



Original article

## Quality of service and user satisfaction in postgraduate students of a Public University of Lima

Calidad de servicio y satisfacción del usuario en estudiantes de posgrado de una Universidad Pública de Lima

Qualidade de serviço e satisfação do usuário em estudantes de pós-graduação de uma Universidade Pública de Lima

Carlos Alberto Peña Miranda<sup>1</sup>



<https://orcid.org/0000-0002-4339-4615>

Elizabeth Cosi Cruz<sup>2</sup>



<https://orcid.org/0000-0002-0255-7705>



Liliana Abelina Silarayan Ruiz<sup>3</sup>

<https://orcid.org/0000-0002-6759-9615>

<sup>1</sup> National University of San Marcos. Peru



[cpenam@unmsm.edu.pe](mailto:cpenam@unmsm.edu.pe)

<sup>2</sup> Norbert Wiener Private University. Peru.



[elizabeth.cosi@uwiener.edu.pe](mailto:elizabeth.cosi@uwiener.edu.pe)

<sup>3</sup> San Ignacio de Loyola University, Lima, Peru



[liliana.silarayan@usil.pe](mailto:liliana.silarayan@usil.pe)

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### ABSTRACT

The National University and, particularly, the graduate school, have the task of providing a quality service that generates satisfaction among its students. This is essential to improve the quality of graduate programs. This research aims to establish whether satisfaction with the quality of university service in postgraduate students is related. To achieve this, a non-experimental, correlational and transversal design was used with a sample of 180 students, to whom the questionnaire on quality of university service and the questionnaire on user satisfaction were administered. The results obtained allow us to conclude that there are significant relationships between the two study variables ( $r = 0.80$ ), as well as between their dimensions that make up each variable.

**Keywords:** Quality of education; quality of the environment; education; professional satisfaction; learning.

### RESUMEN

La Universidad Nacional y, particularmente, la escuela de posgrado, tienen la tarea de brindar un servicio de calidad que genere satisfacción entre sus estudiantes. Esto es fundamental para mejorar la calidad de los programas de posgrado. La investigación tuvo como objetivo establecer la relación que existen entre la calidad del servicio universitario ofrecido con la satisfacción del usuario en estudiantes de posgrado de una Universidad Pública de Lima. Para lograrlo se utilizó un diseño no experimental, correlacional y transversal con una muestra de 180 estudiantes, a quienes se les administró el cuestionario sobre calidad del servicio universitario y el cuestionario sobre satisfacción del usuario. Los resultados obtenidos permitieron concluir que, existen relaciones significativas entre las dos variables de estudio ( $r = 0.80$ ), así

como entre sus dimensiones que componen cada variable.

**Palabras clave:** Calidad de la educación; calidad del entorno; educación; satisfacción profesional; aprendizaje.

### RESUMO

A Universidade Nacional e, particularmente, a pós-graduação, têm a missão de prestar um serviço de qualidade que gere satisfação aos seus alunos. Isso é essencial para melhorar a qualidade dos programas de pós-graduação. Esta pesquisa tem como objetivo estabelecer se a satisfação com a qualidade do serviço universitário em estudantes de pós-graduação está relacionada. Para isso, utilizou-se um desenho não experimental, correlacional e transversal com uma amostra de 180 estudantes, aos quais foram aplicados o questionário sobre qualidade do serviço universitário e o questionário sobre satisfação do usuário. Os resultados obtidos permitem-nos concluir que existem relações significativas entre as duas variáveis do estudo ( $r = 0,80$ ), bem como entre as suas dimensões que compõem cada variável.

**Palavras-chave:** Qualidade da educação; qualidade do meio ambiente; educação; satisfação no trabalho; aprendizagem.

## INTRODUCTION

The quality of service has gone through several stages from the artisanal process whose objective was to please the customer to the quality process in the product or service. In this last stage, the competitiveness of the company will be determined and, likewise, the use of strategies for continuous improvement in customer service. This service is a main requirement in a company. This is reflected in the levels of competition between organizations, who have embarked on the

search and design of strategies to ensure the quality of goods and services. Likewise, the advancement of Information and Communications Technologies (ICT) allows companies to change their lifestyle and work style. Indeed, these two concepts: service quality and user satisfaction come from administrative management; However, in this case, we are located in the university education sector, postgraduate level. For this reason, service quality and customer satisfaction in graduate students are related to each other.

