



# Importance and satisfaction of university services: a key relationship in quality management in higher education institutions.

178

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## Abstract:

The generation of quality university training alternatives is one of the main challenges facing higher education institutions; It is conceived as the route of action that favors the fulfillment of the commitment they have with society to promote regional and / or national development through the training of professionals capable of innovating and applying scientific and technological knowledge. For this, there are various measurement mechanisms that are formulated including indicators of school dropout, failure, terminal efficiency, student mobility, monitoring of graduates, among others. The objective of this research is to measure the importance and level of satisfaction that undergraduate students have with the educational services provided in a higher education institution whose enrollment is the largest in the state of Tabasco, Mexico. The study is of a descriptive, non-experimental type with a quantitative approach, applying a questionnaire validated through Cronbach's Alpha of 0.935 and 0.951 for the variables importance and satisfaction, respectively. A Pearson correlation analysis was performed to obtain the results of each variable, as well as the correlation of both. The results to measure the relationship between the factors that make up the scale to determine the satisfaction of undergraduate students as well as the importance they assign to educational services reflected significant associations between the factors considered.

**Keywords:** educational services, student satisfaction, educational quality.

**DOI Number:** 10.14704/nq.2022.20.7.NQ33021

**Neuro Quantology 2022; 20(7):178-188**

## Introduction

Higher Education Institutions (HEIs) are conceived as complex organizational systems immersed in contexts that determine them but which, at the same time, are influenced by the processes of social transformation that they promote; prevailing a bidirectional relationship between context and university. These interaction processes are materialized through teaching, research and engagement, generating abstract results, that is, the training of professionals, who are expected to be agents of change and detonators of economic and social development, mainly in the region, state and / or country in which they operate.

The quality of university education for Grimaldo (2018) must correspond to the level of updating of

its social potential, expressed in its ethical platform (understood as the purpose of the institution), materialized in specific projects (mediations) and projected in the territory ( interactive space for realization and / or impact). In the same way, it indicates that it must be reflected that the University must flow with society, that is, a transforming mutual involvement must prevail that encourages the construction of a socially responsible territory. Consequently, the quality of university action is measured through "effective learning and growth achievements, achieved through a systemic effect of mutual transformation" (Grimaldo 2018, p.15).

This dynamic demand for innovative processes, so in the university environment, quality management is conceived through two large dimensions:



academic and institutional management. Therefore, quality management models represent a path that leads to performance improvement; Under this approach of continuous improvement, the satisfaction of students with the services they receive from the HEIs is very important, even though the debate persists as to whether or not students should be considered as clients of educational processes. coincidences in which your expectations and needs must be considered.

Measuring student satisfaction is an issue that is gaining importance day by day since it is related to educational quality and consequently with the fulfillment of the commitment that HEIs have with society as promoters of their development and they are precisely the students the recipients of that education that to be considered of quality must meet, among other characteristics, with relevance. For Mejías and Martínez (2009) satisfaction is the result of an assessment and therefore it is a judgment for which student satisfaction is their perception regarding the degree of compliance with their expectations.

In turn, Mapén et al. (2020) point out that "in various academic contexts, educational quality is presented through indicators such as dropout, terminal efficiency, and failure rates, among others." (p. 17), however, it is evident that they are insufficient to formulate judgments that favor a complete evaluation, and it is necessary to know the opinion of those who want to receive educational services.

Educational institutions, in this search for improvement to raise their performance indicators, have identified models to evaluate student satisfaction considering trends in quality management and performance excellence. Álvarez and Vernaza (2013) point out that it is important to identify both positive and negative aspects from the evaluation, the latter being structural to determine improvement strategies in the educational service. For their part, Alves and Raposo (2004), raise the importance of finding reliable ways to measure university student satisfaction, relevant to the context and the particularities of the educational institution.

