

ORIGINAL ARTICLE

Service quality as an imperative to achieve loyalty: the case of a private educational institution in Lima, Peru 2022

ABSTRACT

Quality is an imperative in services, especially in the education sector, since it trains the professionals of the future who will contribute to the development and growth of society. In fact, the university reform is aimed at achieving excellence in university education through continuous improvement, starting with the implementation of basic quality conditions controlled by the Superintendencia Nacional de Educación Superior Universitaria (SUNEDU). Thus, today there are universities that have demonstrated these conditions, but there is still much to be done. Therefore, this research aims to determine how service quality is related to customer loyalty of a private university in Lima, Peru, 2022. To this end, an applied non-experimental quantitative approach, with a cross-sectional descriptive correlational design was carried out. The study sample consisted of 392 undergraduate students belonging to a private university educational institution. The results of the research revealed a significant relationship between service quality and customer loyalty. Consequently, it is found that the higher the quality of service provided by the educational institution, the higher the loyalty of the students. This phenomenon implies that students could not only recommend the institution to potential clients, but also choose to continue their graduate studies at the same institution.

Keywords: service quality; loyalty; university education; excellence; continuous improvement.

**Graciela Nancy Callupe
Rivera**

nancy_callupe@hotmail.com

ORCID: <https://orcid.org/0000-0003-1645-0754>

Universidad Norbert Wiener,
Facultad de Ingeniería y
Negocios, Lima, Peru

Submitted: 02/27/2024 - Accepted: 04/19/2024 - Published: 06/30/2024

INTRODUCTION

Quality education, especially focusing on university students, is a challenge that universities want to meet, as it will allow them to strengthen themselves in the long term and retain their students, even more so in a competitive and changing environment (Bravo, 2020). However, given the increase in enrollments worldwide, which has resulted in a significant expansion of university education in the last twenty years, there are doubts about quality, especially in private institutions (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). In the Peruvian context, the number of universities has grown significantly, since in 1959 there were only nine universities, but in the 1990s this number increased to 30 and later to 56. In 1996, Legislative Decree No. 882 authorized the creation of more universities, both for-profit and non-profit (Superintendencia Nacional de Educación Superior Universitaria [SUNEDU], 2015). This measure led to an expansion of university offerings, but without the necessary rigor in terms of the quality of services (Molina, 2020).

Education is essential in people's lives because it contributes to their professional training and development in the labor market and in society. In this sense, the provision of quality services in educational institutions, especially at the university level, is very necessary (Barragán *et al.*, 2022). In Peru, there have been several reforms aimed at improving the quality of university education. The last one took place in 2014 with the enactment of Law 30220, which aimed to ensure the quality of university education, with the oversight body being the Superintendencia Nacional de Educación Superior Universitaria (SUNEDU), an institution that regulates and monitors the implementation of quality in universities (Gallegos *et al.*, 2022). The first step was to establish basic quality conditions in higher education institutions in order to obtain accreditation. However, not all institutions have been able to demonstrate this, with less than one hundred universities meeting the minimum quality requirements; therefore, they have licenses to operate for 6 to 10 years, after which they must apply for renewal (SUNEDU, 2021).

However, there is still much room for improvement to achieve excellence. To this end, it is crucial that universities implement policies that ensure the perfection of their services, with the aim of improving the quality of university education. The next important step is to achieve accreditation through the application of rigorous quality standards (Barragán *et al.*, 2022; SUNEDU, 2015). Likewise, they will achieve student loyalty by retaining current students and attracting new ones, since good service strengthens relationships with them and is the key to long-term survival and success in three areas: at the level of the institution, at the level of society, and at the level of students' professional development (Del Río-Rama *et al.*, 2021).

Thus, there is a need to improve the quality of service in the Peruvian university system in order to guarantee a competitive education and the training of qualified professionals, while universities, especially private universities, want to retain their students and encourage them to act as service promoters to attract other potential students. However, the question is how service quality and loyalty are related. Therefore, the objective of this study is to analyze how service quality is related to customer loyalty in a university in Lima, Peru, in the year 2022. In addition, it aims to determine whether the dimensions of service quality, according to the SERVQUAL model, are related to student loyalty.

The SERVQUAL model is of fundamental importance to educational institutions because it provides a student-centered methodology for improving service quality in higher education. By focusing on the gap between student expectations and perceptions, this model provides a valuable tool for identifying areas for improvement and prioritizing corrective actions, which is critical for institutions committed to service excellence and student satisfaction. In addition, its ability to facilitate the implementation of continuous improvement strategies contributes significantly to raising quality standards and enhancing institutional reputation, underscoring its undeniable relevance in the field of education (Barragán *et al.*, 2022).

Service quality

It is defined as the degree to which a service meets the needs, wants, and expectations of customers. It can also be understood as the participants' perception of the service's ability to meet or exceed their expectations. Only those who need, request and experience the service can evaluate its quality (Jiminián, 2013). Similarly, in the literature related to this topic, the concept of quality is linked to perceived quality, which implies the consumer's evaluation of the excellence and superiority of a product (Duque, 2005).

