rest of the globe, Indonesia is one of the fastest-growing nations in the e-learning business. Asia has the most interesting trends in literacy development, content demand, technology acceptance, greatest growth rate, talent management integration, and important government efforts. In such a scenario, Indonesia will have a great chance in 2017. Consumers in the e-learning sector are predicted to increase by USD 12.2 billion.

At all levels, online learning necessitates breakthroughs in creativity and strategy. As a result, education should emphasize emerging trends in executive leadership (Flanagan & Jacobsen, 2003). The services given to consumers might reveal the quality of universities or educational institutions. Efforts must be made to improve the quality of educational institutions. Providing a learning information system is an attempt to enhance consumer quality and service (Sasuti et al., 2020). Quality service at an institution can include E-learning systems, teacher and course materials, administrative assistance, and digital leadership, such as Digital Tools, Digital Natives, and Digital Strategies (Siregar et al., 2021).

Universities and students can profit from e-learning in various ways (Samir et al., 2009). For starters, e-learning may help universities save much money on physics teaching and learning infrastructure (Ramadiani et al., 2017). Second, e-learning may help universities become more digital and contribute to a knowledge-based society by becoming more digital (Arguelles & Busquet, 2016). Third, e-learning may assist institutions in becoming more integrated into the global education system (Wong & Huang, 2011). There are some discrepancies in research findings on the quality of e-learning services. According to Pham et al. (2019), the quality of E-Learning services impacts E-Learning student satisfaction. Larasati & Andayani (2019), on the other hand, claim that it has no effect. Because of several things.

In contrast to previous research, Arguelles & Busquet (2016) discovered that while service quality did not affect satisfaction, it impacted loyalty. To engage in the lecture process, students must continue to use e-learning. Despite this, the campus does not optimize e-learning performance. There were various discrepancies

in the results gained from each of the factors associated with Digital Leadership that influenced E-learning Student Satisfaction in the research done in some of his earlier studies (Strong, 2012). However, the study's findings (Romi Ilham & Siregar, 2021) show that digital leadership has little effect on satisfaction due to various other reasons. Other research (Leonnard et al., 2014)(Arguelles & Busquet, 2016) indicated that while student trust did not influence loyalty, it did affect loyalty since the direct effect of student satisfaction on loyalty was regarded as substantial.

II. THEORETICAL FRAMEWORK AND HYPOTHESES

Satisfaction Theory

Satisfaction is a sense of pleasure or disappointment after evaluating if a product's performance outcomes meet expectations (Chaw & Tang, 2018). Consequently, customers will be happy if the performance and product outcomes meet user expectations. An evaluation of whether a product or service feature provides a level of comfort connected to meeting a need, such as a meeting or surpassing consumer expectations (Song, 2010).

Digital Leadership

The traditional leadership strategy is no longer deemed successful for managing and leading an institution to accomplish organizational goals. There is a need to move beyond old leadership approaches and adopt new ones. According to digital leadership, a leader who can use information technology to achieve shared goals is known as a digital leader (Ilham, 2012). Leadership is defined as the relationship between a leader and their followers in which the leader directs and oversees the followers' activities. As a result, leadership entails persuading individuals to work together to achieve corporate goals. A new leadership style known as digital leadership has evolved due to advancements and innovations in information and communication technologies such as e-learning and the internet.

E-learning Service Quality

The amount of service supplied determines how much service can be provided based on consumer expectations (Pham et al., 2019). According to this definition, service quality is determined by the company's capacity to fulfill customer wants and expectations. Industrial quality refers to a product or service that matches the size of the existing manufacturing location and meets or exceeds consumer expectations in terms of delivery. "The focus of service quality is to meet consumer needs and expectations, as well as the accuracy of delivery to balance consumer expectations, namely consistency between expectations and management concepts, and consistency between consumer expectations and employee work standards," Wong & Huang (2011) stated.

E-learning Student Satisfaction

Customer happiness is one of the key indicators of a company's success in developing and implementing information application systems. Customer perception is a picture of whether service quality is excellent or terrible that is not dependent on service providers' point of view or opinion (Maudiarti, 2018). "Satisfaction is a person's sentiments of pleasure disappointment that follows from comparing a product's observed performance (or outcome) to expectations," according to Kotler & Keller (2015). As a result of comparing the product's perceived performance to his expectations, satisfaction is a sense of contentment or dissatisfaction with someone. Online satisfaction may be described as a customer's overall assessment of the quality of services or products given in the online market in the age of broad growth of ICT and e-commerce (Rolph & Srinivasan, 2003).

