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Enhancing Prime Services through Total Quality Management Strategies: Impacts on the Digital Transformation Process at Islamic Universities

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ABSTRACT

Total Quality Management (TQM) is a management approach aimed at enhancing the quality of products, services, and organizational processes. In educational administration, TQM involves applying these principles to boost the efficiency and effectiveness of the education system. This study investigates whether TQM implementation improves digital transformation initiatives and service delivery in educational settings. Using a quantitative approach with the Structural Equation Model (SEM), this research measures and analyzes the relationships between TQM, Digital Transformation, and Prime Services. The study population comprises students from the Faculty of Tarbiyah who have completed at least three semesters, providing them with sufficient experience to assess TQM's effectiveness. Nonprobability quota sampling is used to select respondents based on predetermined criteria. The findings reveal that all reflective indicator variables in the outer model are valid, with high reliability demonstrated by composite reliability and Cronbach's alpha values. The inner model testing shows that exogenous variables can be explained by endogenous variables, including TQM (X1), Digital Transformation (X2), and Prime Services (X3). The results indicate that TQM significantly impacts digital transformation and the enhancement of prime services in education. Recommendations for educational administrators include strengthening TQM principles, increasing investment in digital technology, and focusing on prime services to students. These steps can improve operational efficiency, educational quality, and responsiveness to student needs in the digital era.

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1. INTRODUCTION

Education, the fundamental cornerstone in a nation's progress and development, plays a pivotal role in shaping the future and fostering the growth of a country(Othman et al., 2023). Improving the quality of education is necessary in the effort to produce a younger generation capable of facing the changes of the times and future challenges (Khairani & Tambak, 2023). The advancement of science and technology serves as a critical indicator of the rapid progress of the era. Hence, this development demands an enhancement of education quality across various aspects (Alakrash & Razak, 2021). Currently, the world is entering the era of Digitalization 4.0, the fourth digital revolution era, where information technology has become the foundation of human life (Khasanah & Herina, 2019). However, it encompasses all stages in the education process, from the provision of initial resources and the implementation of the educational process to the resulting outcomes (Andriana & Evans, 2020; Bulturbayevich, 2021). One of the measures of this improvement is enhancing management aspects within educational institutions to achieve high-quality performance (Baharun et al., 2021; Bastas & Altinay, 2019). Various efforts to improve the quality of higher education have been, are currently, and will continue to be implemented gradually and sustainably (Supriyanto, 2011).

TQM has attracted significant attention as one of the critical pillars aimed at aligning itself with the dynamics of global and local changes (Al-Zoubi et al., 2023). Total Quality Management has been known in the business and industrial world (Supriyanto, 2011) (Sanda et al., 2022). Some still use the same term, Total Quality Management (TQM). In contrast, others adapted it to terms like Total Quality Control, Total Quality Service, Continuous Improvement, Strategic Quality Initiatives, and Service Quality, and then it has been adopted in the field of education as Total Quality Education or TQE (Abbas, 2020; Khare et al., 2023). Regardless of the terminology used, the ultimate goal of applying these terms is to enhance quality or quality aspects in managing an institution, whether in the business, industrial, or educational context (Munir, 2022; Wetchan et al., 2023). In recent years, various research efforts have intensively sought to clarify the meaning and practice of TQM in higher education, and the results have presented various perspectives on the topic (Ushantha & Kumara, 2016). The principles of TQM are applied in digital transformation and the enhancement of educational services by focusing on quality sustainability, understanding user needs, improving processes, using data for decision-making, and fostering a collaborative work culture. This means using technology to improve operational efficiency, provide customized learning, optimize administrative processes, analyze data for evaluation, and promote collaboration among teachers, students, and staff. In this way, TQM supports digital education transformation to enhance the overall quality of educational services.