In a competitive context, service quality is recognized as a critical factor for growth, survival and business success. It is also defined as the difference between what consumers perceive about the service provided by a company and their expectations of the company providing that service (Yesitadewi and Widodo, 2023). However, the evaluation of service quality is intended to contribute to the establishment of a quality management system within an organization (Mejías, 2005).

Quality and education

In education, quality plays a crucial role and is presented as a highly effective strategy to strengthen universities, since its analysis is directly linked to curricular processes, academic accreditation and the collaboration of university institutions (Pérez and Pinto, 2020). The main service is focused on learning, while others cover areas such as psychology, nutrition, primary health care, library, recreational and sports activities, community and parental services. Schools offer a variety of services that have the potential to generate transformations and improvements in service value creation, enabling them to exceed customer expectations. As in any service organization, in schools it is possible to identify internal and external supplier-customer relationships and various interrelated processes that work effectively and efficiently to deliver educational services (Ropa, 2014).

According to SUNEDU (2015), quality at the university level is related to the degree of alignment between the actions carried out by the university or academic program to

implement the guidelines established in the institutional mission and objectives, and the results obtained through these actions, a level of quality that should be based on both internal and external considerations. Furthermore, in order to guarantee quality, it is necessary to have control by the public authority, which is materialized through the accreditation process to ensure compliance with minimum quality conditions. Subsequently, appropriate processes must be implemented to ensure excellence in service through accreditation. This last process will promote a culture of quality improvement in which institutions demonstrate their ability to implement appropriate quality assurance mechanisms.

Models

The models propose to use the measurement of service quality as a tool that supports control and facilitates decision-making (Mejías, 2005). Over the years, many models have been developed, among which the SERVQUAL model stands out, which, despite its age, is a reference for the development of many studies. It corresponds to the North American school and was developed by Parasuraman and colleagues, and is also based on customer expectations and perceptions (Torres and Vasquez, 2018). This model proposes five dimensions: tangible elements, reliability, responsiveness, security and empathy (Paredes and Santos, 2022).

Another model that considers dimensions similar to SERVQUAL, with the exception of those related to expectations, is the SERVPERF model. This scale is less ambiguous when it comes to evaluating perceptions of service quality, where perception is the only determining element for evaluating the quality of any service. It was created by Cronin and Taylor in 1994 (Ibarra and Casas, 2015). For his part, Christian Grönroos proposed a Nordic model in 1984, which emphasizes the link between quality and the image of the organization. In this model, the relationship between the quality perceived by the customer, which includes both technical quality (physical aspects) and functional quality (customer treatment), is crucial. In short, the customer experience is influenced not only by the result of the service, but also by

the way it is delivered and the image of the organization (Duque, 2005).

The HEDPERF model is more specific because it was designed to assess the quality of services in higher education institutions and was developed by Firdaus Abdullah in 2005 (Duque and Diosa, 2014). This model consists of six dimensions designed to analyze the perception of educational services, which include academic aspects, non-academic aspects, reputation, access, programs and understanding (Álvarez, 2021). This category also includes the SERVQUALING model, adapted from SERVQUAL, which focuses only on perceptions (Balderrábano *et al.*, 2023). It involves placing the student, among other customers, at the center of considerations, projects and inputs in efforts to improve service quality. In essence, it is a profound transformation of perspectives and practices (Mejías, 2005).

However, this research will focus on the SERVQUAL model, since it is characterized by providing companies with a systematic and measurable structure for the continuous analysis and improvement of their services. This approach helps to strengthen customer loyalty and maintain competitiveness in the market (Cañón Cárdenas and Rubio Rodríguez, 2018). These findings reinforce the importance of maintaining and constantly improving the quality of educational services as a key element to foster student loyalty and, therefore, contribute to sustainable development and academic excellence. In this sense, the objective is to determine the relationship between service quality and customer loyalty.

Dimensions of Service Quality according to the SERVQUAL Model

- **Tangible elements.** It refers to the evaluation that customers make about the appearance of a company's facilities, personnel, equipment used, materials, and communications (Challenges in Supply Chain, 2023). That is, it focuses on tangible physical aspects such as infrastructure and other elements that can be perceived through the sense of touch (Matsumoto, 2014).
- **Reliability.** This is the customer's assessment of a company's ability to provide products or services that are reliable, of high quality, and delivered on time (Challenges in Supply Chain, 2021). In this sense, it means accurately and reliably delivering the promised service to the customer in accordance with what has been established (Contreras, 2021).
- **Responsiveness.** This refers to the ability to perform multiple tasks without causing delays (Yarlequé *et al.*, 2022). Similarly, it refers to the willingness at both the corporate and individual levels to assist customers, ensure timely delivery of services, and respond quickly to customer requests (Silador *et al.*, 2022).
- **Safety.** This refers to the ability and skills of the personnel to ensure confidence in the service provided to the customer, thus seeking to achieve credibility (Dolors, 2004). To this end, the employee shows willingness to assist the customer and provide prompt and appropriate service, including the timely fulfillment of the necessary requirements. In addition, the accessibility of the organization or company to the customer is evaluated (Salvador *et al.*, 2008).
- **Empathy.** It is the emotional affinity, usually charged with emotionality, that an individual experiences toward another's reality. It refers to the level of understanding and connection with another person's feelings. It consists of the ability to put oneself in someone else's shoes, to adopt their point of view, and to objectively understand their emotions and behavior (Varo, 1994). The customer can form an opinion about a particular service based on the interaction, treatment, and communication, aspects that are provided through empathy (Tumino and Poitevin, 2014). In education, service quality refers to the ability of an institution to meet the needs and