In this context, the university, as an academic institution that trains the new professionals that the nation requires, is obliged to redefine its quality standards in order to adapt to social changes. To this end, formulating a total quality management plan becomes relevant to the extent that the consumer or client is defined as the person who is going to receive or consume the institution's products or services.

Student satisfaction is a perception of pleasure or rejection regarding the expectations of an object, process or result. That is, if the expectation is positive then the student perceives satisfaction; while this same experience is negative, you will perceive rejection. Other relevant aspects are trust, empathy, responsiveness, accessibility, and tangible aspects (Kotler and Keller, 2006). Another point of view is from Mireles and García (2022), who point out that student satisfaction responds to basic needs such as psychological, food, economic, educational) during their stay at the university.

Satisfaction has become a basic indicator to determine the efficiency of the academic, administrative and infrastructure service. Likewise, the student's satisfaction with how they perceive the service is important for the educational institution or organization. This attitude will serve to improve process management and the increase of new academic programs at the university. Consequently, the search for quality in the

university sector is a task that must be assumed with total dedication and responsibility. Consequently, the quality of university life influences the experience that the student has with respect to the service they receive; Because by being positive it gains prestige (Terrazas and Almeida, 2020).

Service quality is a process of perception between expectations and experiences that subjects have about an object, process or institution. It is important to highlight that the competence of the teaching staff, organization of teaching, communication, attitudes and behaviors of the teaching staff, facilities and equipment, evaluations and effectiveness of administrative processes are relevant aspects when the student chooses a certain service (Bravo et al. al., 2020)

Service quality is an important aspect for every institution because it is the image that it will project to the outside. This image helps the students' loyalty to the extent of their expectations and their perception of the service they are receiving at a given moment (Zeithaml and Parasuraman, 2004). An example of service quality and student satisfaction is Mexico; Since 1991 they created the National Quality Postgraduate Program (PNPC) through the National Council of Science and Technology (CONACYT) and the Undersecretariat of Higher Education (SES) of the Secretariat of Public Education (SEP). Through these two institutions, they promoted training processes with rigorous evaluation processes with quality standards. For this reason, quality education is guaranteed (CONACYT, 2021).

An important aspect to take into account is the academic production of scientific articles in postgraduate students. According to Mapén et al. (2020), the importance of promoting and generating knowledge is decisive in positioning postgraduate studies not only at the national level, but also internationally.

The objective of the research was to establish the relationship that exists between the quality of the university service offered with user satisfaction in postgraduate students of a Public University of Lima.

## METHODS

The research was carried out under a quantitative approach. The design used was non-experimental, correlational and transversal. It is transversal because it allowed us to compile and analyze the information collected in a certain time; It is correlational because its objective was to describe the relationships between two variables that have been studied and it is non-experimental because the study variables were not controlled or manipulated (Hernández and Mendoza, 2018).

The population was made up of master's students from the Graduate School of a Public University of Lima. The sample was made up of 180 students. The inclusion criterion was being a regular student of the Master's degrees at the Graduate School and giving consent to participate in the study.

Data collection was carried out using the *Google forms format*. The students answered two questionnaires: quality of university service and user satisfaction. The first consisted of 39 questions and are distributed in seven scales; while the second, of 33 questions that are distributed in five scales. In both instruments, the validity and reliability test was verified for their application.

The first instrument has been distributed into seven independent scales: competence of the teaching staff, organization of teaching, communication, attitudes and behaviors of the teaching staff, facilities and equipment, evaluations and effectiveness of administrative processes (Tumino and Poitevin, 2013);

whose answers correspond to the Likert model from 1 to 5. The authors of this questionnaire were concerned with establishing the levels of validity and reliability. These values were ratified in this research with a Cronbach's alpha of 0.793 for reliability. The validity of the instrument, carried out through exploratory factor analysis, gives a quite significant result (KMO = 0.771), in the same way the Bartlett sphericity test presents a value that can be considered significant. The results obtained confirm the existence of a single factor that explains 70.47% of the general variance, so it can be concluded that the test has construct validity.

The second instrument is the user satisfaction questionnaire, which has been distributed into five independent scales: trust, empathy, responsiveness, accessibility and tangible aspects; whose responses correspond to the five-point Likert model. Reliability, carried out through Cronbach's Alpha internal consistency coefficient, gives a significant result of 0.940, which shows that the instrument is reliable. The validity of the instrument gives a quite significant result (KMO = 0.888), in the same way the Bartlett sphericity test reaches a value that can be considered significant. The results obtained confirm the existence of a single factor that explains 81.95% of the general variance, therefore it is concluded that the user satisfaction test has construct validity.