Studying TQM in the context of higher education is a necessity, referring to comprehensive efforts to direct all aspects of activities and processes, whether academic, administrative, or financial, at all levels of educational institutions to meet the demands of the job market and students (Djonlagic & Dedić, 2015; Valencia-Arias et al., 2023). To achieve this goal, TQM creates an organizational culture committed to meeting client needs and providing (Guo, 2016; Satriawan, 2018). Five measurement elements of TQM can be identified in the context of higher education. The elements include quality management, adherence to quality regulations and standards, a focus on student-centered quality, team development, and training (Latif et al., 2019).

The shift towards the digital era and the digital transformation process has permeated all sectors, including education. TQM is vital as an organizational framework and comprehensive management approach (Guggenberger et al., 2021). Higher education institutions have embraced various technologies, including online learning and digital collaboration tools (Tilwani et al., 2022). This approach allows students to access learning materials from anywhere, enhancing accessibility and flexibility in higher education (Banwari, 2022). However, the digital transformation process also changes the culture and processes in universities, presenting challenges such as data security issues (Demillo, 2015). The positive impact of digital technology is also evident in various aspects of learning, including the utilization of modern learning management systems (Alakrash & Razak, 2021). For instance, evaluation models relying on big data technology have the potential to be effective solutions

in improving the efficiency of management evaluation processes (Min et al., 2023). In the context of online learning are becoming increasingly crucial in guiding what best suits the needs of educational units (Yudhana & Kusuma, 2021). The importance should be adapted to the local context and educational levels (Susatio et al., 2022). By implementing TQM, educational institutions can achieve better digital integration and enhance student services. For instance, by prioritizing user needs, such as using technology for smoother and more accessible remote learning. TQM implementation also enables institutions to improve operational efficiency and better respond to student needs, such as providing responsive and interactive learning platforms. Thus, this research provides a practical foundation for educational institutions to integrate technology more effectively and enhance student services, which in turn can improve student learning experiences and overall educational quality.

Improving prime services in higher education is crucial due to increasing competition (Jereb et al., 2018). Universities can utilize technology to provide responsive services aimed at meeting student needs (Jamir & Pongen, 2020), relevant to the research focus on enhancing student services. Furthermore, a cultural transformation supporting prime services requires strong commitment and leadership (Khan & Matlay, 2009; Briody et al., 2022), essential for implementing TQM principles in educational contexts. Emphasizing teamwork among university units aligns with efforts to improve integration and coordination in TQM implementation (Silvia & Beatriz, 2012; Camilleri, 2021). Recognized as a vital foundation for service improvement at the institutional level, implementing quality management systems can be reinforced with a TQM approach (Rosa et al., 2010). Empowering students through leadership development and active participation aligns with efforts to enhance student involvement in service development (Snell et al., 2015; Lin & Shek, 2019;; Aldridge, 2019), further strengthened by implementing TQM principles to enhance interaction between students and universities. This indicates a strong foundation in the existing literature, with a focus on TQM implementation to improve student services and transform university culture.

The State Islamic Institute (IAIN) Ambon, as one of the higher education institutions in Ambon City, has undertaken various initiatives to enhance the quality of education. These initiatives include improving the qualifications of faculty, developing relevant curricula, implementing innovative teaching methods, upgrading facilities, and enhancing the quality of services. As a result, there has been a significant improvement in the overall quality of education. Qualified and competent faculty, community-oriented curricula, engaging teaching methods, and modern facilities have created an optimal educational environment. However, IAIN Ambon acknowledges that challenges persist, particularly in leadership, management, and information technology, which are crucial in improving educational quality. Through careful evaluation, IAIN Ambon recognizes its potential for continuous improvement. Visionary and effective leadership can guide better institutional development strategies, while efficient and transparent management can optimize available resources.