expectations of its students, both in academic terms and in their overall learning experience (Reyes *et al.*, 2020). To understand how students perceive this service quality and its relationship in loyalty (Barragán *et al.*, 2022). Therefore, it is essential to determine the relationship between service quality and student loyalty, using dimensions such as tangible aspects (conditions of facilities, available educational resources), reliability (timeliness and quality of teaching), responsiveness (accessibility of teaching and administrative staff), safety (perception of physical and emotional safety on campus) and empathy (staff attitude and support towards students). In summary, the evaluation of these specific dimensions provides a way to measure the quality of service in the educational environment, the improvement of which can significantly optimize the student experience and student retention in the educational institution, based on the degree of relationship that these dimensions have with student loyalty.

- **Customer Loyalty.** It involves the active participation of an engaged consumer who has the willingness or intention to continue using the products or services offered by a company, which arose from their positive experiences with the company, which materializes with frequent repurchase for a period of time (Widodo and Jauhari, 2023), since customer loyalty can be described as the inclination or desire of customers to make repeated purchases from a company over time, thus generating benefits and advantages for the company (Venkatakrisnan *et al.*, 2023). However, a better understanding of the elements that influence customer loyalty can increase long-term revenues and broaden the understanding of sustainable competitive advantage (Mansouri *et al.*, 2022).
- **Dimensions of loyalty.** For companies, frequent purchases are important

because they generate long-term profitability. Consequently, it is important to build customer loyalty, which is the willingness or intention of customers to continue using the products or services offered by a company because of their good experience (Kalia *et al.*, 2021). In this sense, given the high competition in the market, companies have to focus on certain elements to reach their customers (Mazzini, 2020). In this sense, the loyalty cloverleaf is born, in the center of which is the quality of service, surrounded by five dimensions as petals, namely:

- Customer Information. Derived from CRM, it is essential and should be focused on achieving customer satisfaction through personalization. Data-driven customer management focuses on preventing and anticipating customer churn.
- Effective implementation of internal marketing. This is the only way to achieve the active, determined and voluntary participation of all employees, especially in services where human intervention plays a crucial role.
- Communication with the client. It must be clear and detailed, adapted to their individual needs, capable of creating emotional bonds and providing practical and useful information (Alcaide, 2010a).
- Experiential marketing. It generates different experiences, sensations and emotions in the customer; this is achieved by creating experiences related to perception, feelings, thoughts, actions and relationships. Marketing is approached in a holistic way, from the construction of the brand to the individual behavior of employees.
- Incentives and privileges. It is essential to recognize and value loyal customers, rewarding them for

their commitment to the company and, in some cases, sharing some of the benefits generated by their business with the organization through incentives and privileges.

Loyal customers represent a significant source of profitability and benefits for companies that manage to build a loyal customer base (Alcaide, 2010b).

METHODS

The research used an applied methodology of descriptive and correlational scope, with a non-experimental cross-sectional design because the data and information collection was done at a single point in time. The population for this study was 16,932 undergraduate students enrolled in the 2022-II semester from the first to the tenth cycle of the 16 undergraduate programs offered by the institution. Students who were not enrolled in that semester were excluded, as were graduates and administrative or managerial personnel.

The sample was selected using probability sampling, since each element of the population has an equal chance of being selected for the sample. The selection is made by defining the characteristics of the population and the sample size, using a random selection process (Hernández-Sampieri and Mendoza, 2018). Then, the formula for infinite populations was applied.

$$n = \frac{N \times Z^2 \times p \times q}{(N - 1) \times e^2 + Z^2 \times p \times q}$$

Where

n = Sample size.

N = Total population.

Z = Value determined by the confidence level chosen.

e = Sampling error (allowable error 5%).

p = Proportion of elements having a characteristic to be studied.

q = Proportion of elements that do not have a certain characteristic, p + q = 1.

The following data were assigned to each of these elements:

$$n = \frac{16932 \times 1.96^2 \times 0.5 \times 0.5}{(16932 - 1) \times 0.05^2 + 1.96^2 \times 0.5 \times 0.5}$$

$$n = \frac{16261.4928}{43.2879} = 375.659083$$

This resulted in a total of 376 students being contacted; however, after the information was collected, 392 students chose to participate. Therefore, they were included in the study.

Questionnaires and surveys were used as data collection tools, highlighting their importance in the research due to their ease of access, uniformity, confidentiality, and adaptability. These methods offer an efficient and economical way to obtain direct information from participants (Hurtado, 2000, cited in Arias *et al.*, 2022), making it possible to evaluate service quality and measure student loyalty, and their use provides valuable information that can be used to improve the customer experience and strengthen the company-customer relationship. It is important to note that in this type of instrument, there are no right or wrong answers; all are acceptable for the purpose of the study (Carhuancho *et al.*, 2019). For this study, a survey was considered for each variable. For the first variable, a survey with 22 questions was considered, which addressed the dimensions of the SERVQUAL model; on the other hand, for the second variable, the model proposed by Juan Carlos Alcaide, called Loyalty Clover, was considered, which consisted of 19 questions. Both have been duly validated by experts, who validated them with 97%. Similarly, the instruments showed good reliability (Cronbach's alpha = 0.986 for the variable of service quality and Cronbach's alpha = 0.981 for the variable of customer loyalty).