Data processing was carried out with the statistical software SPSS version 27. Descriptive analyses, mean and standard deviation were carried out, the normality test was calculated with the Shapiro-Wilk statistic whose results recommend the use of non-parametric statistics, reason for which Spearman's rho was used.

## RESULTS

are presented below, in relation to the two study variables.

**Table 1-** Normal distribution of the variables under study

Variable	Half	OF	Shapiro-Wilk	Next.
Faculty competence	16.86	3.72	.980	.010
Teaching organization	12.12	3.60	.960	,000
Communication	17.31	3.46	.950	,000
Attitudes and behaviors	15.01	2.19	.926	,000
Facilities and equipment	23.60	3.28	.965	,000
Evaluations	24.17	3.01	.964	,000
Effectiveness of administrative processes	21.52	4.11	.935	,000
Trust	25.17	4.41	.934	,000
Empathy	23.87	3.89	.974	.002
Answer's capacity	23.70	4.18	.987	.100
Accessibility	15.62	2.98	.981	.013
Tangible aspects	24.63	4.32	.952	,000

Once the normality analyzes of the collected data have been carried out, the results obtained from the Shapiro-Wilk test (Table 1) indicate that they do not approximate the normal curve, which is why the use of non-parametric statistics is convenient. in carrying out data analyzes that allow for a correct hypothesis test.

**Table 2-** Level of correlation between the quality of the university service and user satisfaction

Variables	User satisfaction	r2
Quality of service	0.80***	0.64

Carrying out correlation analyzes using Spearman's non-parametric rho statistic (table 2) informs us that the correlations between service quality and user satisfaction are significant and positive (r = 0.80).

**Table 3-** Level of correlation between the dimensions of user satisfaction and service quality

Variables	Quality of service	r2
Trust	0.70***	0.49
Empathy	0.73***	0.53
Answer's capacity	0.71***	0.50
Accessibility	0.72***	0.52
Tangible aspects	0.70***	0.49

Carrying out correlation analyzes using Spearman's non-parametric rho statistic (Table 3) informs us that the correlations between the dimensions of user satisfaction and service quality are significant and positive. According to Cohen (1988), these are correlations that can be classified as large in all cases.

**Table 4-** Calculation of the correlation between the dimensions that make up each variable

Variables	CO	r2	EM	r2	C.R.	r2	A.C.	r2	AT	r2
Faculty competence	0.52**	0.27	0.59**	0.35	0.56**	0.31	0.60**	0.36	0.53**	0.28
Teaching organization	0.53**	0.28	0.49**	0.24	0.50**	0.25	0.50**	0.25	0.50**	0.25
Communication	0.61**	0.37	0.60**	0.36	0.56**	0.31	0.62**	0.38	0.61**	0.37
Attitudes and behaviors	0.61**	0.37	0.53**	0.28	0.50**	0.25	0.59**	0.35	0.58**	0.34
Facilities and equipment	0.43**	0.18	0.46**	0.21	0.44**	0.19	0.43**	0.18	0.46**	0.21
Evaluations	0.63**	0.40	0.61**	0.37	0.60**	0.36	0.59**	0.35	0.60**	0.36
Adm process effectiveness	0.53**	0.28	0.52**	0.27	0.56**	0.31	0.56**	0.31	0.49**	0.24

Note. CO = Trust, EM = Empathy, CR = Responsiveness, AC = Accessibility, AT = Tangible aspects

Carrying out the correlation analyzes using Spearman's non-parametric rho statistic (table 4) informs us that the correlations between the dimensions of service quality and the dimensions of user satisfaction are significant and positive, however, the strength of the correlations is different if we consider what was proposed by Cohen (1988) where:  $r = .10$  to  $.23$  is slight;  $r = .24$  to  $.36$  is moderate;  $r = .37$  or more is strong.

## DISCUSSION

The results obtained in this research show that satisfaction with the quality of the university service in the students of the Graduate School is significantly linked, since it reached a correlation coefficient of 0.80. The result is similar to those reported by researchers such as Torres and Araya-Castillo (2010); Araya-Castillo (2013) and Marzo, Pedraja and Rivera (2005), in the sense that the quality of the educational service in higher education must be related to student satisfaction, which will be reflected in the behavior of these students.

Vázquez (2013) points out that the quality of a service should be evaluated based on the satisfaction it provides to the user. Accordingly, it is necessary that, when measuring levels of university quality, emphasis must be placed on the levels of satisfaction that students have with the services received, particularly with regard to their teachers and the university administration (Vergara and Quesada, 2011).