2. METHODS

This research employs the Structural Equation Model (SEM) because it allows researchers to analyze complex relationships among different variables within a single framework. SEM is suitable for this study as it enables the assessment of TQM's impact on digital transformation and prime services by examining both direct and indirect relationships between variables. Moreover, SEM allows for comprehensive model testing, identifying direct and indirect effects, and evaluating model fit with the data. The use of Smart PLS in the analysis aids in executing SEM efficiently and effectively. Smart PLS provides user-friendly tools and supports path analysis, testing direct and indirect effects, and easily evaluating model fit. By using Smart PLS, researchers can gain a deeper understanding of the relationships between the studied variables, validate the model, and interpret the results more effectively. The study reveals the structural model (paths) and the relationships among the variables under investigation. The model evaluates variable assessments, leading to general conclusions based on theory, facts, and empirical evidence. Data collection is conducted by gathering information from a sample representing various population subsets.

The population for this research consists of students from the Faculty of Tarbiyah who have completed a minimum of three semesters. This specific criterion was chosen because students who have completed a minimum of three semesters are considered to have sufficient experience in the educational environment, which can provide better insights into this research. They have passed the initial adaptation phase and have enough experience in navigating the higher education system.The sample is determined using nonprobability sampling, precisely the quota sampling method, resulting in 225 samples (15 times the number of parameters). The quota sampling method is considered appropriate because it allows researchers to select samples according to specific predetermined criteria. Despite its limitations in generalizing results to a broader population, this method provides an opportunity to obtain a representative sample from the population relevant to the research objectives. In this context, the use of quota sampling enables researchers to ensure diversity and adequate representation of students who have completed a minimum of three semesters in the Faculty of Tarbiyah, which is the focus of the study.

This study identifies three main variables: Total Quality Management, Digital Transformation, and prime services as intervening endogenous variables. Total Quality Management and Digital Transformation are considered exogenous variables. Table 1 provides detailed information on the variables that are the focus of this research. Analyzing the relationships among these variables aims to offer a comprehensive understanding of the dynamics between Total Quality Management, Digital Transformation, and prime services. Consequently, this research contributes to a holistic understanding of improving service quality in the context under investigation.

Table 1. Research Variables

Variabel		Indicators		Code
Exogenous Variable	*Total Quality Management*	1.	Focus on customer satisfaction (customer)	TQM 1
		2.	Employee empowerment and involvement	TQM 2
		3.	Continuous improvement in quality	TQM 3
	Digital Transformation	1.	Ease of use	DT 1
		2.	Usefulness	DT 2
Endogenous Variable	Prime Services	1.	Effectiveness of academic guidance	PS 1
		2.	Effectiveness of learning	PS 2
		3.	Effectiveness of administrative services	PS 3
		4.	Focus on students	PS 4
		5.	Effectiveness of facilities and infrastructure services.	PS 5

Based on the developed variables, the research hypotheses can be formulated as follows: First, that the instrument indicators used in this study have adequate validity and reliability. Second, through the empirical data collected, the model designed is capable of explaining the existing relationships between Total Quality Management and digital transformation with prime services. The research utilizes data extracted from closed-ended questionnaires, with a Likert scale used as a measurement tool to serve as indicators for the variables. SEM is selected as the statistical analysis method used to reveal the relationships among the variables in the model. The analysis stages include designing the Inner model to establish relationships among variables, designing the Outer model to assess validity and reliability, measuring Goodness of Fit to validate the performance of the structural measurement model, and hypothesis testing and interpretation. With this approach, the research aims to provide a deeper understanding of instrument validity, relationships among variables, and model performance in the context of Total Quality Management, digital transformation, and prime services.

In designing the outer model based on Confirmatory Factor Analysis (CFA), the primary focus is to test the validity and reliability of the measurement model used in the research. Validity testing employs the convergent validity approach, which is assessed through the Standardized Loading Factor (SLF) or loading factor and Average Variance Extracted (AVE). Indicators are considered to have high convergent validity if the outer loadings > 0.70 and AVE > 0.50. The two main latent variables, Total

Quality Management and digital transformation, along with the intervening endogenous variable, prime services, are evaluated to measure convergent validity. The second approach in the measurement model is reliability testing, which includes testing construct reliability and variance extracted for each latent variable. Construct reliability testing measures the internal consistency of indicators of a formed variable, indicating the degree of consistency in the formed variable. Meanwhile, variance extracted assesses the total variance based on indicators successfully extracted by the construct.