On the other hand, the surveys were applied by mail and institutional intranet through a Google form in December 2022, and to ensure voluntary participation an informed consent was applied. Then, data processing was carried out with the support of Excel 2016 and SPSS version 26.

RESULTS

The data were then processed using the Spearman coefficient. This coefficient was considered because it is a statistical test designed to evaluate the presence of a linear relationship between two quantitative variables when the data do not follow a normal distribution. If a result close to 1 is obtained, it indicates a strong correlation between the variables, while a result close to 0 indicates the absence of a significant relationship (Mendivelso, 2021). From the same, the level of significance was considered for the respective analysis (if it is less than 0.05, the null hypothesis is rejected) of the following hypotheses:

The results obtained in the present research provide a clear view of the relationship between the study variables. By analyzing the data, it was found that service quality and student loyalty are related.

According to Table 1, it can be seen that both variables obtained a Spearman's coefficient of 0.935, which shows that service quality and student loyalty have a very strong positive correlation. This means that if students perceive that they receive a high level of quality in the services offered by the university, they are more likely to decide to continue their education at that institution instead of looking for other options. Therefore, service quality plays an important role in student retention. Consequently, focusing on improving service quality can be an effective strategy to ensure student retention.

Table 2 shows that the Spearman's coefficient between the service quality and loyalty

dimensions exceeds 0.866, with a significance level of 0.00 in all cases. There is a very strong and positive relationship between reliability and security, as evidenced by coefficients close to 1 (Spearman's Rho: 0.900 and 0.927), which suggests that students perceive an institution that offers them a high level of reliability in services, as well as a secure environment and transactions; therefore, they are more likely to be loyal to it.

However, the tangible elements (empathy and responsiveness) show slightly lower results (Spearman's Rho: 0.867; 0.898 and 0.887, respectively), all with a significance level below 0.05. This indicates that aspects such as the quality of the facilities, the attention and understanding of the management, administrative and teaching staff towards the needs of the students, as well as the promptness in responding to their concerns are important because they are related to their decision to stay in the university.

Therefore, all null hypotheses are rejected, indicating a significant positive correlation between these dimensions and student retention in a private university educational institution. These findings support that improvement in these specific areas can have a positive relationship with student satisfaction and loyalty. Consequently, they provide a solid basis for implementing strategies to strengthen these dimensions in order to ensure a better student experience that guarantees retention in the educational institution.

DISCUSSION

Table 1
Correlations between service quality and customer loyalty

| | | Service Quality | Loyalty |
|-----------------------|-----------------|-------------------------|---------|
| Spearman's Rho | Service Quality | Correlation Coefficient | 1.000 |
| | | Sig. (two-tailed) | .935** |
| | | N | 392 |
| | Loyalty | Correlation Coefficient | .935** |
| | | Sig. (two-tailed) | 1.000 |
| | | N | 392 |

Note. Prepared by the authors, 2024.

Table 2
Correlations between service quality and loyalty dimensions

| Correlations | | Loyalty | Tangible items | Empathy | Reliability | Responsiveness | Safety | |
|----------------|-------------------|-------------------------|----------------|---------|-------------|----------------|--------|--------|
| Spearman's Rho | Loyalty | Correlation Coefficient | 1.000 | .867** | .887** | .900** | .898** | .927** |
| | | Sig. (two-tailed) | . | .000 | .000 | .000 | .000 | .000 |
| | | N | 392 | 392 | 392 | 392 | 392 | 392 |
| | Tangible elements | Correlation Coefficient | .867** | 1.000 | .899** | .870** | .845** | .859** |
| | | Sig. (two-tailed) | .000 | . | .000 | .000 | .000 | .000 |
| | | N | 392 | 392 | 392 | 392 | 392 | 392 |
| | Empathy | Correlation Coefficient | .887** | .899** | 1.000 | .924** | .911** | .895** |
| | | Sig. (two-tailed) | .000 | .000 | . | .000 | .000 | .000 |
| | | N | 392 | 392 | 392 | 392 | 392 | 392 |
| | Loyalty | Correlation Coefficient | .900** | .870** | .924** | 1.000 | .916** | .906** |
| | | Sig. (two-tailed) | .000 | .000 | .000 | . | .000 | .000 |
| | | N | 392 | 392 | 392 | 392 | 392 | 392 |
| | Responsiveness | Correlation Coefficient | .898** | .845** | .911** | .916** | 1.000 | .915** |
| | | Sig. (two-tailed) | .000 | .000 | .000 | .000 | . | .000 |
| | | N | 392 | 392 | 392 | 392 | 392 | 392 |
| | Safety | Correlation Coefficient | .927** | .859** | .895** | .906** | .915** | 1.000 |
| | | Sig. (two-tailed) | .000 | .000 | .000 | .000 | .000 | . |
| | | N | 392 | 392 | 392 | 392 | 392 | 392 |

Note. Prepared by the authors, 2024.