According to Babo and Azebedo (2012) the quality of the educational service has been considered as

an indicator of good organizational practices worldwide since countries have assumed this challenge as a social mandate, however its scope is limited to various contextual factors, including economic ones. , those that most affect to guarantee educational quality. To this aspect is added another limitation since there are various factors that are considered as indicators of quality (Kasworm, 2008; Olofsson and Lindberg, 2012; Rosa and Amaral, 2014; Smart, 2010). For Bennett (2001), the evaluation of educational quality should focus on added value, that is, the ability to develop skills in students beyond the limited transmission of knowledge.

179

### Materials and research methods

The study is of a non-experimental descriptive type (Hernández et al., 2014) since without deliberately manipulating the variables (Kerlinger and Lee, 2002) they were observed in their natural environment, under a cross-sectional study method; The approach is quantitative since it is characterized by its emphasis on measurement, data collection, processing and analysis (Bryman and Bell, 2015). The instrument adapted from Jaqueline et al., 2006) was applied through the judgment of experts selected according to their academic trajectory and research experience; An adaptation to the evaluation card designed by Escobar-Pérez and Cuervo-Martínez (2008) was elaborated, which measures the clarity, coherence, relevance and sufficiency of the items. The reliability of the instrument was made through the determination of Cronbach's alpha through the Statistical Package for the Social Sciences software (SPSS version 25), obtaining an index of 0.953 for the variable: satisfaction and 0.959 for the variable: importance. The values obtained are considered very good since according to Cortina (1993) a coefficient higher than 0.7 is considered to have good internal consistency. The questionnaire is made up of 50 items, which in turn are integrated into ten study dimensions: educational environment, student well-being, administrative quality, teaching quality, educational infrastructure, academic organization, research resources, student services, computer services and link with society. En la Tabla 1 se muestra el detalle de las Alphas de Cronbach's obtenidas en cada una de las dimensiones de las variables de estudio.

**Table 1**  
*Reliability*

Variable	Dimension	Alpha de Cronbach
Satisfaction	Educational environment	.877
	Academic organization	.420
	Student welfare	.826
	Administrative quality	.867
	Teaching quality	.885
	Educational infrastructure	.655
	Research resources	.835
	Student services	.766
	Computer services	.782
	Bonding with Society	.832
	<b>Total reliability</b>	<b>.953</b>
Importance	Educational environment	.863
	Academic organization	.650
	Student welfare	.839
	Administrative quality	.876
	Teaching quality	.909
	Educational infrastructure	.760
	Research resources	.577
	Student services	.838
	Computer services	.845
	Bonding with Society	.840
	<b>Total reliability</b>	<b>.959</b>

Note: own elaboration with research results.

The assessment of each item was carried out for both study variables through a five-point Likert scale as follows:

1. Not at all important / Very dissatisfied.
2. Something unimportant / A little dissatisfied.
3. Neither important nor unimportant / Neither satisfied nor dissatisfied.
4. Very Important / A little satisfied.
5. Extremely important / Very satisfied.

The population subject of study was 355 students who carry out undergraduate studies at the

Universidad Juárez Autónoma de Tabasco (UJAT), who study the following educational programs: Administration, Public Accounting, Marketing and Economics.

To apply the instrument, the sample was determined by convenience (Hernández et. al, 2014) since the students who had access during the study period were surveyed.

**Results**

The research results were obtained from the statistical analyzes carried out through the Statistical Package for the Social Sciences program



(SPSS version 25). For the descriptive study, the sociodemographic data considered in the first section of the questionnaire were evaluated, which reflect that 51% of the students are male and 49% are female (Table 2); Regarding the degrees they are studying, 53% of those surveyed are Administration students, 21.7% Marketing students, 20.6% Accounting and 4.8% study Economics (Table 3). Regarding the age ranges,

these were structured in three-year intervals, starting with 17 years, which is the minimum age of the surveyed students, and concluding with 34 years; the highest number of students (54.1%) was found in the 20 to 22 age range, 23.1% were between 17 and 19 years old. The lowest percentages were obtained in the intervals from 26 to 28 years (2.5%), 29 to 31 years (1.1%) and 0.8% from 32 to 34 years (Table 4).