By measuring construct reliability and variance extracted for each latent variable, this research ensures that the measurement model used has an adequate level of validity and reliability. If the construct reliability value of a formed variable > 0.70, it can be considered reliable, ensuring that the indicators used are appropriate and consistent in measuring that variable, with the formula:

$$\textit{Construct Reliability} = \frac{(\Sigma\, Std.Loading)2}{(\Sigma\, Std.Loading)2 + \Sigma\varepsilon 1} \quad \text{..........} \quad (1)$$

The variance extracted is a measure that assesses how much of the total variance is successfully extracted by the indicators of a latent variable. If the variance extracted value of a latent variable is > 0.70, then the variable is considered reliable, with the formula:

$$\textit{Variance Extracted} = \frac{(\Sigma\, Std.Loading)2}{\Sigma\, Std.Loading2 + \Sigma\varepsilon 1} \quad \text{..........} \quad (2)$$

In structural analysis, the first step is calculating the construct reliability and variance extracted values using the abovementioned formulas. The reliability of a variable is considered good if the construct reliability value is above the 0.7 cutoff (Ghozali, 2016). They are implemented by referring to each indicator's output of standard regression weights. Afterward, design the structural (inner) model to determine the relationships between variables following the validation and reliability tests. These relationships are evaluated based on the coefficients of determination (R^2) and path coefficients. The R^2 value measures the extent to which independent variables influence dependent variables. The model is good if the R2 value is > 0.67, moderate if it falls between 0.33 and 0.67, and weak if < 0.33. Adjusted R Square provides a corrected value for R Square, strengthening the assessment of exogenous variables on endogenous variables.

Goodness of Fit (GoF) can be verified using the Stone Geisser Q^2 Value, which focuses on the Q Square predictive relevance test. The model is considered to have predictive relevance if Q Square > 0, indicating that exogenous variables can predict endogenous variables. Minimal predictive relevance is achieved if Q Square < 0. Model deviations can be examined through Root Mean Square Error (RMSEA), where < 0.05 indicates a close fit, while a value > 0.05 indicates a good fit. Hypothesis testing within the inner model involves path coefficients and T-statistics. Hypotheses can be accepted or rejected based on the significance between constructs, measured by T-statistics and p-values. T-statistics> 1.96 indicates significance, while path coefficients are considered positive and significant if the p-value is < 0.05. Path coefficients range from +1 to -1, with positive values indicating a positive relationship and negative values indicating a negative relationship. The magnitude of the path coefficient in the range of 1 signifies an increasingly better relationship, which can be tested for significance (Ghozali, 2016).

3. FINDINGS AND DISCUSSION

3.1 Outer Model Test

The Outer Model Test is a component of construct validity analysis within the structural model framework of Structural Equation Modeling (SEM) or Partial Least Squares (PLS) Path Modeling. This test focuses on measuring indicators or measurement variables in a model, aiming to evaluate the extent to which these indicators meet the standards for measurement accuracy and alignment with the constructs or latent variables represented by the model. Table 2 presents the results of the outer model test on composite reliability.

Table 2. Composite Reliability

Indicator	Cronbach's_ Alpha	Composite_ Reliability (Rho_A)	Composite_ Reliability (Rho_C)	Average Extracted Variance (A.VE)
Total Quality Management	0,851	0,882	0,901	0,696
Digital Transformation	0,915	0,952	0,946	0,853
Prime Services	0,946	0,968	0,961	0,862

Table 2 displays the evaluation results of composite reliability for three leading indicators: Total Quality Management (TQM), digital transformation, and prime services. The evaluation employs various reliability metrics, including Cronbach's Alpha, Composite Reliability (Rho_A), Composite Reliability (Rho_C), and Average Variance Extracted (A.VE). Firstly, Cronbach's Alpha measures internal consistency among indicators forming each construct. TQM has a Cronbach's Alpha value of 0.851, while digital transformation and prime services have higher values, namely 0.915 and 0.946, respectively. All these values indicate a good level of consistency among the measured indicators.

