Sibatik Journal
Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, dan Pendidikan
E-ISSN: 2809-8544

BLENDED LEARNING, TECHNOLOGY READINESS, AND SERVICE QUALITY: A STUDY OF STUDENTS AT STKIP MODERN NGAWI

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Abstract

This study aims to analyze the effect of Blended Learning and Technology Readiness on Service Quality among students of STKIP Modern Ngawi. This study was motivated by the decline in the quality of educational services perceived by students, especially in the aspects of service responsiveness, learning facilities, and the effectiveness of the learning system in the digital era. The research approach used was quantitative with a survey method. The study population was 186 active students of STKIP Modern Ngawi, with a sample size of 126 respondents determined using the Slovin formula. Data collection techniques were carried out through distributing questionnaires using a Likert scale. Data analysis used multiple linear regression with the help of the IBM SPSS Statistics application. The results showed that Blended Learning had a positive and significant effect on Service Quality with a t-value of 5.374 and a significance of 0.000. Technology Readiness also had a positive and significant effect on Service Quality with a t-value of 6.281 and a significance of 0.000. Simultaneously, Blended Learning and Technology Readiness had a significant effect on Service Quality with an F-value of 118.562 and a significance of 0.000. The Adjusted R Square value of 0.777 shows that the Blended Learning and Technology Readiness variables are able to explain Service Quality by 77.7%, while the remainder is influenced by other variables outside the study.

Keywords: Blended Learning, Technology Readiness, Service Quality.

INTRODUCTION

The digital transformation in the education sector has encouraged higher education institutions to develop more flexible, adaptive, and technology-based learning systems. This change has accelerated since the widespread use of digital technology in higher education learning. Educational institutions are required to provide quality academic services through the integration of technology and modern learning systems to effectively meet student needs (Bond et al., 2021). In the context of higher education, service quality is a crucial indicator of student satisfaction and learning experience during the academic process (Sultan & Wong, 2022).

Service quality in education is not only related to physical facilities, but also encompasses the quality of learning interactions, ease of access to academic services, faculty responsiveness, and the effectiveness of the digital learning systems used by universities (Alam & Parvin, 2021). Universities that are able to provide good educational services will have a greater ability to increase student satisfaction, loyalty, and engagement in the learning process (Pham et al., 2023). Therefore, developing the quality of educational services is a strategic issue in the management of modern higher education institutions.

One learning approach that has developed rapidly in recent years is blended learning. This learning model integrates face-to-face learning with digital technology, making the learning process more flexible and efficient (Rasheed et al., 2020). The implementation of blended learning allows students to access learning materials anytime and anywhere through

DOI: https://doi.org/10.47353/sibatik.v5i6.5190

digital platforms provided by educational institutions. This is particularly relevant for students who have limited class attendance due to work, geographic location, or weather factors.

This phenomenon also occurs among students at STKIP Modern Ngawi. Some students often face obstacles in fully participating in face-to-face learning due to work commitments, off-campus activities, and mobility constraints during the rainy season. This situation has the potential to reduce the effectiveness of the learning process if universities continue to rely entirely on conventional learning systems. The implementation of blended learning is seen as a solution that can help students continue to receive optimal learning services without being limited by space and time.

To strengthen the urgency of research on Service Quality at STKIP Modern Ngawi, researchers conducted an initial identification of student perceptions regarding the quality of educational services based on several key indicators of service quality, namely reliability, responsiveness, assurance, empathy, and tangibles. Measurements were conducted using a 1–5 rating scale over several semester periods with 30 respondents. The results of the initial survey showed a tendency for a decline in the quality of educational services perceived by students over time. This condition indicates that the educational services provided have not been fully able to meet student expectations, especially in the context of modern technology-based learning. A visualization of the research problem trend can be seen in the following figure.