**Table 2**

*Gender de los estudiantes encuestados.*

Gender	Frequency	Percentage
Male	181	51.0
Feminine	174	49.0

**Note:** own elaboration with research results

**Table 3**

*Bachelor's degree*

Bachelor's degree	Frequency	Percentage
Administration	188	53.0
Marketing	77	21.7
Economy	17	4.8
Accounting	73	20.6
Total	355	100.0

**Note:** own elaboration with research results

**Table 4**

*Age*

Age range	Frequency	Percentage
17 A 19	82	23.1
20 A 22	192	54.1
23 A 25	65	18.3
26 A 28	9	2.5
29 A 31	4	1.1
32 A 34	3	.8

**Note:** own elaboration with research results



Within the data included in the first section of the instrument, it was considered whether the student works or not, obtaining as a result that 31% do work and 69% do not. As well as the semester in which they are, the details being presented in Table 5, it should be noted that the first semester students were not included in the study, considering that they still did not have the possibility of expressing an opinion regarding the quality of educational services given his recent admission to the

University. It is important to note that the IES study program is flexible, that is, each student chooses the subjects to be studied according to the curricular map of the undergraduate degree that they are student and the minimum credits so that they can enroll in each semester, for It is observed that despite the fact that 10 semesters are contemplated to conclude each degree, it is feasible to extend the study period for two more school cycles.

**Table 5**  
*Semester*

Semester	Frequency	Percentage
2	4	1.1
3	1	.3
4	127	35.8
5	21	5.9
6	47	13.2
7	14	3.9
8	29	8.2
9	34	9.6
10	51	14.4
11	21	5.9
12	6	1.7
Total	355	100

**Note:** own elaboration with research results

Regarding the analysis of arithmetic means for the variable: importance, the highest results were reflected in the items: 37 (with 4.39 related to the usefulness of books to improve understanding of the subjects), items 31 and 36 (with 4.29 the quality of teaching of the teaching staff and the availability of books in the library) and with equal results of 4.28 the items 33, 34 and 42 aimed at measuring satisfaction with The lighting of the classrooms, Availability of study books in the physical and virtual library and the hygienic services (bathrooms). Therefore, it is concluded that the highest levels of importance that students assigned to the proposed

dimensions are: resources for research, educational infrastructure, student services and teaching quality. And the lowest level of importance was reflected in item 6 (decoration of classrooms) of the educational environment dimension.

In the case of the satisfaction variable, the highest arithmetic means were obtained in the items: 33 and 37 (The lighting of the classrooms and the usefulness of the books to improve the understanding of the subjects, respectively).



**Table 6**  
*Descriptive statistics*

Item	Importance		Satisfaction	
	M	DE	M	DE
AE1	3.92	1.150	3.13	.995
AE2	3.86	1.058	3.20	.956
AE3	4.00	1.101	3.29	1.089
AE4	3.97	1.032	3.41	1.008
AE5	4.10	1.083	3.37	1.206
AE6	3.35	1.332	2.90	1.215
AE7	3.78	.992	3.20	.967
AE8	3.96	1.039	3.23	1.027
AE9	4.05	1.016	3.37	1.039
AE10	4.24	.986	3.49	1.004
AE11	3.97	1.055	3.46	1.050
AE12	4.19	1.100	3.29	1.252
AE13	4.09	1.116	3.17	1.110
AE14	4.02	1.121	3.43	1.021
AE15	4.11	2.927	3.13	1.077
AE16	4.06	1.021	3.33	1.039
AE17	4.08	1.089	3.35	1.125
OA18	3.97	1.037	3.44	1.049
OA19	4.17	1.143	3.09	1.278
BE20	3.93	1.102	3.20	1.125
BE21	3.94	1.141	3.06	1.228
BE22	4.00	1.047	3.25	1.141
BE23	3.97	1.203	2.81	1.307
CA24	3.91	1.174	2.82	1.158
CA25	3.97	1.189	2.84	1.232
CA26	3.94	1.200	3.00	1.153
CD27	4.05	1.074	3.29	1.109
CD28	4.25	.957	3.52	1.042
CD29	4.13	1.069	3.35	1.105
CD30	4.17	1.072	3.39	1.106
CD31	4.29	1.083	3.55	1.097
IE32	4.14	1.094	3.18	1.092
IE33	4.28	1.003	3.72	1.050
RI34	4.28	.952	3.65	1.028
RI35	4.26	.978	3.71	.967
RI36	4.29	.999	3.66	1.024
RI37	4.39	2.866	3.72	.976
SE38	3.74	1.267	2.93	1.172
SE39	3.95	1.142	3.23	1.030
SE40	4.05	1.091	3.07	1.158
SE41	4.11	1.157	2.88	1.240
SE42	4.28	1.119	2.52	1.328
SI43	4.16	1.039	3.35	1.133
SI44	4.13	1.027	3.25	1.036