Next, Composite Reliability (Rho_A and Rho_C) provides an additional perspective on construct reliability. Rho_A measures the extent to which the indicators are interrelated and consistent, while Rho_C assesses how reliable the indicators are. All indicators, whether TQM, digital transformation, or prime services, exhibit high Composite Reliability values (above 0.88), confirming that these constructs can be considered reliable. Finally, Average Variance Extracted (A.VE) gives an overview of how much variance in the latent variable measured can be explained by its indicators. All indicators show relatively high A.VE values (above 0.69) indicate that these indicators adequately reflect the variability of the measured constructs.

Overall, the results in Table 1 indicate that all indicators have good reliability levels, providing additional confidence in the validity of the research findings. These results establish a solid foundation for interpreting the analysis results and making decisions based on this research.

3.2 Inner Model Test

After conducting the Outer Model Test to evaluate construct validity and indicator reliability, the next step is the Inner Model Test. The Inner Model Test evaluates relationships among constructs or latent variables represented in the structural model. This analysis aids in understanding the extent to which the model can explain relationships between variables and tests the proposed hypotheses. Table 3 presents the results of the inner model test for this research.

Table 3. Inner_Model

Variable	R_Square	R_Square Adjusted
Total Quality Management	0,546	0,507

Table 3, which includes the R_Square and R_Square Adjusted for the Total Quality Management (TQM) variable in the Inner Model Test, provides an overview of how well the model can explain the variation in this construct. The R_Square for the TQM variable reaches 0.546, indicating that approximately 54.6% of the variation in total management quality can be explained by the factors modeled in this study. This value depicts the fit between the model and observational data, indicating that the model has relatively good capabilities in describing the concept of TQM.

In addition to R_Square, there is the R_Square Adjusted, which adjusts the model's complexity and the number of variables used. With a R_Square Adjusted value of 0.507, we obtain a more conservative overview of the model's ability to explain the variation in TQM. Although R_Square Adjusted is lower than R_Square, it reflects considerations regarding the complexity of the model and assesses whether the addition of variables brings significant value in explaining the variability in TQM.

Subsequently, the evaluation of Q_Square_Predictive_Relevance becomes crucial as it serves as an additional metric to assess the sustainability or predictive capability of the model for the dependent variable, Total Quality Management (TQM). The Q_Square value provides information on how well the model can predict latent variables or responses not used in the model formation. Table 4 presents the results of the Q_Square_Predictive_Relevance value.

Table 4. Q_Square_Predictive_Relevance)

Variable	Q^2predict	RMSE	MAE
Total Quality Management	0,371	0,715	0,59

Table 3 presents the results of the predictive performance evaluation of the model for the Total Quality Management (TQM) variable using metrics such as Q_Square_Predictive_Relevance, Root Mean Square Error (RMSE), and Mean Absolute Error (MAE). Q_Square_Predictive_Relevance for the TQM variable has a value of 0.371. This value indicates how well the model can predict the variation in TQM in test data not used in model formation. The higher the value of Q_Square_Predictive_Relevance, the better the model can maintain its accuracy on test data.

In addition to Q_Square_Predictive_Relevance, the table also includes RMSE and MAE values. RMSE measures the accuracy level of the model predictions by calculating the square root of the average of the squared differences between predicted and actual observed values. An RMSE value of 0.715 indicates a low prediction error level, suggesting that the model can predict TQM with adequate accuracy overall. MAE, which measures the average of the absolute differences between predictions and actual observations, has a value of 0.59, indicating that the model can predict TQM with a low error level.