According to the results obtained, this research showed a very strong and positive relationship between service quality and student loyalty in a private institution located in Lima, Peru. It also confirmed the existence of a correlation between the different dimensions of service quality (such as tangibles, reliability, responsiveness, safety and empathy) and the variable of student loyalty. These results are consistent with those of Silva (2022), who also demonstrated a significant relationship between educational service quality and student retention in private banking institutions, identifying a positive and robust correlation between both variables (Spearman's Rho: 0.711, $p = 0.00$). In addition, a Pearson's chi-square analysis was performed = 93.974, which confirmed the significant relationship between service quality and retention.

In contrast to this study, Del Río-Rama *et al.* (2021) indicated that expectations and perceived satisfaction play a crucial role in students' loyalty, influencing their behavior both to recommend the center's services to other students and to continue their Master's studies at the same institution. They reached this conclusion by applying factor analysis, confirmatory and exploratory by means of structural equations. On the other hand, in another research, as in this study, the relationship

between service quality and its dimensions of the SERVQUAL model was analyzed among students of Universidad de Colima in Mexico. They showed that the tangible elements and empathy dimensions were significantly related to service quality (P-value: 0.00145 and 0.00167) compared to the other dimensions (Barragán *et al.*, 2022).

In contrast, a study in Iraq found that tangibles (0.316), safety (0.311), and empathy (0.258) were the most important dimensions of service quality in different university departments. The results indicate a difference in the evaluation of service quality dimensions between the students of architectural engineering in Iraq and those in the present research, who prioritize reliability and security provided by the university (Saadoon *et al.*, 2022). However, in this research, it was found that according to the Peruvian context, reliability (Spearman's Rho = 0.900) and safety (Spearman's Rho = 0.927) were the most influential dimensions according to the students' perception.

In comparison to the present study, De Oliveira *et al.* (2020) used structural equation modeling to investigate the factors that influence the satisfaction of 505 students in technical colleges in Brazil. Their results indicated

that the quality of services, academic performance, job opportunities, perceived image, and perceived value were important determinants of student satisfaction. They recommended adjustments to the curriculum to adapt it to the demands of the labor market, and emphasized the importance of monitoring and improving the educational system by taking into account students' perspectives and employability-related outcomes.

Another study, carried out at Universidad Sámman de Jalisco, Mexico, examined the quality of university services as perceived by students and its relationship to the fulfillment of their academic expectations. This analysis was carried out using the SERVQUAL model, similar to the approach used in this study. However, it is important to note that the sample in this case consisted of 73 students, which is smaller compared to the current study. The results of this study indicated a positive evaluation in the dimensions analyzed and in the fulfillment of expectations. In contrast, the present study found a positive relationship with student loyalty. In addition, through a multiple regression analysis, they identified the importance of implementing timely actions in each dimension to increase the effects of perception, an aspect not addressed in the present research (Piñera and Cruz, 2023).

Another study evaluated service quality using a model derived from SERVQUAL, called SERVQUALING, which omitted the consideration of expectations and used multivariate techniques to evaluate the service quality of a university address in Quevedo, Ecuador. The sample consisted of 341 beneficiaries and the results showed that the participants' perception of the service quality of this management was very positive, with a value of 4.79. Consequently, it was concluded that it would be beneficial to implement actions to improve the service quality of the directorate. This finding supports the importance of the service quality factor, which is consistent with the conclusions of this study, and suggests the need to implement improvements in this aspect (Cruz *et al.*, 2022).

When students perceive a high-quality educational service, this generates greater

satisfaction with their experience at the institution. This satisfaction can increase their commitment to the university and strengthen their emotional connection to it, which motivates them to be more inclined to continue their studies there. Therefore, factors such as service quality, expectations and perceived satisfaction are fundamental to retaining students and have an impact on their behavior, whether recommending the institution to other students or deciding to continue their graduate studies in the same place (Del Río-Rama *et al.*, 2021). In this sense, the SERVQUAL model provides five dimensions that allow students to value their perception by comparing it with their expectations regarding the service received at the university. For example, students value personalized attention as part of the tangible aspects and empathy as they consider it essential for their satisfaction and their closer connection with the institution (Barragán *et al.*, 2022).

CONCLUSIONS

The statistical analysis carried out using Spearman's coefficient concludes that service quality has a very strong and positive influence on student loyalty in a private university in Lima, Peru, in the year 2022. The Spearman's coefficient (Rho) is 0.935, with a p-value of 0.000 and a significance level (α) of 0.05. This finding suggests that the higher the perception of service quality, the higher the likelihood of student loyalty, and underscores the need for continuous improvement in the services provided by universities, including areas such as administrative services, infrastructure, and student support, among others, which has significant implications for quality management policies and practices.

This study finds that empathy, as a component of service quality, has a significant positive influence on student loyalty in a private university in Lima, Peru in 2022. The analysis shows a Spearman coefficient (Rho) of 0.887, with a p-value of 0.00 and α of 0.05, indicating that the university provides personalized and courteous treatment by its administrative and managerial staff.

