

# Effect of Service Quality and E-Learning Quality on Student Satisfaction in Moderation of Social Distancing During the COVID-19 Pandemic: Empirical Studies in Private Universities

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## Abstract

*The purpose of this study is to determine the effect of service quality and e-learning quality on student satisfaction in moderation of social distancing during the coronavirus disease-19 (COVID-19) pandemic: empirical studies in Private Universities. This research is a quantitative research with a cross-sectional study survey. Collecting data through questionnaires from respondents who are active students at 3 large Private Universities in Tangerang such as Prasetya Mulya, Universitas Pelita Harapan, and Universitas Multimedia Nusantara. Respondents in this study amounted to 100 respondents. Data processing using partial least square-structural equation modeling (PLS-SEM). The results show that tangible, responsiveness, and empathy have a positive effect on e-learning quality, and e-learning quality has a positive effect on student satisfaction. Reliability and assurance do not have a positive effect on e-learning quality and furthermore social distancing does not moderate the relationship between service quality and e-learning quality. Contribution to this research provides information and knowledge for decision making, especially Private Universities through understanding service quality on quality and satisfaction in achieving competitiveness, greater value, growth in service opportunities, and satisfaction.*

## Keywords

service quality; e-learning quality; social distancing; student satisfaction



## I. Introduction

The increasing level of competition in higher education provides opportunities for prospective students to consider several options in choosing and applying to universities (Ali, 2019). Thus, it is important for universities to pay more attention to the factors that lead to student satisfaction in order to gain a competitive advantage in today's highly competitive market (Ali, 2019; Jameel et al., 2021). Private Universities and Public Universities have designed a variety of unique student-focused approaches with the aim of generating student satisfaction in a competitive environment. According to Mageswary and Wong (2021), universities are very important to monitor the level of student satisfaction because it will encourage students to perform better in studies which will contribute to student retention, which in turn will increase the registration of prospective new students.

The coronavirus disease-19 (COVID-19) pandemic that has hit the world, poses challenges for the education sector industry in Indonesia. Services-oriented businesses, such

as education, experienced the most drastic strategic and operational changes during the pandemic. During the COVID-19 pandemic, when the whole world is facing a health crisis and the lock down or the implementation of enforcement of restrictions on community activities, students are asked to take online learning to continue their education, as a way to curb the spread of COVID-19. This is in line with the decision of the Minister of Education and Culture, Nadiem Anwar Makarim, who announced that all sectors related to education should temporarily stop face-to-face learning and switch to the implementation of the teaching and learning process by utilizing online learning media (Winahyu, 2020). School closures in response to the COVID-19 outbreak have exposed a number of challenges limiting access to education. Sihombing (2020) state that Covid-19 pandemic caused everyone to behave beyond normal limits as usual. The outbreak of this virus has an impact especially on the economy of a nation and Globally (Ningrum, 2020). The problems posed by the Covid-19 pandemic which have become a global problem have the potential to trigger a new social order or reconstruction (Bara, 2021).

According to a report by the United Nations Educational, Scientific, and Cultural Organization, COVID-19 has affected 1.6 billion young people or about 91% of the world's student population unable to attend school. In Indonesia, school closures have an impact on 62.5 million students, ranging from pre-primary to higher education levels.

E-learning refers to learning over the Internet, providing learners with a flexible and personalized platform for learning. This can be called an innovative approach to providing excellent educational services to learners through electronic information, which aims to continuously improve knowledge, skills, and other performance (Fazlollahtabar and Muhammadzadeh, 2012). Colleges use their own well-developed learning management system. Most universities in Indonesia use online platforms such as Microsoft Teams, Zoom, and Skype. The Minister of Education and Culture supports web-based education and increases the capacity of online platform services to strengthen online teaching. Such as, Learning Home Access, Google G Suite for Educators Access, Microsoft Office 365 Access, Teacher Room Online School Access, provision of quota assistance for students, teachers, lecturers, and students.

Although e-learning is not a new concept, its use is still limited. Langdon (2020), points out that higher education institutions around the world are shifting to various forms of e-learning, and for most of them, it is uncharted territory. This is certainly a big and challenging step for universities, because apart from having to maintain the quality of education, the implementation of e-learning is carried out in the middle of the second semester without any planning or readiness from students, teachers or lecturers, administrative teams or even technology infrastructure. The transition period to e-learning in universities during the pandemic occurred suddenly and suddenly. Both lecturers and students have very limited time to prepare new teaching and learning models.

On the other hand, e-learning has guaranteed an increase in the ability, information and quality of learning through interaction (Fazlollahtabar and Muhammadzadeh, 2012). Even by Mystakidis et al. (2019) and Sumi and Kabir (2021) say that increasing student participation in e-learning can lead to enrichment of students' knowledge and interests.