3.3 Hypothesis Testing

In the hypothesis testing phase, examining the significance between constructs using T-statistic analysis and p-values is crucial. T-statistic is employed to evaluate whether the constructs' differences are statistically significant. The p-values derived from this analysis indicate the extent to which observed data supports or rejects the proposed hypotheses. A low p-value indicates statistical significance, suggesting that the differences between constructs are unlikely to occur by chance. Conversely, a high p-value indicates statistical insignificance. Therefore, interpreting T-statistic and p-values is critical in explaining the acceptance or rejection of a hypothesis, providing profound insights into the relationships between constructs in the context of the conducted research. Table 5 presents the results of the hypothesis testing.

Table 5. Hypothesis Testing

Hip	Variable	TStat	P Val
H1	Total Quality Management -> Digital Transformation	4,981	0,00
H2	Digital Transformation -> Prime Services	1,057	0,145
H3	Total Quality Management -> Prime Services	2,672	0,047

Table 5, the outcome of the hypothesis testing, offers significant insights into the relationships between variables in the research model. The first hypothesis (H1) linking Total Quality Management with digital transformation shows highly significant results, with a T-statistic value of 4.981 and a p-value less than 0.05. It indicates a strong and significant relationship between Total Quality Management and digital transformation in the study context. This finding suggests that the implementation of Total Quality Management potentially has a significant positive impact on digital transformation.

However, in the second hypothesis (H2) investigating the relationship between digital transformation and prime services, the results show a T-statistic value of 1.057 with a p-value around 0.145. Although it does not reach the conventional significance level of 0.05, the interpretation of the relatively low p-value indicates a tendency for a relationship between digital transformation and prime services. In this case, the research may require more data or additional analysis to clarify this relationship.

The third hypothesis (H3) examining the correlation between Total Quality Management and prime services yields significant results, with a T-statistic value of 2.672 and a p-value around 0.047. It indicates a significant relationship between Total Quality Management and prime services implementation in the context of the study. This finding strengthens the argument that organizations or entities implementing Total Quality Management can be expected to provide better prime services.

Discussion

Total Quality Management (TQM) and digital transformation are two interrelated concepts that can positively impact organizational performance. In the context of this research, statistical analysis results indicate a strong and significant relationship between TQM and DT. For instance, Wassan et al. (2022) study found that TQM implementation can enhance operational efficiency and product quality, consequently supporting digital transformation. With a statistical T value of 4.981 and a p-value less than 0.05, these findings strongly support the hypothesis that TQM positively contributes to digital transformation. Additionally, this research holds vital implications for organizations facing digital transformation challenges. According to Mayakova (2019), TQM implementation can be a robust foundation for achieving success in digital transformation. It aligns with the statistical values reflecting a positive and significant correlation between TQM and digital transformation. Thus, organizations may consider TQM implementation a strategic initial step to enhance digital transformation effectiveness. However, it is crucial to note that these research findings are contextual and may vary based on each organization's unique characteristics and conditions. Therefore, contextual evaluation and adaptation of these findings to specific organizational needs are essential. As an inspirational source and practical guide, this research contributes positively to understanding the interplay between TQM and digital transformation.

