

## Institutional Management Strategy for the Improvement of Service Quality in a Systems Engineering School of a University in Peru

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### Abstract

The institutions requires educational quality, where the improvement of its educational processes and activities are important, universities have adopted management models guided in achieving efficiency and optimization of their resources, as well as standards that allow them to access and comply with an accreditation that promotes the quality of an efficient educational service, adequate attention to the student, as well as a model that allows their achievement.

In the international benchmark, there is strong pressure on universities to increase teaching activities. Currently, the quality in the training of professionals is key, they must have clear objectives development, where innovative and efficient strategies are explored and elaborated to revitalize the social environment of the professional, in order to develop aspects related to the economic, social and environment.

In this sense, the professional school should strengthen the process of monitoring graduates so that the demand for job access is higher in relation to current data, in turn strengthen the university social responsibility program to achieve the goals set during the continuous improvement process, support to the laboratories and technological equipment to satisfy the demand the students as an empirical method of diagnosis, insufficiencies have been observed in the theoretical and practical contents of the institutional management system and condition of the higher education service for a competitive market, little practical importance in institutional management and required improvement in the quality of higher education services.

**Keywords:** *Quality, service, strategy, students.*

### I. Introduction

In Peru, according to the Quality Framework of University Higher Education, the institutions promoted the achievement of quality in education, according to convenience, later it became public policy (Ruiz et al., 2021), for which, today the Peruvian university system is in the process of reorganization where educational quality is promoted, this is how University Law No. 30220, among its different measures, delivers the rectory of the Quality Assurance Policy of Higher University Education [PACESU]. the National Ministry of Education [MINEDU]; Likewise, he founded the National Superintendency of Higher University Education [SUNEDU], starting in 2015, where he introduced the mandatory requirement of renewable licensing to universities as a replacement for the operation of the previous legal framework, in order to ensure that young university students receive a service quality education to improve their professional skills (SUNEDU, 2022).

Licensing and accreditation are stages that complement each other to achieve quality assurance, that is, after licensing, the university can choose to carry out an accreditation process for its professional schools, in this sense, there are certifiers such as the National Evaluation System , Accreditation and Certification of Educational Quality

[SINEACE] and as International Accrediting Agency to the Institute for Quality and Accreditation of Computer, Engineering and Technology Programs [ICACIT] for postgraduate and undergraduate programs in Engineering and Architecture.

At a national level, universities have established a council for continuous improvement where they propose innovative projects at a higher level. In this direction, at the local level at the Hermilio Valdizan National University, there are advisory bodies as a management unit for the educational level, where they prioritize, with their Continuous Improvement Committees [CMC], the shortcomings of each of the programs in the faculties, as well as the achievement of goals regarding the quality indicators established in its development. For these reasons, the School of Systems Engineering of the Hermilio Valdizan National University is no stranger to the national problems of Peruvian universities. In this sense, the professional school should strengthen the process of monitoring graduates so that the demand for job access is higher in relation to the current data, in turn strengthen the university social responsibility program to achieve the goals set during the continuous improvement process, organize a tutoring program promoting student attendance in talks, attend maintenance with higher priority, support of the laboratories and technological equipment to satisfy the demand of the users (students), through the records of incidents and instruments applied as an empirical method of diagnosis, insufficiencies have been observed in the theoretical and practical contents of the institutional management system and condition of higher education service par to a competitive market, deficient didactic and methodological approach in the institutional management process to improve service conditions in the established standards, little practical importance in institutional management and required improvement in the quality of higher education services.