To increase added value, universities need to have the ability to evaluate the quality of the e-learning process, so that the evaluation of service quality can be measured, and then to measure the actual perceptions of students. This is also an important area for improvement, in the more consistent use of e-learning in the future and as an educational method that supports learning even after this pandemic period is over.

During the COVID-19 pandemic, social distancing is believed to be able to reduce the spread of the virus. Social distancing behavior should be prioritized to prevent the spread of COVID-19 in the community until a vaccine is developed. Thus, the moderating effect of the perception of the importance of maintaining social distance during this pandemic on service quality and e-learning quality factors will be studied in this study.

With the background presented above, it is very relevant to analyze student perceptions of the e-learning framework used in universities during the COVID-19 pandemic. Therefore, the purpose of this study was to measure the relationship between the model predictors of service quality and e-learning quality on student satisfaction moderated by social distancing. This study will provide valuable insight into the dimensions proposed for evaluating e-learning quality during this and future pandemics, more specifically investigating the impact of e-learning quality on student satisfaction in the context of Private Universities.

The purpose of this study is to determine the effect of service quality and e-learning quality on student satisfaction in moderation of social distancing during the COVID-19 pandemic: empirical studies in Private Universities.

## II. Research Methods

This research is a quantitative research with a cross-sectional study survey. Quantitative research is systematic scientific research on the parts and phenomena and causalities of their relationships (Pandiangan, 2015; Pandia et al., 2018). The purpose of quantitative research is to develop and use mathematical models, theories and/or hypotheses related to natural phenomena. Cross-sectional study survey is a type of research that observes population data or samples only once at the same time (Pandiangan, 2018).

Population is a group of individuals with the same characteristics who live in the same place and have the ability to reproduce among others (Asyraini et al., 2022; Octiva, 2018). The concept of population is widely used in ecology and genetics. Ecologists view populations as elements of a broader system (Pandiangan et al., 2021; Pandiangan, 2022). The population is students at 3 large Private Universities in Tangerang, namely Prasetya Mulya, Universitas Pelita Harapan, and Universitas Multimedia Nusantara. This election was determined, because the number of students owned was more than five thousand students. Sample is part of the population studied in a study and the results will be considered to be a picture for the original population, but not the population itself (Octiva et al., 2018; Pandiangan et al., 2022). The sample is considered a representative of the population whose results represent the overall symptoms observed. The sampling technique is non-probability sampling, with the sampling technique used is purposive sampling. Non-probability sampling is a method of selecting units from a population using a subjective (Pandiangan et al., 2018). Purposive sampling is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study (Octiva et al., 2021). Respondents in this study amounted to 100 respondents.

Collecting data through questionnaires from respondents who are active students at 3 large Private Universities in Tangerang such as Prasetya Mulya, Universitas Pelita Harapan, and Universitas Multimedia Nusantara and distributed online using the google form, regarding the ongoing COVID-19 pandemic, where universities are still implementing online learning to avoid crowds and social distancing.

Data processing using partial least square-structural equation modeling (PLS-SEM). PLS-SEM is a type of statistical analysis whose usefulness is similar to SEM in covariance analysis (Tobing et al., 2018). Because it is similar to SEM, the basic framework in PLS used is based on linear regression. Using the Smart PLS 3.3 software.

### III. Discussion

#### 3.1 Result

Based on the demographic information data presented in Table 1, the majority of respondents (78%) are in the age category of 18–22 years. Male respondents and female respondents are the same (50%). There are (81%) respondents have online learning experiences with a very frequent frequency, so this sample can be used to analyze moderating variables. Furthermore, the respondents came from Prasetya Mulya (25%), Universitas Pelita Harapan (45%), and Universitas Multimedia Nusantara (30%).

**Table 1.** Demographic Profile of Respondents

Demographic	Classification	Frequency	Presentation
Age	18-22	78	78%
	22-26	17	17%
	26-30	5	5%
	>30	-	
Gender	Man	50	50%
	Woman	50	50%
Previous Online Learning Experience	Never	5	5%
	Sometimes	14	14%
	Very Often	81	81%
Study in Private Universities	Prasetya Mulya	25	25%
	Universitas Pelita Harapan	45	45%
	Universitas Multimedia Nusantara	30	30%

#### a. Hypothesis Test Results

**Table 2.** Hypothesis Test Results

Connection Variable	Path Coefficient	T-Statistic	P-Value
Tangible → E-Learning Quality	0.304	3.267	0.001
Reliability → E-Learning Quality	0.021	0.16	0.873
Responsiveness → E-Learning Quality	0.202	1.974	0.049
Assurance → E-Learning Quality	0.088	0.776	0.438
Empathy → E-Learning Quality	0.306	2.648	0.008
E-Learning Quality → Student Satisfaction	0.737	11.764	0.000