This research highlights the relationship between Digital Transformation and Prime Services in the context of higher education. Although the results of the second hypothesis (H2) testing showed a statistical-T value of 1.057 with a p-value around 0.145, not reaching conventional significance levels (0.05), the relatively low p-value interpretation indicates a tendency for a relationship between digital transformation and prime services (Plekhanov et al., 2022). Nevertheless, it is essential to note that these results require additional data or further analysis to clarify and validate this relationship. Recognizing that p-values approaching significance levels provide initial indications of relationships between studied variables but are not robust enough for definitive conclusions, further research can delve deeper by considering additional factors influencing the digital transformation and prime services relationship. For example, subsequent studies could explore the influence of mediating or moderating variables for a more comprehensive understanding of this connection (Chatterjee et al., 2023). This is consistent with previous research findings stating that digital transformation can improve service quality (Jereb et al., 2018). However, it is important to note that these results require additional data or further analysis to clarify and validate this relationship (Susatio et al., 2022). Further research could consider factors influencing this relationship, such as technology readiness, supportive leadership, or resistance to change (Jamir & Pongen, 2020,; Khan & Matlay, 2009; Briody et al., 2022). Additionally, other variables such as technology infrastructure, staff skills, or organizational culture could also be factors influencing it (Silvia & Beatriz, 2012; Camilleri, 2021). Given the importance of understanding this relationship, future research could further explore these factors to develop more effective strategies in overcoming potential barriers to successful digital transformation (Rosa et al., 2010; Aldridge, 2019).

This study highlights the relationship between Total Quality Management (TQM) and prime services in an organizational context. The analysis reveals that TQM implementation significantly impacts the enhancement of prime services, with a statistical-T value of 2.672 and a p-value around 0.047, indicating a significant relationship between TQM and prime services (Guggenberger et al., 2021). Support for this finding is found in previous research indicating that TQM practices positively contribute to improving service quality (Ushantha & Kumara, 2016). The implications of these findings are that organizations implementing TQM can expect an improvement in the quality of services provided, consistent with the TQM concept that emphasizes sustained efforts to enhance overall quality (Al-Zoubi et al., 2023). However, it is essential to note that the success of TQM implementation also depends on other factors such as organizational commitment, supportive leadership, and employee participation (Abbas, 2020). In this context, the application of TQM principles in educational organizations also shows positive results, with a significant improvement in educational services (Khare et al., 2023). These findings indicate that higher education can leverage TQM principles to enhance the quality of services provided to students and other stakeholders (Supriyanto, 2011). With a focus on the business context, TQM has also been proven effective in increasing customer satisfaction and product quality (Sanda et al., 2022). Overall, these findings provide strong evidence to illustrate the positive relationship between TQM implementation and the enhancement of prime services in various organizational contexts (Munir, 2022).

4. CONCLUSION

This study explores the relationship between Digital Transformation and Prime Services in higher education institutions. The results indicate that, although not statistically significant, with a statistical-T value of 1.057 and a p-value around 0.145, there is a tendency for a relationship between digital transformation and prime services. This highlights the importance of understanding the impact of digital technology on service quality in educational institutions. Despite not being statistically significant, these findings can serve as an initial basis for educational institutions to evaluate the impact of digital transformation on their services. Conversely, the findings show that the implementation of Total Quality Management (TQM) has a significant impact on enhancing prime services. With a statistical-T value of 2.672 and a p-value around 0.047, these results affirm that a comprehensive quality management approach can improve user experience and satisfaction in the higher education environment. TQM is a structured system for managing processes to ensure that products or services meet defined quality standards. Additionally, research limitations, such as sampling methods and geographic or cultural contexts, can affect the relevance of the findings.

The implications of these findings are highly relevant for educational institutions in prioritizing quality management practices to enhance the services provided to students and other stakeholders. By applying TQM principles, educational institutions can ensure that the services they provide are of high quality and responsive to user needs. This is crucial in the increasingly competitive higher education environment, where student satisfaction and service quality are key to maintaining and enhancing institutional reputation. Furthermore, this research emphasizes the importance of understanding the relationship between quality management practices and prime services. By identifying factors influencing this relationship, educational institutions can develop more effective strategies to improve service quality. For example, they can focus on staff training, developing a supportive organizational culture, or optimizing internal processes. This study also provides a foundation for further research. Further studies can explore other factors influencing the relationship between digital transformation and prime services, as well as further investigate how educational institutions can effectively implement TQM. Thus, further research can provide deeper insights into enhancing the student experience and overall educational services in higher education institutions.

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