E-learning Student Loyalty

"Customer loyalty is based on highly good features of long-term purchases, customer devotion to brands, retailers, or suppliers," according to Leonnard et al. (2014). It may be deduced from this understanding that the mix of satisfaction and complaints has resulted in brand loyalty (Ilham, 2018a). On the other hand, customer satisfaction is determined by how the corporation achieves this happiness by limiting complaints to acquire long-term client purchases. Information and communication technology (ICT) advancements transform all businesses and sectors, including higher education ((Ramadiani et al., 2017). One of them may be e-learning. E-learning is becoming more popular in colleges as information and communication technology (ICT) is applied. Lecturers and students have a variety of instructional alternatives because of technology (Ramadiani et al., 2017).

Framework

The framework of thought in this study is described as follows:

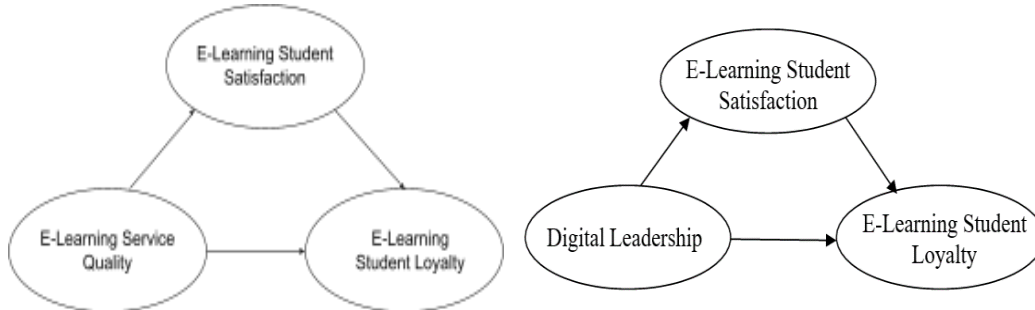


Figure 1: Thinking Framework

III. RESEARCH METHODS

The social media sites YouTube, Facebook, and Instagram, make up the study's demographic. Purposive sampling is the technique utilized. In this study, there are three requirements for sampling: first, the questionnaire must be filled out by students who have been utilizing e-learning for more than a year. Second, students in East Java must complete the questionnaire using the Moodle e-learning platform. Accredited universities A or B is the third option. Hayam Wuruk Perbanas University Surabaya, Brawijaya University, UPN Veteran Surabaya, UNTAG Surabaya, University of Jember, Ciputra University, UBAYA, Surabaya State University are among the campuses that satisfy these requirements.

This study collected the data via a survey method using a Google Forms-provided questionnaire. A Likert scale was used to evaluate the factors. In this study, the analytical approach employed was Warp Partial Least Squares (PLS). The analytical approaches employed in the PLS (Partial Least Square) method include outer model analysis, inner model analysis, and hypothesis testing.

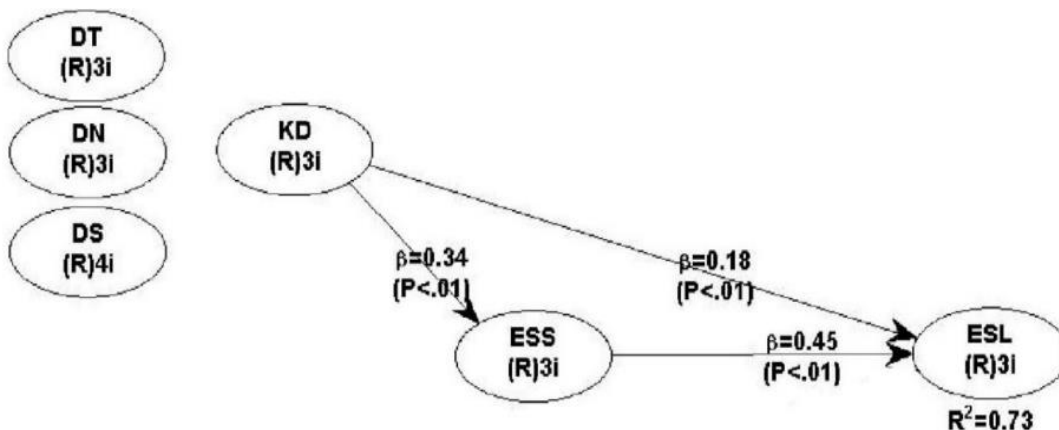
IV. RESULTS AND DISCUSSION

Overview of Research Subjects

Questionnaires began to be distributed on 17 June 2021, and the collection was limited to 1 July 2021. As a result, 138 questionnaires could be processed at 20 universities in East Java. Therefore, the total questionnaires that can be processed according to the research criteria are 138 questionnaires. The data shows that most respondents in the study came from the Hayam Wuruk Perbanas University Surabaya, with 52 respondents and the University of Muhammadiyah Malang as many as 16 respondents. The rest were respondents spread across several universities in East Java.

