How E-Learning Experience Can Explain Student Trust

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ABSTRACT

Higher education's service delivery process has undergone many changes due to the pandemic in the last few years. Keeping a physical distance incited changes in teaching and learning processes. The utilization of e-learning turned into a long-lasting circumstance that is still relevant today. The study was conducted to analyze higher education students' e-learning experiences and their roles in determining the students' trust. The data are collected through a survey conducted by questionnaire, which is then processed using structural equation modeling to confirm the relationship between variables. The study's findings show the significance of the lecturer's quality in determining satisfaction and eventually affecting students' trust in the e-learning context. The study contributes to the research on determinants of student trust in the context of online learning experiences.

Keywords: E-learning Experience, Higher Education, Satisfaction, Trust.

1 INTRODUCTION

Universities, as providers of higher educational services, have a long-term orientation by maximizing their quality of service. This effort needs to be supported by qualified students. A suitable strategy needs to be used to achieve this, and having satisfied students is an aspect that is worth considering when deciding marketing strategies (Austin & Pervaiz, 2017).

In a pandemic situation, lecturers and students must be able to adapt to the online learning system. Before the pandemic, few universities in Indonesia used the learning management system in teaching and learning (Susan, et al., 2023). E-Learning has a learning component, the acquisition or modification of knowledge, and a technology component, which serves as the means and catalyst of said learning process (Aparicio, Bacao, & Oliveira, 2016).

Higher education institutions should manage student satisfaction to achieve a good reputation (Bakrie, Sujanto, & Rugaiyah, 2019). Higher education institutions need to improve their service quality to increase student satisfaction (Pedro, Mendes, & Lourenco, 2018). The literature emphasizes the importance of student satisfaction (Weerasinghe, Lalitha, & Fernando, 2017). Besides, trust determines consumer consumption decisions (Cardoso, et al., 2022). The results of prior research show that consumer satisfaction significantly affects their

trust (Menidjel, Benhabib, & Bilgihan, 2017) (Ledikwe, Lombard, & Klopper, 2019). Nevertheless, other findings show that satisfied students do not necessarily trust the department or university (Susan, et al., 2023). Specific to e-learning, previous research shows that the quality of teaching has a significant impact on student satisfaction (Fernandes, Ross, & Meraj, 2013).

Higher education institutions need to make efforts to build a long-term relationship with the students (Orozco & Arroyo, 2017), since retaining existing customers is just as important as acquiring new customers (Giner & Rillo, 2016). The study aims to analyze and confirm the relationship between the dimensions of students' e-learning experience, student satisfaction, and trust in maintaining sustainable relationships with students.

2 LITERATURE REVIEW

The marketing concept shows that consumer satisfaction can determine consumer behavior after consumption. In this case, satisfaction is an individual's feelings of pleasure or disappointment resulting from the consumption experience by comparing perceived performance and consumer's expectations (Wirtz & Lovelock, 2018). Specific literature on higher education emphasizes the importance of student satisfaction for higher education institutions (Weerasinghe, Lalitha, & Fernando, 2017) in determining their success. Higher education institutions must concentrate on student satisfaction through superior customer service to maintain sustainability (Teo & Soutar, 2012).

The student satisfaction measurement may refer to several aspects: academic administration quality, infrastructure, social life, and support services (Thomas, 2011). In the e-learning context, satisfaction measurement could refer to satisfaction of taking the course via e-learning system (Kim, Lee, Yoon, & Kim, 2022). Past research identified factors that shape students' university experience based on learning outcomes, staff-student interactions, and physical facilities (Clemes, Cohen, & Wang, 2013).

Decision makers in higher education institutions need to understand that students who are satisfied with their e-learning experience will believe that the institutions do their best to provide the highest quality of education through online learning. Students' trust is an aspect that needs to be nurtured and maintained by higher education for the long-term longevity of their services. It is related to the high degree of difficulty in fixing a broken trust, which may take a relatively long time (Cao, Shi, & Yin, 2014).

Trust has a vital role in determining the consumption decisions of the consumer (Cardoso, et al., 2022). An organization needs to develop trust-based relationships (Caceres & Paparoidamis, 2007). Trust is paramount in ensuring the wellness of human relationships and collaboration, no matter how many people are involved in the relationship (Adam & Donelson, 2022). Trust is a base construct in studies of customer behavior, and it may persuade many other customers (Raza, Rather, & Bhutta, 2020) and can direct consumer purchase intentions (Kanwar & Huang, 2022) (Pham & Ton, 2023). Increased trust influences consumer intention to have a long-term relationship (Jun & Yi, 2020). Customers who are satisfied with the overall service experience will likely trust the service provider. Experience-based satisfaction is crucial for building trust and is an antecedent to trust (Nyamekye, Kosiba, Boateng, & Agbemabiese, 2022). Trust is a positive and significant function of satisfaction. How satisfied the customer is with the overall service experience influences their trust (Song, Wang, & Han, 2019), and empirical evidences indicate the positive effect of satisfaction on trust (Yap, Ramayah, & Shahidan, 2012) (Mbango, 2019).