SI45	4.21	1.052	2.96	1.277
SI46	4.18	1.148	2.66	1.374
VS47	4.03	1.037	3.23	1.099
VS48	4.19	1.052	3.20	1.120
VS49	4.08	1.053	3.23	1.112
VS50	4.26	1.084	3.33	1.177

**Note:** own elaboration with research results

**Table 7**  
*Correlation between satisfaction factors*

Satisfaction factors	1	2	3	4	5	6	7	8	9	10
1. Educational environment										
2. Academic organization	.52**									
3. Student welfare	.59**	.50**								
4. Administrative quality	.45**	.41**	.56**							
5. Teaching quality	.64**	.42**	.50**	.49**						
6. Educational infrastructure	.54**	.42**	.45**	.40**	.43**					
7. Research resources	.55**	.33**	.30**	.28**	.42**	.52**				
8. Student services	.48**	.47**	.52**	.54**	.37**	.42**	.39**			
9. Computer services	.49**	.45**	.55**	.53**	.39**	.48**	.41**	.61**		
10. Bonding with Society	.58**	.41**	.43**	.39**	.48**	.51**	.47**	.51**	.59**	

*Note:* 1 = Educational Environment, 2 = Academic Organization, 3 = Student Well-being, 4 = Administrative Quality, 5 = Teaching Quality, 6 = Educational Infrastructure, 7 = Research Resources, 8 = Student Services, 9 = Computer Services, 10 = Bonding with society.

\*\* . The correlation is significant at the 0.01 level (bilateral). \* . The correlation is significant at the 0.05 level (bilateral).

Pearson's correlation analysis was performed, in order to measure the relationship between the factors that make up the scale to determine the satisfaction of undergraduate students. Significant associations were obtained between the factors. The highest correlations were between the Educational Environment with Teaching Quality (r =

.64) and Student Services with Information Technology Services (r = .61). On the other hand, the lowest correlations were found in Administrative Quality with Research Resources (r = .28) and Student Well-being with Research Resources (r = .30)



**Table 8**

Correlation between importance factors

Importance factors	1	2	3	4	5	6	7	8	9	10
1. Educational environment										
2. Academic organization	.55**									
3. Student welfare	.60**	.64**								
4. Administrative quality	.58**	.55**	.69**							
5. Teaching quality	.62**	.59**	.69**	.72**						
6. Educational infrastructure	.61**	.58**	.64**	.61**	.64**					
7. Research resources	.52**	.47**	.48**	.45**	.58**	.56**				
8. Student services	.62**	.60**	.60**	.60**	.63**	.66**	.49**			
9. Computer services	.58**	.50**	.58**	.64**	.66**	.62**	.55**	.70**		
10. Bonding with Society	.64**	.51**	.53**	.56**	.68**	.62**	.54**	.64**	.69**	

Note: 1 = Educational Environment, 2 = Academic Organization, 3 = Student Well-being, 4 = Administrative Quality, 5 = Teaching Quality, 6 = Educational Infrastructure, 7 = Research Resources, 8 = Student Services, 9 = Computer Services, 10 = Bonding with Society.