Reliability, as part of service quality, also has a positive and very strong influence on student loyalty at a private university in Lima,

Peru in 2022. The analysis shows a Spearman coefficient (Rho) of 0.900, with a p-value of 0.000 and α of 0.05, demonstrating that the university has the capacity to provide services correctly and solve problems, thus establishing a relationship based on trust.

Physical appearance, another component of service quality, has a positive and significant effect on student loyalty in a private university in Lima, Peru. The analysis shows a Spearman's coefficient (Rho) of 0.867, with a p-value of 0.000 and α of 0.05. The university has well-equipped classrooms and modern laboratories, which contribute to the positive experience of the students.

Responsiveness, as part of service quality, positively and significantly influences student loyalty in a private university in Lima, Peru, in 2022. The analysis shows a Spearman coefficient (Rho) of 0.898, with p-value of 0.000 and α of 0.05, indicating that administrative and managerial staff show interest and respond in a timely manner to students' needs.

Security, a service quality component, has a positive and very strong influence on student loyalty in a private university in Lima, Peru, in 2022. The analysis shows a Spearman coefficient (Rho) of 0.927, with a p-value of 0.000 and α of 0.05. The implementation of both physical and privacy security systems contributes to students' perceptions of security, which creates confidence in solving problems safely and securely.

Strengthening security and reliability is essential because of its strong correlation with student loyalty. This means implementing policies and procedures that ensure the confidentiality of information, the physical and emotional safety of students, and consistency in service delivery. In addition, service quality dimensions with lower correlations with loyalty, such as tangibles, empathy, and responsiveness, are identified as areas for improvement. The university could offer staff training programs in these areas to improve student satisfaction and retention. Although the correlations of empathy and responsiveness with loyalty are strong but slightly lower, it is suggested that initiatives be implemented to foster a culture of empathy among staff and improve

processes for responding to student needs and concerns.

Results provide useful insights for improving the management and quality of educational services, suggesting specific strategies such as staff training programs and the implementation of continuous feedback mechanisms, while areas for future research could include comparisons between different types of institutions and longitudinal analysis of this relationship to strengthen student engagement and service quality in other educational institutions.

REFERENCES

- Alcaide, J. (2010a). A vueltas con la fidelización de Clientes. *Clienting & Management*. Edición primavera 2010. https://www.esic.edu/documentos/editorial/resenas/9788473566803_Clienting&Management_01-05-10.pdf
- Alcaide, J. (2010b). *Fidelización de clientes*. ESIC Editorial.
- Álvarez, R. (2021). Evaluación del nivel de satisfacción del estudiante respecto al servicio educativo bajo el enfoque del modelo HEDPERF en las universidades públicas que integran la Alianza Estratégica de la Universidad Peruana y que implementaron el mecanismo de licenciamiento. *Industrial Data*. 24(1), 23-47 <https://doi.org/10.15381/idata.v24i1.17749>
- Arias, J.; Holgado, J.; Tafur, T., and Vásquez, M. (2022). *Metodología de la Investigación*. Instituto Universitario de Innovación Ciencia y Tecnología INUDI Perú S.A.C
- Balderrábano, M.; López, L.; Muñoz, J.; Muñoz, G., and Osorio, E. (2023, del 4 al 13 de octubre). Tomo 01. *Ciencias Administrativas*. Artículos del Congreso Academia Journals Puebla IEU 2023. [Ponencia]. Congreso Internacional de Investigación Academia Journals, Puebla, México. <https://static1.squarespace.com/static/55564587e4b0d1d3fb1eda6b/t/6521b2c2919e496206540688/1696707272218/Tomo+01+-+Ciencias+Administrativas+-+Art%C3%ADculos+del+Congreso+Academia+Journals+Puebla+IEU+2023.pdf#page=31>
- Barragán, C.; García, J., and Medina, N. (2022). Análisis de la calidad del servicio en IES a través del modelo SERVQUAL. *Revista de Estudios en Contaduría, Administración e Informática*. 11(30), 1-11. <https://www.redalyc.org/articulo.oa?id=637969396001>