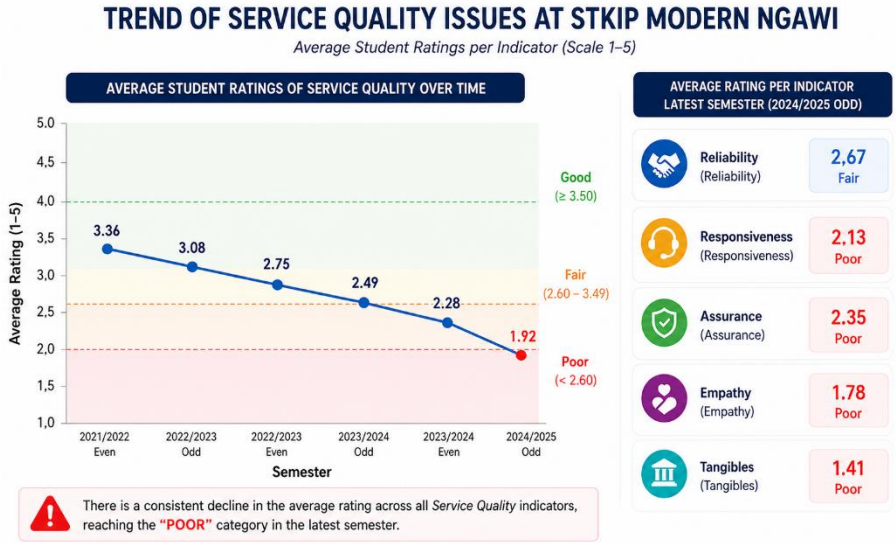

Figure 1. Trend of Service Quality Problems
Source: Pre-Survey, 2026

Based on the graph "Trends in Service Quality Issues at STKIP Modern Ngawi," it can be seen that the average student assessment of the quality of educational services has consistently decreased from the 2021/2022 semester to the 2024/2025 semester. In the even-numbered 2021/2022 semester, the average assessment remained at 3.36, which is categorized as "sufficient." However, this score continued to decline to 3.08, then 2.75, 2.49,

DOI: https://doi.org/10.47353/sibatik.v5i6.5190

2.28, and finally reaching 1.92 in the odd-numbered 2024/2025 semester, which is now categorized as "poor."

This decline indicates that students perceive a decline in the quality of educational services in several key aspects. The reliability indicator scored 2.67, remaining in the "sufficient" category, indicating that the consistency of academic services remains relatively acceptable to students. However, other indicators showed lower scores. The responsiveness indicator scored 2.13, indicating low responsiveness in providing academic services to students. The assurance indicator scored 2.35, indicating that students are not yet fully confident in the quality and competence of the services provided.

The empathy indicator scored 1.78, indicating that attention and concern for student needs were still perceived as less than optimal. The tangibles indicator scored the lowest, at 1.41, indicating that both physical facilities and technology-based learning support facilities were inadequate. This situation demonstrates that infrastructure and digital learning support are key issues affecting the quality of educational services at STKIP Modern Ngawi.

Several previous studies have shown that blended learning has a positive impact on student learning experiences and satisfaction. Research conducted by Martin et al. (2022) explains that blended learning can improve learning effectiveness, academic flexibility, and the quality of student interactions during the learning process. Other research also shows that the use of blended learning contributes to increased student satisfaction by providing easy access to materials, academic communication, and learning efficiency (Yu & Li, 2022). Student satisfaction is fundamentally closely related to perceptions of the quality of educational services received during the learning process.

In addition to blended learning, the success of digital-based educational services is also influenced by the user's technological readiness. Technology readiness is the level of an individual's readiness to accept, understand, and use technology to support specific activities (Parasuraman & Colby, 2020). In the context of higher education, student technological readiness is a crucial factor because students are the primary users of digital learning systems implemented by universities. Students with a high level of technological readiness tend to adapt more easily to digital-based learning systems and have a more positive perception of the quality of academic services provided by educational institutions (Shambare, 2021).

The development of digital learning has made technology readiness an increasingly important aspect in improving the quality of educational services. Students who are optimistic and skilled in using technology will more easily utilize digital learning features, such as learning management systems, virtual classrooms, and online academic services. Conversely, low technology readiness can create obstacles in the learning process and lower students' perceptions of the quality of educational services (Al-Maroof et al., 2021).

Extensive research has been conducted on blended learning and service quality, as has research on technology readiness in the context of educational technology adoption. However, research integrating blended learning and technology readiness to explain service quality in higher education remains relatively limited, particularly in regional higher

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education institutions. This situation indicates a research gap that warrants further exploration.