Relevant to e-learning and based on theoretical studies on the relationship between research variables, the hypothesis is that system quality, perceived fit of content, instructor

quality, and student-instructor online interaction affect student satisfaction. It also hypothesizes that student satisfaction affects student trust.

3 RESEARCH METHODS

The study applied a survey design. Data were collected from active students in private universities in Bandung, Indonesia. A total of 304 respondents met the criteria and participated in the survey questionnaire.

Following the research objectives, the research variables are Trust as the dependent variable, Satisfaction as the intervening variable, and the independent variables are System Quality, Perceived Fit of Content, Instructor Quality, and Student-Lecturer Interaction. The research indicators adapt prior research with modification (Wong, Wong, & Leung, 2018) (Kim, Lee, Yoon, & Kim, 2022).

To measure all scale items, a 4-point numerical scale, ranging from 1 (extremely disagree) to 4 (extremely agree). An even score scale is used to avoid a center-answer tendency (Susan & Djajadikerta, Determinants of e-money adoption: an empirical study, 2020). The obtained data are processed and analyzed using structural equation modeling, as one construct that becomes an independent variable can be a dependent variable in another relationship (Hair, Black, Babin, & Anderson, 2019).

4 FINDINGS AND DISCUSSION

From the data collection process conducted by distributing questionnaires to students at private universities, 304 data were collected. The data are tested for validity and reliability. The results show that each variable is reliable, with an Alpha Cronbach value between 0.742 and 0.863. The results also present that the item-to-total correlation score of each item is between 0.338 – 0.866.

The results of structural model testing were used to analyze the influence of four exogen variables: e-learning system quality, perceived fit of e-learning content, instructor quality, and student-instructor online interactivity on student satisfaction. The test was also conducted to analyze the effect of student satisfaction on student trust as an endogenous variable.

Figure 1 depicts the relationship between research variables, in which the quality of the system and the suitability of online learning content determine online learning satisfaction. Other factors are the quality of the instructor and student-teacher interaction.

Table 1 illustrates that the structural equation modeling results indicated that not all hypotheses were supported. E-learning system quality does not impact e-learning satisfaction as the p-value is (0.012). The quality of the online learning system, which is well organized and facilitates the implementation of the teaching and learning process, which can be taken anytime and anywhere, is not a factor that satisfies students regarding e-learning. The perceived fit of e-learning content does not determine e-learning satisfaction, as the p-value is 0.93. Online learning that meets students' needs and wants does not determine their satisfaction. The result of hypothesis testing regarding the effect of student-lecturer interaction on e-learning satisfaction is also statistically insignificant, with a p-value of (0.35). Student satisfaction regarding e-learning is not determined by frequent interaction with lecturers and by obtaining assistance and information related to online learning.

Table 1: The results of structural equation

Hypothesis	Coefficient	Std Dev	t-value
System Quality → Satisfaction	(0.0008)	0.066	(0.012)
Perceived Fit of Content → Satisfaction	0.083	0.089	0.93
Instructor Quality → Satisfaction	0.27	0.060	4.40
Interaction → Satisfaction	(0.024)	0.070	(0.35)
Satisfaction → Trust	0.19	0.057	3.30