- Bravo, C. (2020). Estrategia de marketing relacional para lograr la fidelización de los estudiantes de artes & diseño gráfico empresarial de una universidad. *TZHOECOEN Revista científica Institucional*. 12(3), 334-347. <https://doi.org/10.26495/tzh.v12i3.1331>
- Cañón Cárdenas, A., and Rubio Rodríguez, D. (2018). Importancia de la utilización del modelo SERVQUAL a partir de una revisión sistemática de la literatura en el periodo 2010-2016. [Trabajo de Grado, Fundación Universitaria de Ciencias de la Salud]. <http://repositorio.fucs-lud.edu.co/handle/001/669>
- Carhuancho, I.; Sicheri, L.; Nolazco, F.; Guerrero, M., and Casana, K. (2019). *Investigación Holística; diseño exploratorio; enfoque cuantitativo; población*. UIDE. <https://repositorio.uide.edu.ec/handle/37000/3893>
- Contreras, E. (2021). La medición de la calidad del servicio en destinos turísticos: una revisión desde Colombia. *Innovar*. 31(81), 35-48. <https://doi.org/10.15446/innovar.v31n81.95571>
- Cruz, E.; Montes, K., and Angamarca, G. (2022). Calidad de servicio de la dirección de vinculación universitaria con análisis multivariante. *Ciencias Sociales y Económicas*. 6(2), 14-26. <https://doi.org/10.18779/csye.v6i2.587>
- De Oliveira, J.; De Sousa, G., Devós, G.; Coser, R., and Lizarelli, F. (2020). Antecedents and consequences of student satisfaction in higher technical-vocational education: evidence from Brazil. *International Journal for Educational and Vocational Guidance*. 20, 351-373. <https://doi.org/10.1007/s10775-019-09407-1>
- Del Río-Rama, M.; Álvarez-García, J., Kwon, N., and Durán-Sánchez, A. (2021). Influence of the Quality Perceived of Service of a Higher Education Center on the Loyalty of Students. *Frontiers in Psychology*. 12, 1-14. <https://doi.org/10.3389/fpsyg.2021.671407>
- Dolors, P. (2004). *De la calidad de servicio a la fidelidad del cliente*. ESIC Editorial.
- Duque, E. (2005). Revisión del concepto de calidad del servicio y sus modelos de medición. *Innovar*. 15(25), 64-80. http://www.scielo.org.co/scielo.php?script=sci_abstract&pid=S0121-50512005000100004&lng=en&nr=iso&tlng=es
- Duque, E., and Diosa, Y. (2014). Evaluación conceptual de los modelos de medición de la percepción de calidad del servicio: Una mirada desde la educación superior. *Suma de Negocios*. 5(12), 180-191. [https://doi.org/10.1016/S2215-910X\(14\)70040-0](https://doi.org/10.1016/S2215-910X(14)70040-0)
- Gallegos, A.; Oré, A., and Todorí, D. (2022). Antecedentes de la reforma universitaria en el Perú: Una breve mirada a las normativas. *Telos*. 24(2), 445-456. <https://doi.org/10.36390/telos242.15>
- Hernández-Sampieri, R. and Mendoza, C. (2018). *Metodología de la investigación las rutas cuantitativa, cualitativa y mixta*. McGraw-Hill Interamericana Editores.
- Ibarra, L., and Casas, E. (2015). Aplicación del modelo Servperf en los centros de atención Telcel, Hermosillo: Una medición de la calidad en el servicio. *Contaduría y Administración*. 60(1), 229-260. http://www.scielo.org.mx/scielo.php?script=sci_abstract&pid=S0186-10422015000100010&lng=es&nr=iso&tlng=es
- Jiminián, Y. (2013). Estudio sobre la calidad del servicio educativo en la Escuela de Postgrado de la Universidad Abierta para Adultos (UAPA). *Educación Superior*. 18,81-108. <https://dialnet.unirioja.es/servlet/articulo?codigo=9026223>
- Kalia, P.; Kaushal, R.; Singla, M., and Parkash, J. (2021). Determining the role of service quality, trust and commitment to customer loyalty for telecom service users: A PLS-SEM approach. *The TQM Journal*. 33(7), 377-396. <https://doi.org/10.1108/TQM-04-2021-0108>
- Mansouri, H.; Sadeghi, S., and Husin, M. (2022). The influence of sellers' ethical behaviour on customer's loyalty, satisfaction and trust. *Spanish Journal of Marketing - ESIC*. 26(2), 267-283. <https://doi.org/10.1108/SJME-09-2021-0176>
- Matsumoto, R. (2014). Desarrollo del Modelo Servqual para la medición de la calidad del servicio en la empresa de publicidad Ayuda Experto. *Revista Perspectivas*. 34, 181-209. http://www.scielo.org.bo/scielo.php?script=sci_abstract&pid=S1994-37332014000200005&lng=es&nr=iso&tlng=es
- Mazzini, B. (2020). *Estrategias publicitarias y fidelización de clientes*. [Tesis para obtener el título de Licenciado, Universidad Laica Vicente Rocafuerte]. <http://repositorio.ulvr.edu.ec/handle/44000/4123>
- Mejías, A. (2005). Modelo para medir la calidad del servicio en los estudios universitarios de postgrado. *Universidad, Ciencia y Tecnología*. 9(34), 81-85. http://ve.scielo.org/scielo.php?script=sci_abstract&pid=S1316-48212005000200004&lng=es&nr=iso&tlng=es