\*\* . The correlation is significant at the 0.01 level (bilateral). \* . The correlation is significant at the 0.05 level (bilateral).

Pearson's correlation analysis was carried out in order to measure the relationship between the factors that are considered important by undergraduate students. Significant associations were obtained between the factors. The highest correlations were between Administrative Quality with Teaching Quality ( $r = .72$ ) and Student Services with Computer Services ( $r = .70$ ). On the other hand, the lowest correlations were found in Administrative Quality with Research Resources ( $r = .45$ ) and Academic Organization and Student Well-being with Research Resources ( $r = .47$ ) and ( $r = .48$ ) respectively.





**Table 9**

Differences between Importance and Satisfaction by Factor

	Comparisons	<i>M</i>	<i>DE</i>	<i>t</i>	<i>gl</i>	<i>p</i>
Par 1	Importance of Educational Environment - Satisfaction with Educational Environment	.705	.762	17.427	354	.000
Par 2	Importance of Educational Environment - Satisfaction with Educational Environment	.808	1.271	11.989	354	.000
Par 3	Importance of Student Well-being - Satisfaction with student well-being	.884	1.197	13.907	354	.000
Par 4	Importance of Administrative Quality - Satisfaction with administrative quality	1.053	1.328	14.936	354	.000
Par 5	Importance of Teaching Quality - Satisfaction with teaching quality	.760	1.012	14.157	354	.000
Par 6	Importance of Educational Infrastructure - Satisfaction with educational infrastructure	.511	1.093	8.817	354	.000
Par 7	Importance of Research Resources - Satisfaction with research resources	.617	1.131	10.275	354	.000
Par 8	Importance of Student Services - Satisfaction with student services	1.099	1.157	17.891	354	.000
Par 9	Importance of Computer Services - Satisfaction with computer services	1.118	1.214	17.344	354	.000
Par 10	Importance of Bonding with Society - Satisfaction with bonding with society	.892	1.073	15.672	354	.000

186

**Note:** own elaboration with research results.



A comparative analysis was carried out between the importance and satisfaction of the mean values obtained for each factor, using the Student's t test for related samples in SPSS version 25. It was found that there is a significant difference in all comparisons.

## Conclusions

The Public Institutions of Higher Education (UPES) in Mexico develop their activities financed mainly through financial resources provided by the Federation and the State, that is, through subsidies; Obtaining, maintaining or even increasing them depends largely on the quality indicators defined such as: professionalization of the teaching staff, enrollment in each educational program, terminal efficiency, follow-up of graduates, number of research professors that are part of the National System (SNI) and State (SEI) of researchers, number of academic bodies and level of consolidation in which they are, to name a few. Therefore, it is considered pertinent to affirm that the subsidies depend on the fulfillment of the quality standards defined for higher education.

The HEIs promote that their educational programs have the support of evaluating bodies such as the Interinstitutional Committees for the Evaluation of Higher Education (CIIES) as a guarantor of quality, however it is essential to evaluate internally and through the opinion of the students the importance and satisfaction of the educational services they receive, which are conceived as the main means through which the objective and graduation profile of each of the educational programs are met. The exploration carried out through this study reflected interesting results to be considered by the educational authorities of the academic division, the students are full-time, that is, they must stay long daily days in the university institution, so student services are considered by the students as very important. Satisfied students develop feelings of belonging and permanence, which is why they become the main diffusers of the activities that are promoted inside the educational centers.

The above allows us to understand the importance of the study, since the success of higher education institutions is related to the management of

educational quality, it is recognized that the study requires contextual adaptations for its application in other settings and the emphasis of the Study dimensions must respond to each particularity. Therefore, it is concluded that this research is considered as an evaluation alternative that will require deeper investigations through observation.

187

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