For all the arguments, the present investigation is important theoretically because it addresses an innovative and structured strategy design supported by theories to strengthen the professionalism and adaptability of the graduate in the world of work, in turn the systemic integral model is a set of scenarios in which the university is a holistic entity where all its elements are interrelated with each other, in order to understand from a systemic and integrating perspective, the importance that exists between the relationship and its components, with the purpose that the objectives sustained in the mission, vision and principles of the professional school under study are fulfilled, from the practical approach it is a friendly, intuitive, versatile and easy to apply interface, it is methodologically relevant because the comprehensive systemic model presents innovative strategies and a structured methodology so that the student's learning process is based on the efficiency of academic methods and efficiency in institutional management; which enables the university effectiveness according to the quantity and academic competitiveness of the graduates, academically the methodology proposed for teaching is based on Flipped Classroom, which consists of three phases before, during and complementary where students and teachers achieve the programmed competences so that strengthen the graduate during their training, from the social approach it is pertinent because universities need to constantly update and carry out their educational strategies and methods, in order to comply with their social goal of preparing personnel for the society to which they are due. . For this reason, the problem is formulated: How does the institutional management strategy improve the quality of service of the professional school of systems engineering of the Hermilio Valdizan National University?

## **II. Methods**

### **Research type and design**

Approach and paradigm

Quantitative Approach: Uses the collection and evaluation of data to answer research questions and hypotheses in order to create patterns of behavior and test them. (Hernández et. al.,2014)

Paradigm: Positivist.

## Kind

Basic - descriptive, it describes the qualities, properties and profiles of subjects, groups, communities, procedures, things or some other phenomenon that can be subjected to an evaluation. (Hernández et. al.,2014)

## Design

Non-experimental, transversal, the design is the method or strategy in order to acquire the desired data and respond to the problem statement, a non-experimental study is based on the non-management of variables and analyzes what happened in its nature, it is cross-sectional because the information will be collected only once. (Hernández et. al., 2014, pp.154)

## Variables and operationalization

### Independent variable

Concept definition. - Institutional Management: It is that series of processes and activities that guide management tasks that support academic management. (Sovero,2007)

### Dependent variable

Concept definition. - Service quality: General judgment on the excellence or supremacy of the company and is linked to the distinction between what is perceived and expected. (Parasuraman, et al., 1988; Bolton & Drew, 1991b)

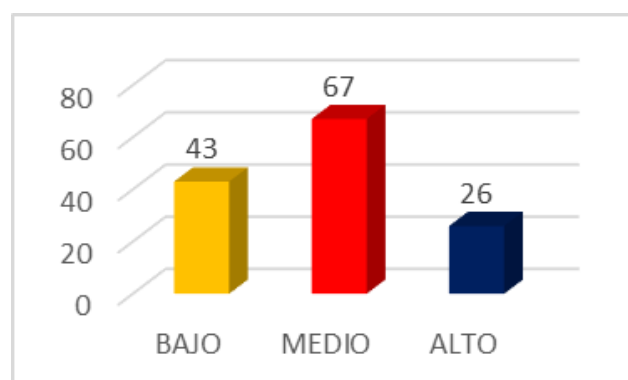
See annex 1. Operationalization of variables.

## III. Results

**Table 1.**

SERVICE QUALITY LEVEL		
CATEGORY	No.	%
UNDER	43	32%
MEDIUM	67	49%
HIGH	26	19%
TOTAL	136	100%

Service Quality Level



**Figure 1:** Service Quality Level.

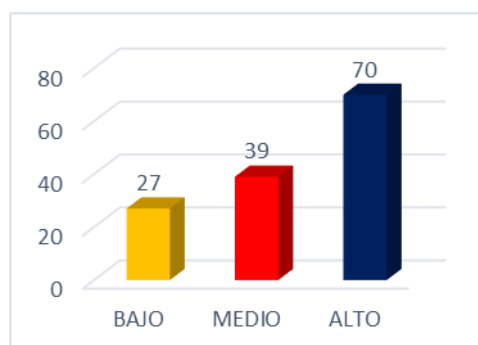
Note: Table 1 and Figure 1 show the level of quality of service that is perceived in the School of Systems Engineering, of the University under study. Therefore, there is an average level of perceived service quality of 49%, and a low level of 32%, with respect to the total number of students surveyed, in order to obtain a level of quality of educational service. In this sense, Kotler and Keller (2014) maintain that quality refers to the characteristics and aspects that differentiate a product or service with the purpose of meeting the customer, their needs and expectations, while Araya-Castillo et al., (2020), refer that the provision of the service is a tactical decision to meet the customer's demands and achieve market positioning, at the same time.