The results show that tangible, responsiveness, and empathy have a positive effect on e-learning quality, and e-learning quality has a positive effect on student satisfaction. Reliability and assurance do not have a positive effect on e-learning quality

## b. Moderation Test Results

**Table 3.** Moderation Test Results

<b>Variable Relationship</b>	<b>Path Coefficient</b>	<b>T-statistics</b>	<b>P-Value</b>
Tangible x PBMSD → E-Learning Quality	0.125	1.212	0.226
Reliability x PBMSD → E-Learning Quality	0.134	0.803	0.422
Responsiveness x PBMSD → E-Learning Quality	-0.069	0.525	0.600
Assurance x PBMSD → E-Learning Quality	-0.087	0.778	0.437
Empathy x PBMSD → E-Learning Quality	-0.038	0.268	0.789

Social distancing (PBMSD) does not moderate the relationship between service quality and e-learning quality.

### 3.2 Discussion

The teaching and learning process in the COVID-19 pandemic situation, uses technology as the main medium of learning, as well as supports limited social gatherings. Continuing education during the pandemic, social distancing norms are the only solution to slow the spread, a serious concern for private universities and students. Traditional learning is shifting towards online learning which is sudden and somewhat forced, the quality of learning should not be compromised. This study aims to examine the effect of various service quality factors, where service quality is the most common instrument to assess service quality. Because online education is necessary to avoid the spread of COVID-19 on campus, it is important to understand how students understand the benefits of social distancing and its moderating effect on various e-learning quality factors.

The results of this study indicate that factors such as tangible, responsiveness, and empathy have a positive influence on perceived quality and satisfaction, which is consistent with the results of other studies conducted. These results also confirm that except empathy, for other constructs tangible, responsiveness, is positively related to e-learning quality perceived by students which affects student satisfaction. It seems clear that as a new technology-based learning, students need websites from Private Universities that must be easy to navigate and provide relevant information during a pandemic because it is the only interface between students and Private Universities during a pandemic. Relevant information, learning materials, and ease of navigation will improve e-learning quality and increase student satisfaction. The website functions as a physical arrangement that ensures the availability of courses and learning materials in an accurate and concise manner. An effective and informative website helps increase the personalization and benefits of product selection. Responsiveness may be very important during online learning because it is important for students and lecturers to be involved in discussing the learning process. Responsiveness of lecturers and students will also help improve the quality of learning in the online environment when students are frustrated and need technical support. Empathy has a positive influence on how students perceive e-learning quality. The reliability and assurance variables have no positive effect. During the COVID-19 pandemic, the role of lecturers in the teaching and learning process is not directly related to the certainty of students taking e-learning, because students are taught by lecturers who are regulated by their respective universities. On the other hand, students believe that lecturers have a lot of experience in the field, prepare well for lectures, and have a genuine interest in student welfare, both before, during, and after e-learning.



This study also shows that there is a positive relationship between e-learning quality and student satisfaction. This means that e-learning quality will increase student satisfaction in online learning during this sudden shift. Therefore, the significant impact of the service quality dimension on perceived quality and satisfaction indicates the importance of these dimensions in achieving competitiveness, greater value, growth of service opportunities, and satisfaction.

The moderating effect of PBMSD has been concluded not to be significant on all tangible, reliability, responsiveness, assurance, and empathy variables. Students recognize that the impact of the current pandemic affects the psychological state and behavior of individuals. COVID-19 has been shown to affect the social and everyday lives of individuals, and they have tried to protect themselves through various means. In this state during the e-learning process it is not a barrier to learning and satisfaction.

### **Managerial Implications**

The findings of this study provide an understanding of the determinants that affect perceptions of quality and customer satisfaction with e-learning services. Management and decision making at private universities need to pay attention to how the determining factors such as tangible, responsiveness, and empathy are evaluated by students. This study significantly contributes to the literature by highlighting the accumulated impact of service quality attributes on quality and satisfaction in the context of Private Universities facing the unending COVID-19 pandemic that explicitly triggers a paradigm shift in the world of learning and education. Study results can be used to build a better system not only for the pandemic but also for the future. E-learning or blended learning is an area that will be explored further by learning solution providers. The results of this study can serve as a guide for the government and authorities in developing policies to understand the antecedents of e-learning and its relationship to learning satisfaction and formulate relevant strategies according to these findings. Thus the quality standards that achieve user satisfaction in general can be maintained.

## **IV. Conclusion**

The results show that tangible, responsiveness, and empathy have a positive effect on e-learning quality, and e-learning quality has a positive effect on student satisfaction. Reliability and assurance do not have a positive effect on e-learning quality and furthermore social distancing does not moderate the relationship between service quality and e-learning quality.

Contribution to this research provides information and knowledge for decision making, especially Private Universities through understanding service quality on quality and satisfaction in achieving competitiveness, greater value, growth in service opportunities, and satisfaction.

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