Based on the phenomena and results of previous research, this study aims to analyze the influence of blended learning and technology readiness on service quality at STKIP Modern Ngawi. This research is expected to provide theoretical contributions to the development of digital education studies and educational service marketing, as well as provide practical contributions to higher education institutions in improving the quality of technology-based educational services.

Based on the research background and phenomena that occurred at STKIP Modern Ngawi, the research questions in this study are as follows:

1. Does Blended Learning affect Service Quality at STKIP Modern Ngawi?
2. Does Technology Readiness Influence Service Quality at STKIP Modern Ngawi?
3. Do Blended Learning and Technology Readiness simultaneously influence Service Quality at STKIP Modern Ngawi?

METHOD

This study employed a quantitative approach with a survey method. The quantitative approach was used because the study aimed to examine the effect of Blended Learning and Technology Readiness on Service Quality among STKIP Modern Ngawi students through numerical data measurement and statistical analysis (Creswell & Creswell, 2021). This study was associative-causal in nature, aiming to analyze the cause-and-effect relationships between the research variables.

The research was conducted at STKIP Modern Ngawi, with active students participating in a blended learning process. The study was conducted during the 2025/2026 academic year.

The population in this study was all active students at STKIP Modern Ngawi who participated in the blended learning system in the 2025/2026 academic year. The population in this study was 186 students based on internal campus academic data.

The sampling technique used probability sampling with a simple random sampling approach, so that each student had an equal opportunity to become a research respondent (Sugiyono, 2022). The sample size was determined using the Slovin formula with an error rate of 5%.

$$n = \frac{N}{1+Ne^2}$$

Information:

- n = number of samples
- N = population size
- e = error rate (5%)

Sample calculation:

$$n = \frac{186}{1+186(0.05)^2}$$

Calculation results:

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N=126.27=126 Respondents

Based on the results of these calculations, the number of samples in this study was 126 respondents from STKIP Modern Ngawi students.

The data collection technique used a questionnaire distributed to students of STKIP Modern Ngawi. The research instrument used a Likert scale of 1–5, ranging from strongly disagree to strongly agree.

The data analysis in this study used IBM SPSS Statistics with multiple linear regression analysis. This analysis was used to determine the effect of independent variables on the dependent variable, both partially and simultaneously.

The regression equation model in this study is:

$Y=\alpha+\beta1X1+\beta2X2+e$

Information:

Y = Service Quality

α = constant

β1 = Blended Learning regression coefficient

β2 = Technology Readiness regression coefficient

X1 = Blended Learning

X2 = Technology Readiness

e = error term

RESULTS AND DISCUSSION

Research Description

This research was conducted at STKIP Modern Ngawi, with 126 active students participating in the blended learning system. Respondents in this study consisted of students from various study programs and semesters who actively used digital-based learning in their academic processes. Respondent characteristics included gender, semester, and intensity of digital learning platform use.

Respondents by Gender

Respondents based on gender can be seen in Figure 2 below.

Table 1. Respondents by Gender

Gender	Amount	Percentage
Man	52	41.3%
Woman	74	58.7%
Total	126	100%

Table 1 shows that there are more female respondents than male respondents. This indicates that female students are more dominant in the blended learning process at STKIP Modern Ngawi. Female students are considered more active in participating in digital learning and utilizing technology-based academic services.

DOI: https://doi.org/10.47353/sibatik.v5i6.5190

Respondents by Semester

Respondents based on semester can be seen in Table 3 below.

Table 2. Respondents by Semester

Semester	Amount	Percentage
Semester 2	24	19.0%
Semester 4	38	30.2%
Semester 6	41	32.5%
Semester 8	23	18.3%
Total	126	100%

Table 2 shows that the majority of respondents, 41 students (32.5%), were from the sixth semester. This indicates that students in their mid- to final semesters are using blended learning systems more frequently due to increasingly complex academic activities and the need for greater learning flexibility.

Respondents Based on Intensity of Digital Platform Use

Table 3. Intensity of Use of Digital Learning Platforms

Intensity of Use	Amount	Percentage
Low	18	14.3%
Currently	47	37.3%
Tall	61	48.4%
Total	126	100%

Table 3 shows that the majority of students have a high level of digital learning platform usage. This indicates that students are quite accustomed to using learning technology in the academic process at STKIP Modern Ngawi.