Data analysis

Outer Model Analysis



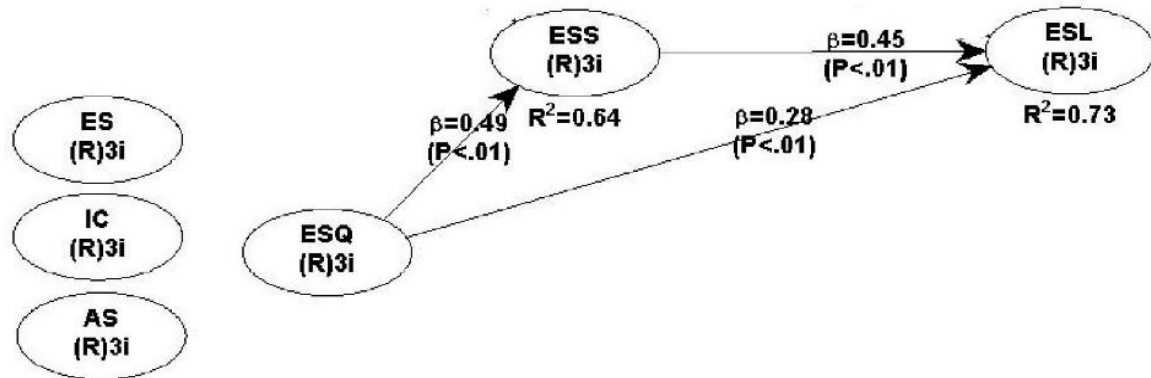


Figure 2: variable relationship model

Table 1: Outer Model Results

Variable	Indicator	Loading Factor			AVE	CA	CR
		E-SE	ONE	E-LO			
DL	X1.1	0.748	-0.009	0.016	0.654	0.826	0.868
	X1.2	0.781	0.22	-0.19			
	X1.3	0.817	-0.024	-0.037			
	X1.4	0.78	0.007	0			
	X1.5	0.095	-0.121	0.317			
	X1.6	0.506	-0.121	0.241			
	X1.7	0.607	-0.112	-0.294			
	X1.8	0.762	-0.179	0.082			
	X1.9	0.719	0.026	-0.065			
	X1.10	0.326	0.327	0.54			
E-SE	X1.1	0.751	-0.317	-0.122	0.529	0.888	0.91
	X1.2	0.693	-0.018	-0.133			
	X1.3	0.729	0.031	0.038			
	X1.4	0.666	0.33	-0.029			
	X1.5	0.791	-0.03	0.026			
	X1.6	0.757	0.11	0.224			
	X1.7	0.649	0.035	-0.123			
	X1.8	0.776	0.213	-0.287			
	X1.9	0.721	-0.331	0.399			
ONE	Z1.1	0.086	0.886	-0.078	0.722	0.806	0.886
	Z1.2	0.065	0.809	0.154			
	Z1.3	-0.151	0.851	-0.065			
E-LO	Y1.1	0.098	0.083	0.925	0.855	0.831	0.922
	Y1.2	-0.098	-0.083	0.925			

Convergent Validity

Based on the table above, it can be seen that all of the variable items above are valid. The loading factor value for the Digital Leadership variable (X1) ranges from 0.326 to 0.817. These values are all above 0.5. And for the AVE value of the variable more than 0.5, that is 0.654. Therefore, it can be concluded that all items of digital leadership have a high level of validity and can be used for further knowledge research.

For the variable e-learning service quality (X1), the loading factor value ranges from 0.649 to 0.791. All of these numbers are more than 0.5. Furthermore, for a variable with an AVE value greater than 0.5, the value is 0.529. As a result, all of the variable e-learning service quality (X1) has a high level of validity and may be employed in future knowledge research.

When it comes to the convergent validity test of the e-learning student satisfaction (Z1) variable, the table above shows that all variable items are valid. For the measure e-learning student satisfaction (Z1), the loading factor value ranges from 0.809 to 0.886. Each indicator's loading factor is bigger than the measurement criterion, which is 0.5. Furthermore, when the variable's AVE value is greater than 0.5, the result is 0.722. As a result, all items in the variable e-learning student satisfaction (Z1) have a high level of validity and may be utilized in future e-learning student satisfaction studies.