- Mendivelso, F. (2021). Prueba no paramétrica de correlación de Spearman. *Revista Médica Sanitas*. 24(1), 42-45. <https://doi.org/10.26852/01234250.578>
- Molina, O. (2020, 15 de noviembre). La reforma universitaria y la calidad educativa, por Oswaldo Molina. *Diario El Comercio*. <https://elcomercio.pe/economia/peru/la-reforma-universitaria-y-la-calidad-educativa-por-oswaldo-molina-noticia/?ref=ecr>
- Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO). (2020, 28 de diciembre). Comprender el acceso a la educación superior en las dos últimas décadas - UNESCO-IESALC. <https://www.iesalc.unesco.org/2020/12/28/comprender-el-acceso-a-la-educacion-superior-en-las-dos-ultimas-decadas/>
- Paredes, P. and Santos, E. (2022). Calidad del servicio y satisfacción en hospitales del sistema de seguridad social. *Revista Angolana de Ciências*. 4(1). <https://www.redalyc.org/journal/7041/704173394011/html/>
- Pérez, O. and Pinto, R. (2020). Determinantes de la inserción laboral en egresados universitarios en México. *RIDE Revista Iberoamericana para la Investigación y el Desarrollo Educativo*. 11(21). <https://doi.org/10.23913/ride.v11i21.732>
- Piñera, D., and Cruz, I. (2023). Importancia de la calidad de los servicios universitarios: El caso de la Universidad Sámman de Jalisco, Campus Tijuana. *Revista Educación*. 47(1), 1-20. <https://doi.org/10.15517/revedu.v47i1.51806>
- Retos en Supply Chain. (2023, 04 de setiembre). El modelo Servqual: Dimensiones a tener en cuenta. *Retos en Supply Chain*, blog de EAE Business School <https://retos-operaciones-logistica.eae.es/modelo-servqual-dimensiones-tener-cuenta>
- Reyes, T.; Nande, E., and Hernández, L. (2020). Factores determinantes de la productividad en las universidades públicas mexicanas. *Revista Líder*. 36(22), 89-103. <https://dialnet.unirioja.es/servlet/articulo?codigo=8004678>
- Ropa, B. (2014). Administración de la calidad en los servicios educativos. *Horizonte de la Ciencia*. 4(6), 67-73. <https://www.redalyc.org/journal/5709/570960877010/>
- Saadoon, K.; Muhlis, M., and Mohammed, R. (2022). Architecture Students' Satisfaction in Iraqi Private Universities: TIU-S in Focus. *International Journal of Sustainable Development and Planning*. 17(4), 1349-1354. <https://doi.org/10.18280/ijstdp.170432>
- Salvador, C.; Pozo, C, and Alonso, E. (2008). Percepción del cliente de los predictores de calidad en el sector servicios. *Revista Boletín de Psicología*. 94, 69-84. <https://dialnet.unirioja.es/servlet/articulo?codigo=2887729>
- Silador, R.; Utrera, A.; Dueñas, J., and Vargas, E. (2022). Modelo SERVQUAL para la medición de la calidad del servicio en la hotelería: Caso de estudio. *Ayana. Revista de Investigación en Turismo*. 3(1), 1-20. <https://doi.org/10.24215/27186717e028>
- Silva, A. (2022). La calidad del servicio educativo y la fidelización de los alumnos de institutos privados Surco. *Gestión en el Tercer Milenio*. 25(49), 73-81. <https://doi.org/10.15381/gtm.v25i49.23052>
- Superintendencia Nacional de Educación Superior Universitaria (SUNEDU). (2015). El Modelo de Licenciamiento y su implementación en el sistema universitario peruano. <https://repositorio.minedu.gob.pe/handle/20.500.12799/4565>
- Superintendencia Nacional de Educación Superior Universitaria (SUNEDU). (2021). *III Informe Bienal sobre la realidad universitaria en el Perú*. SUNEDU. <https://cdn.www.gob.pe/uploads/document/file/3018068/III%20Informe%20Bienal.pdf?v=1649883911>
- Torres, M., and Vásquez, C. (2018). Modelos de evaluación de la calidad del servicio: Caracterización y análisis. *Revista Científica Compendium*. 18(35), 57-76. <https://revistas.uclave.org/index.php/Compendium/article/view/64>
- Tumino, M., and Poitevin, E. (2014). Evaluación de la calidad de servicio universitario desde la percepción de estudiantes y docentes: Caso de estudio. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*. 12(2), 63-84. <http://www.redalyc.org/articulo.oa?id=55130462004>
- Varo, J. (1994). *Gestión estratégica de la calidad en los servicios sanitarios: Un modelo de gestión hospitalaria*. Ediciones Díaz de Santos.
- Venkatakrishnan, J.; Alagiriswamy, R., and Parayitam, S. (2023). Web design and trust as moderators in the relationship between e-service quality, customer satisfaction and customer loyalty. *The TQM Journal*. 35(8), 2455-2484. <https://doi.org/10.1108/TQM-10-2022-0298>
- Widodo, T. and Jauhari, R. (2023). The Influence of the Service Quality Dimension on Attitudinal Loyalty and Behavioral Loyalty Moderated by The Level of Internet Usage

and Switching Costs. *Journal Ekonomi, Bisnis & Entrepreneurship*. 17(1), 68-85. <https://doi.org/10.55208/jebe.v17i1.327>

Yarlequé, W.; Peña, C., and Bernuy, A. (2022). Calidad de servicio educativo durante la pandemia de COVID-19. Una revisión sistemática. *Horizontes. Revista de Investigación en Ciencias de la Educación*. 6(26), 2179-2188. <https://doi.org/10.33996/revistahorizontes.v6i26.483>

Yesitadewi, V., and Widodo, T. (2023). The Influence of Service Quality, Perceived Value, and Trust on Customer Loyalty via Customer Satisfaction in Deliverer Indonesia. *Quality-Access to Success*. 25(198), 418-424. <https://doi.org/10.47750/QAS/25.198.44>

Conflict of interest

The author has no conflicts of interest to declare.

Author contributions

Graciela Nancy Callupe Rivera (lead author): Conceptualization, data curation, formal analysis, funding procurement, research, methodology, project management, resources, software, supervision, validation, visualization, writing (original draft, review, and editing).