#### Analysis of Results by dimensions

**Table 2.**

TANGIBLE ASPECTS		
CATEGORY	No.	%
UNDER	27	20%
MEDIUM	39	29%
HIGH	70	51%
TOTAL	136	100%

Level of Tangible Aspects of Service Quality



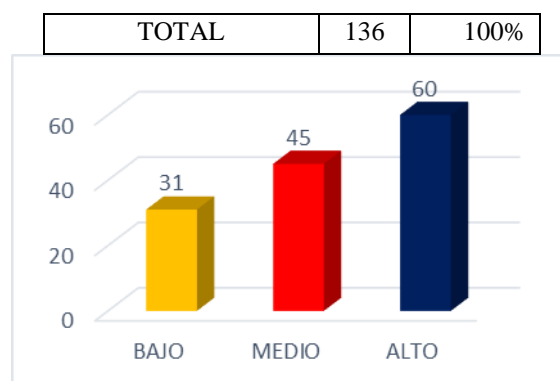
**Figure 2:** Tangible Aspects Level.

Note: Table 2 and Figure 2 show the level of tangible aspects of service quality that is perceived in the School of Systems Engineering, of the University under study. Therefore, a level of tangible aspects perceived at a high level of 51% is appreciated, with respect to the total number of students surveyed, which implies saying that one of the strengths of the School of Systems Engineering is its infrastructure, laboratories implemented with the latest technology. , spacious and ventilated hybrid classroom, auditoriums and meeting room, among others .

**Table 3.**

Quality of Service reliability level

RELIABILITY		
CATEGORY	No.	%
UNDER	31	23%
MEDIUM	Four. Five	33%
HIGH	60	44%



**Figure 3: Reliability Level**

Note: Table 3 and Figure 3 show the level of reliability of quality of service that is perceived in the School of Systems Engineering. Therefore, it can be seen that the perceived reliability is high 60%, compared to the total number of students surveyed, which implies that students perceive that problems are solved quickly and opportunely, that the school shows interest in solving it, they shows clear interest in solving, their difficulties are solved in a timely manner without resorting to other instances and that the solution of the problems presented is emphasized. As indicated, the level of reliability of the students is high.

#### IV. Discussion

Taking into account the specific objectives of the research, the results obtained, the theories that support this article, it is convenient to take into account the theory supported by Araya-Castillo et al., (2020), where he argues that the provision of the service is a tactical decision to meet customer demands and achieve market positioning, in turn, Harvey & Green (1993) argue that the operation applied to the teaching service consists of the grouping of five classes, quality as singularity, consistency, transformation, as adaptation to an objective and as the effective use of resources, while Mori (2021), mentions the quality of service as an operation that associates the client with the company in order to achieve satisfaction, for his part Ferreira and De la Cruz (2019), defines service quality as the gap between the service that is experienced and the one that is expected. Likewise, Martínez (2020), argues that university education should be known as that service industry where educational quality is prioritized, while the results obtained show that the level of service quality in the School of Systems Engineering is a medium level. of perceived service quality of 49%, and a low level of 32%, with respect to the total number of students surveyed, in order to obtain a level of quality of educational service. In this sense , Kotler and Keller (2014) maintain that quality refers to the characters and aspects that differentiate a product or service with the purpose of meeting the customer, their needs and expectations, in turn strongly agree with Tobon (2006) . , in the university institutional environment, it faces serious problems such as the absence of agreements when specifying the execution indicators and determining the level with which students and teachers will be fully prepared, complex aspects to understand and analyze.

#### V. Conclusions

The level of service quality of the systems engineering school was diagnosed, where an average level of perceived service quality of 49% was obtained, and a low level of 32%, with respect to the total number of students surveyed.

It was possible to determine the theoretical foundations of service quality of the systems engineering school, based on the theories of Parasuraman, et al., 1988.

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