Data Normality Test

The normality test aims to determine whether research data is normally distributed. The test is performed using a Normal Probability Plot graph using the IBM SPSS Statistics application.

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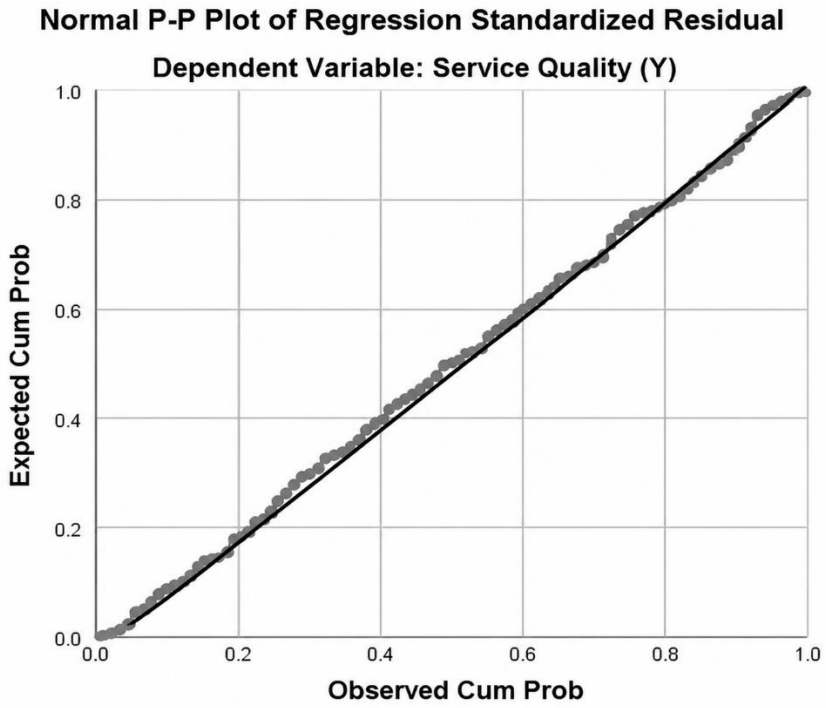

Figure 2. Data Normality Test

The test results show that the data points are spread around the diagonal line and follow the direction of the diagonal line. This condition indicates that the research data is normally distributed, making the regression model suitable for use in this study.

Multiple Linear Regression Equation

Based on the results of data processing using SPSS, the following multiple linear regression results were obtained.

Table 4. Results of Multiple Linear Regression Test

Independent Variables	Unstandardized Coefficients Beta	Std. Error	Standardized Coefficients Beta
Constant	2,184	0.412	
Blended Learning	0.328	0.061	0.351
Technology Readiness	0.417	0.073	0.428

Source: Processed Data, 2026

Based on Table 4, the multiple linear regression equation is obtained as follows:
Y = 2.184 + 0.328 X1 + 0.417 X2
The meaning of the regression equation is as follows:

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a. The constant value of 2.184 indicates that if the Blended Learning and Technology Readiness variables have a constant value, then Service Quality at STKIP Modern Ngawi has a value of 2.184.
b. The regression coefficient value of Blended Learning of 0.328 indicates that every 1 unit increase in Blended Learning will increase Service Quality by 0.328 assuming other variables are constant.
c. The Technology Readiness regression coefficient value of 0.417 indicates that every 1 unit increase in Technology Readiness will increase Service Quality by 0.417 assuming other variables are constant.

t-Test (Partial Effect)

Based on the results of data processing using SPSS, the following t-test results were obtained.

Table 5. t-Test Results

Independent Variables	Beta	t	Sig
Blended Learning	0.328	5,374	0,000
Technology Readiness	0.417	6,281	0,000

Source: Processed Data, 2026

Based on Table 5, it can be explained as follows:

1. The Influence of Blended Learning on Service Quality
   The Blended Learning variable has a t-value of 5.374 with a significance level of 0.000. The significance value is smaller than 0.05 and the t-value is greater than the t-table of 1.979. These results indicate that Blended Learning has a positive and significant effect on Service Quality at STKIP Modern Ngawi. Thus, the first hypothesis is accepted.
2. The Influence of Technology Readiness on Service Quality
   The Technology Readiness variable has a t-value of 6.281 with a significance level of 0.000. This value indicates that Technology Readiness has a positive and significant effect on Service Quality at STKIP Modern Ngawi. Thus, the second hypothesis is accepted.