The table above indicates that all variables are legitimate, including e-learning student loyalty (Y1). The loading factor value for the dependent variable, e-learning student loyalty (Y1), is 0.925. Each of these indicators has a loading factor that is more than 0.5. And for two variables with values greater than 0.5, namely 0.855. As a result, the item from the dependent variable of e-learning student loyalty (Y1) has a high level of validity and may be utilized in e-learning student loyalty studies.

Discriminant Validity

Because each indicator measuring the variable has a loading factor value that is more important than the loading factor value in measuring other variable indicators, the test findings shown in the table above were fulfilled. As a result, all of the variables employed in the model are valid in this study.

Reliability Test

The value of Cronbach's alpha is in the range of 0.806 to 0.888 in the table above. Still, the composite reliability value is 0.886 to 0.922, with the e-learning student loyalty variable (Y1) having the highest composite reliability value. The all-composite reliability values of each variable are more than 0.6 based on these findings. The result exceeds the Cronbach alpha value, indicating that the internal consistency of a latent variable indication is dependable.

Table 2. Path Coefficient and P-Values

Correlation	Path Coefficient	P-Values	Information
DL (X) → E-SATIS (Z)	0,277	<0.001	Significantly
DL (X) → E-LOYAL (Y)	0,669	<0.000	Significantly
E-SE → E-LO	0.549	<0.001	Significantly
E-SE → E-SA	0.749	<0.001	Significantly
E-SA → E-LO	0.285	<0.001	Significantly

According to Table 2, the variable e-learning student satisfaction considerably affects e-learning student loyalty. The last correlation yielded an indirect impact, indicating that the influence of e-learning service quality on e-learning student loyalty via e-learning student happiness is substantial, as seen by the coefficient of 0.214 and p-values of 0.010.

Table 3. Coefficient of Determination

	Digital Leadership	E-Learning Service Quality	E-Learning Student Satisfaction	E-Learning Student Loyalty
R-squared			0.561	0.626
CronbachAlpha	0,826	0.888	0.806	0.831
Full Collin. VIF	1,918	3,280	2,329	2,504
Q-squared			0.566	0.626

According to the table above, the R-squared value for the inner model is 0.561, or 56 percent, implying that 56 percent influences e-learning service quality on e-learning student happiness. As a result of the coefficient of determination on the mediating variable, it can be stated that e-learning student satisfaction is modest. The dependent variable, e-learning student loyalty, is influenced by the R-squared size, which has a value of 0.626 or 63 percent, which may be read as a 63 percent effect. To the dependent variable, e-learning student loyalty, the independent variable is e-learning service quality; additional variables outside the research account for the remainder.

While the value of predictive validity in the table above is more than 0, it can be assumed that the study data that has been released has been effectively prepared and has a predictive association. The dependent variable, e-learning student loyalty, was tested using the Cronbach alpha test on the independent variable, e-learning service quality, which had a value of 0.888, the mediating variable, e-learning student satisfaction, which had a value of 0.806, and the performance of e-learning student loyalty, which had a value of 0.831. Because the test results above are smaller than the composite reliability value, they are deemed free of collinearity.

Hypothesis testing

Hypothesis 1: At universities in East Java, the digital leadership variable has a considerable impact on e-learning student satisfaction. The proper path coefficient value of 0.669 and p-values less than 0.05 in this condition demonstrate that the digital leadership variable impacts the happiness of e-learning students at the University of East Java.

Hypothesis 2: The Digital Leadership variable has a considerable impact on e-learning students' loyalty in East Java universities. This condition demonstrates that the digital leadership variable has a positive impact on e-learning students' loyalty at the University of East Java, as evidenced by the appropriate path coefficient of 0.277 and p-values less than 0.05

Hypothesis 3: At universities in East Java, the E-Learning Service Quality variable has a considerable impact on e-learning student satisfaction. Table 3 reveals that the variable e-learning service quality substantially impacts e-learning student satisfaction at East Java institutions, as evidenced by the path coefficient value of 0.749 and p-values less than 0.05.

Hypothesis 4: At universities in East Java, the E-Learning Service Quality variable has a considerable impact on e-learning student loyalty. Table 3 reveals that the variable e-learning service quality substantially impacts e-learning student loyalty at East Java institutions, as evidenced by the path coefficient of 0.549 and p-values less than 0.05.

Hypothesis 5: At universities in East Java, variable E-Learning student satisfaction substantially impacts e-learning student loyalty. Table 3 reveals that the variable e-learning student happiness substantially impacts e-learning student loyalty at East Java universities, as evidenced by the path coefficient of 0.285 and p-values less than 0.05.