Finally, the dimensions of service quality are significantly related to the dimensions of user satisfaction, the statistical results determined a significant and positive correlation, so it can be stated that universities have commitments that are aimed at training highly professional qualified, so you must seek to provide a good quality service, but you must also commit to working to achieve sustainable development. From this point of view, the academic work carried out by universities must be understood as a process in which the mission, vision and values that have been established will be fulfilled (Martín, 2018).

A positive relationship was evident between the two study variables: service quality and user satisfaction. Furthermore, it was shown that there are significant and positive correlations between the dimensions that make up each variable.



This allows us to reaffirm that both the quality of the university service and user satisfaction are two fundamental elements that the university must address if it wants to guarantee excellent academic training in both undergraduate and postgraduate studies.

## BIBLIOGRAPHIC REFERENCES

- Bravo, E., Lora, L. y Berastegui, Y. (2020). Neuroliderazgo como estrategia para el fortalecimiento de la gestión directiva en instituciones educativas. *Actualidades Investigativas en Educación*, 20(1), 29-29. <https://www.scielo.sa.cr/pdf/aie/v20n1/1409-4703-aie-20-01-416.pdf>
- Consejo Nacional de Ciencia y Tecnología. (2021). Programa Nacional de Posgrado de Calidad. <https://conahcyt.mx/wpcontent/uploads/convocatorias/PNPC/2021/TerminosReferenciaRenovacion2021.pdf>
- Mapén, F., Becerra, A. y Martínez, G. (2020). Importancia y satisfacción de los servicios universitarios en posgrado desde la perspectiva estudiantil. *Revista San Gregorio*, 38, 15-26. [http://scielo.senescyt.gob.ec/pdf/r\\_san/n38/2528-7907-rsan-38-00015.pdf](http://scielo.senescyt.gob.ec/pdf/r_san/n38/2528-7907-rsan-38-00015.pdf)
- Mireles, M. y García, J. (2022). Satisfacción estudiantil en universitarios: una revisión sistemática de la literatura. *Revista Educación*, 46(2), 610-626. <https://revistas.ucr.ac.cr/index.php/educacion/article/view/47621>
- Kotler, P., y Keller, K. (2006). *Dirección de Marketing* (12 ed.). Pearson Educación. <https://books.google.com.pe/books?hl=es&lr=&id=CoHT8SmJVDQC&oi=fnd&pg=PP33&dq=Lane+Keller+-+articulos&ots=l7rIPyyPTn&sig=miT1YJXsnf5dXbQxh82Y-eOkkd8#v=onepage&q=Lane%20Keller-%20articulos&f=false>
- Martín, V. (2018). Calidad y responsabilidad social en la educación superior. En Grimaldo, H. (2018). El rol de la educación superior de cara a los desafíos sociales de América Latina y el Caribe. (p. 17-34). UNESCO - IESALC y UNC. <http://www.redalyc.org/articulo.oa?id=60430753003>
- Terrazas, B. y Almeida, R. (2020). Análisis de los principales indicadores de satisfacción estudiantil en la calidad de vida universitaria en las universidades privadas. *Perspectivas*, 23(45), pp. 7-32. [http://www.scielo.org.bo/pdf/rp/n45/n45\\_a02.pdf](http://www.scielo.org.bo/pdf/rp/n45/n45_a02.pdf)
- Torres, E. y Araya-Castillo, L. (2010). Construcción de una escala para medir la calidad del servicio de las universidades: una aplicación al contexto chileno. *Revista de Ciencias Sociales*, 16(1), 54-67.
- Tumino, M. y Poitevin, E. (2013). Evaluación de la calidad del servicio universitario desde la percepción de estudiantes y docentes: caso de estudio. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio En Educación*, 12(2) 63-84.
- Vázquez, A. (2013). Calidad educativa. *Investigación Educativa*, 17(2).
- Vergara, J. C. y Quesada, V. M. (2011). Análisis de la calidad en el servicio y satisfacción de los estudiantes de Ciencias Económicas de la Universidad de Cartagena mediante un modelo de ecuaciones estructurales. *Revista Electrónica*

de Investigación Educativa, 13(1),  
108-122.

Zeithaml, V. & Parasuraman, A. (2004).  
Service Quality. Cambridge, MI,  
USA: Marketing Science Institute  
(2004), p. 86.

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The authors declare not to have any interest conflicts.

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The authors participated in the design and writing of the article, in the search and analysis of the information contained in the consulted bibliography.

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