F Test (Simultaneous Effect)

Based on the results of data processing using SPSS, the following f-test results were obtained.

Table 6. F Test Results

Variables	F	Sig
Blended Learning and Technology Readiness	118,562	0,000

Source: Processed Data, 2026

DOI: https://doi.org/10.47353/sibatik.v5i6.5190

Based on Table 6, it is known that the F-count value is 118.562 with a significance level of 0.000. The significance value is smaller than 0.05, so it can be concluded that Blended Learning and Technology Readiness simultaneously have a significant effect on Service Quality at STKIP Modern Ngawi.

Analysis of the Coefficient of Determination (R^2)

Table 7. Results of the Determination Coefficient Test

Model	R Square	Adjusted R Square
1	0.781	0.777

Source: Processed Data, 2026

Table 8 shows that the Adjusted R Square value is 0.777. This indicates that the Blended Learning and Technology Readiness variables are able to explain the Service Quality variable by 77.7%, while the remaining 22.3% is influenced by other variables outside this study.

The Influence of Blended Learning on Service Quality

The results of the study indicate that blended learning has a positive and significant impact on service quality at STKIP Modern Ngawi. This condition indicates that the implementation of a combination of face-to-face and digital learning can improve the quality of educational services perceived by students. The blended learning system provides flexibility for students to continue learning despite time constraints, work, or weather constraints. The implementation of blended learning also makes it easier for students to access learning materials, conduct academic communication, and obtain educational services more quickly and effectively. These results align with research conducted by Yu and Li (2022), which states that blended learning can improve the quality of the learning experience and student satisfaction in higher education.

The Influence of Technology Readiness on Service Quality

The results of the study indicate that Technology Readiness has a positive and significant impact on Service Quality at STKIP Modern Ngawi. This condition indicates that student readiness in using digital learning technology is a crucial factor in improving the quality of educational services. Students who have good technological skills and readiness tend to be more easily able to utilize digital learning platforms, understand online academic systems, and adapt to technology-based learning processes. This condition has an impact on improving student perceptions of the quality of educational services provided by the campus. The results of this study align with the research of Parasuraman and Colby (2020), which explains that technological readiness plays a crucial role in increasing the effectiveness of the use of digital-based services.

DOI: https://doi.org/10.47353/sibatik.v5i6.5190

The Influence of Blended Learning and Technology Readiness on Service Quality

The results of the study indicate that blended learning and technology readiness simultaneously have a positive and significant impact on service quality. This condition indicates that the quality of educational services at STKIP Modern Ngawi can improve if the institution is able to develop an effective blended learning system supported by good student technological readiness. The integration of digital learning and the readiness of technology users are crucial factors in creating responsive, flexible, and high-quality educational services in the era of digital transformation in higher education.

CONCLUSION

Based on the results of research on the influence of Blended Learning and Technology Readiness on Service Quality at STKIP Modern Ngawi, the following conclusions can be drawn:

1. Blended learning has a positive and significant impact on service quality at STKIP Modern Ngawi. These results indicate that implementing a learning system that integrates face-to-face and digital learning can improve the quality of educational services perceived by students. The better the blended learning implementation, the higher the quality of educational services received by students.
2. Technology Readiness has a positive and significant impact on Service Quality at STKIP Modern Ngawi. These results indicate that student readiness to use digital learning technology is a crucial factor in improving the quality of educational services. Students with strong technological skills and readiness tend to adapt more easily to digital learning systems, leading to a more positive perception of the quality of educational services.
3. Blended Learning and Technology Readiness simultaneously had a positive and significant impact on Service Quality at STKIP Modern Ngawi. These results indicate that improving the quality of educational services can be achieved through the development of an effective blended learning system supported by strong student technological readiness. Integrating these two factors is a crucial strategy for improving the quality of educational services in the era of digital transformation in higher education.

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