Discussion

Effect of Digital Leadership on Student Loyalty in E-Learning

The digital leadership variable has a considerable impact on digital leadership, implying that the digital e-learning tools supplied by the campus to students, whether good or bad, will impact student loyalty to e-learning. This finding supports the hypothesis that the better the digital tools in e-learning, whether materials, instructors, staff, or the University's website structure, the more students will be willing to use e-learning

during the lecture process (Romi Ilham et al., 2021). These findings show that digital tools play a role in determining the benefits of the campus's facilities, which are designed to identify, give convenience, and build great e-learning services (R Ilham et al., 2021).

Effect of Digital Leadership on Student Satisfaction in E-Learning

The digital leadership variable strongly impacts e-learning student happiness, indicating that campus digital leadership has done a good job providing online services or e-learning. This finding backs up a notion that states that the better the University's e-learning facility, the happier the users, primarily students, will be and the better they will be able to participate in learning without any issues affecting its student scores. This finding demonstrates that digital leadership is a factor in determining the benefits of the campus's digital information strategy and digital information facilities, which strives to discover, provide convenience, and build exceptional e-learning services (Romi Ilham, 2021).

Effect of E-Learning Service Quality on E-Learning Student Loyalty

The variable e-learning service quality has a significant effect on e-learning student loyalty. The quality of e-learning services provided by the campus to students, whether good or bad, will affect student loyalty using e-learning. Based on the questionnaire and the indicators contained in the E-Learning Service Quality variable; This variable has a significant effect on the loyalty of e-learning users because the feasibility of excellent and quality e-learning services can provide added value to the campus. The quality of e-learning makes students more comfortable following daily learning, especially during the pandemic. In addition, e-learning services include website display, administration, materials, and instructors' added values to make students feel free and loyal to use e-learning during the lecture process (Pandey & Pande, 2014). The quality of e-learning services is a factor that will determine the advantages of campus facilities which aim to identify, provide convenience, and develop superior e-learning services (Jiang et al., 2014).

Effect of E-Learning Service Quality on E-Learning Student Satisfaction

The variable quality of e-learning services significantly affects e-learning student satisfaction, meaning that the campus has provided e-learning services well. Assessment of e-learning services can include systems, administration, layout, materials to instructors. Based on the questionnaire and the indicators contained in the E-Learning Service Quality variable, this variable is essential in the satisfaction of using e-learning. Student satisfaction is the primary goal of an e-learning service; Arnold & Sangrà (2018) states that e-learning is good if students are satisfied.

Effect of E-Learning Student Satisfaction on E-Learning Student Loyalty

The variable of e-learning student satisfaction has a significant effect on e-learning student loyalty, meaning that students who are satisfied with e-learning systems and services will become loyal students and trust e-learning. The creation of user loyalty depends on the satisfaction felt by the user; the better the quality of service provided by the provider to the user, the more likely new users become customers (Nisar & Prabhakar, 2017). The number of customers can give trust to others, so the more people who use e-learning as a learning tool, the more effective and high-usefulness of the e-learning system will be (Kennepohl & Moore, 2016).

V. CONCLUSION

Based on the results of the tests and discussions described, it can be concluded that e-learning service quality affects e-learning student satisfaction. This is because, on average, the respondents agree that the assessment and quality of e-learning services, whether good or bad, will affect the satisfaction of e-learning users themselves, namely university students. E-learning service quality effect on e-learning student loyalty. This means a person's loyalty in using the e-learning facilities provided by the University can be influenced by the quality of service. This shows that good service quality will create a sense of loyalty from the student. E-learning student satisfaction effect on e-learning student loyalty. This is because creating a sense of satisfaction from students with e-learning facilities makes students comfortable and can use e-learning well so that student loyalty will arise.

VI. RESEARCH LIMITATIONS

In this study, several limitations cannot be overcome, including the following. This research was carried out during the Covid-19 pandemic, so the research questionnaires can only be distributed through the google form. Furthermore, researchers cannot provide instructions or explanations if respondents do not understand the statement to be filled out. In addition, this study includes respondents on the island of Java, but the distribution of respondents has not been able to represent it evenly. This condition is due to time constraints when distributing questionnaires to universities in areas outside Surabaya where the research is domiciled.

VII. SUGGESTION

Based on the results of the conclusions above, the researchers can give suggestions for further research as follows: For further researchers, if at the time of the study, the Covid-19 pandemic had subsided, it would be best if the questionnaire was distributed directly to explain the statements to be filled out by respondents. This method is beneficial for equating the interpretation of statements between respondents and researchers. For further researchers, it is hoped that they can maximize the use of questionnaires in expanding the scope of the research area and even out the number of respondents in each region on the island of Java to make it more valid.

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