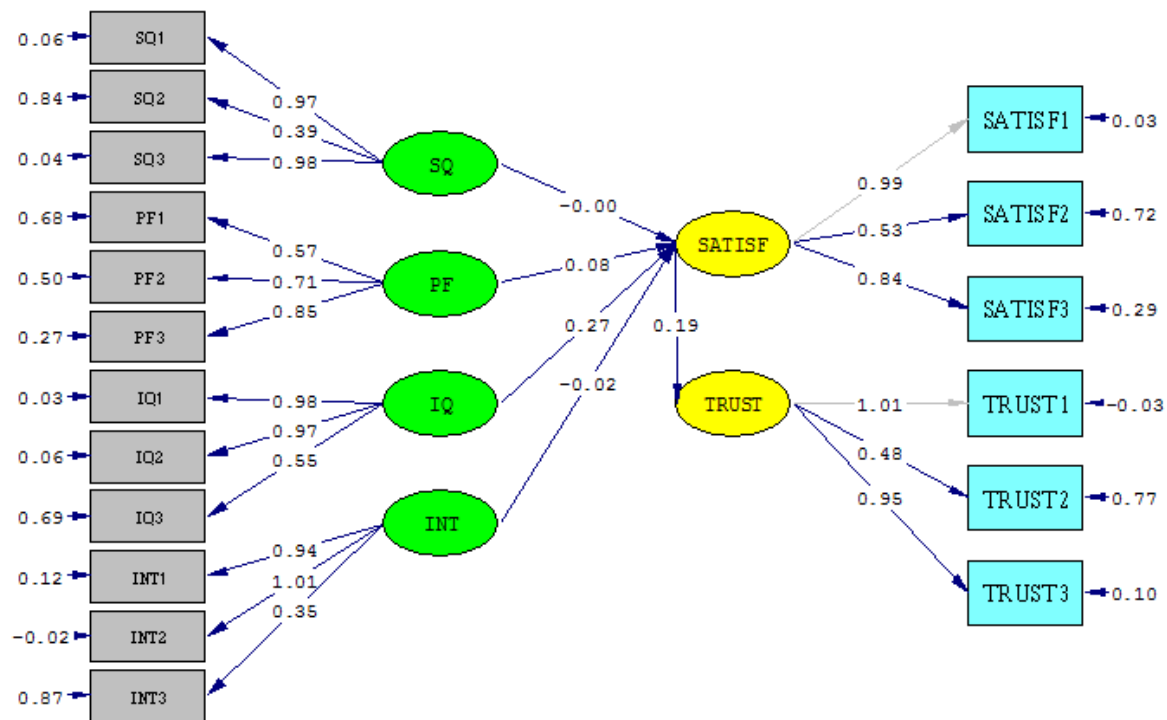Figure 1 Structural Model Results

Notes:
SQ   = System Quality
PF   = Perceived Fit of Content
IQ   = Instructor Quality
INT   = Interaction
SATISF= Satisfaction
TRUST= Trust

In contrast, according to the structural equation modeling results, instructor quality significantly contributed to the satisfaction of e-learning, as the p-value is 4.40. Therefore, the hypothesis is supported. Lecturers who can explain and help understand complex subjects and motivate students to give their best performance through online learning will be able to satisfy them. Similarly, e-learning satisfaction significantly and positively impacts student trust, as the p-value is 3.30. Thus, the hypothesis is also supported. Students who are satisfied with the learning process through the e-learning system believe that the university provides the best education for students through an online learning process with the support of lecturers and non-academic staff.

Students who are satisfied with the e-learning experience will have confidence that they are getting the best education. The findings of the study are in line with prior research. Customer satisfaction impacts their trust (Susan, 2018) (Ledikwe, Lombard, & Klopper, 2019) (Song, Wang, & Han, 2019) (Nyamekye, Kosiba, Boateng, & Agbemabiese, 2022), and customer trust increases as satisfaction increases. Therefore, trust is an outcome of customer satisfaction (Mbango, 2019). Nevertheless, the findings of this study are different from prior research, which showed that student satisfaction has no impact on student trust (Susan, et al., 2023).

Based on the study's results that lecturer quality is a significant factor in determining student satisfaction and ultimately affects student trust, higher education institutions can invest in satisfaction programs to increase consumer trust. Relevant to the study results, higher education institutions must attempt various ways to maintain the quality of lecturers. The institutions should carry out better planning, implementation, and control regarding lecturer qualifications, suitability of the material provided by lecturers with the curriculum, and equality of lecturer qualifications between several parallel classes. Lecturers are determined based on the suitability of their expertise to the subject and are selected based on the same minimum criteria. The institutions can apply Outcome-based Education to ensure the teaching and learning process provides the best results. They can implement an effective strategy for building long-term customer relationships and creating sustainable competitive advantage by achieving customer satisfaction and trust (Menidjel, Benhabib, & Bilgihan, 2017).

5 CONCLUSION

The study's results show that regarding e-learning, it is not the quality of the learning system, the suitability between the learning material provided and students' expectations, or the interaction between students and lecturers which would determine students' satisfaction. The determinant of students' satisfaction still relies on the human factor involved in online learning. Having students happy and satisfied with online learning, specifically regarding the competence of the lecturer in delivering their learning materials through online means, will help them understand complex materials through online means and encourage them to achieve excellent academic performance.

The study's results can provide valuable insights for higher education institutions in developing appropriate strategies to increase student satisfaction and trust. The finding of this research shows that the quality of lecturers in online learning will determine the satisfaction of their students and need to be the focus of attention for universities. There are still opportunities for further research focusing on different variables relevant to student satisfaction and trust, specifically regarding e-learning.

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