

# THE QUALITY OF THE HIGHER EDUCATION SERVICES AND ITS IMPACT ON THE INTERNAL STAKEHOLDERS' SATISFACTION IN THE FIELD OF PRIVATE HIGHER EDUCATION INSTITUTIONS IN UAE

**HANY MAMDOUH SELIM MOHAMED**

Faculty of Commerce, Business Department, Al Khawarizmi International College, UAE.

Email: hanidscs@gmail.com

## Abstract

The higher education service sector is one of the fastest-expanding industries in the UAE. In this study, researcher has focused to study the impact of the quality of higher education services on the internal stakeholders' satisfaction. To study staff satisfaction with service quality impacts students' satisfaction and; to identify the essential educational services influencing the internal stakeholders' satisfaction. The descriptive research methodology has been used with non-probability (convenience) sampling technique by distributing questionnaires to obtain qualitative and quantitative information. The representative sample of 1264 students and 147 staff members, selected from various disciplines. This private higher education institution is located in Abu Dhabi and Alain, United Arab Emirates. A total number of 1264 respondents from a population of 1600 students, an unlimited number of 54 respondents from a population of 71 academics and 93 respondents as a sample from a population of 111 non-academic staff. Statistical analysis and results have been calculated. Therefore, higher education institutions may measure their services in light of the new modified model and the dimensions of SERVPERF according to stakeholders' perceptions. Based on the results of the study, the following conclusion has been obtained: The academic staff considers both services essential to their satisfaction. The non-academic staff highlight that the non-academic services are more important than the academic services. Students consider that academic services are more critical than non-academic services. Faculty members seem to be satisfied with acquired services. Potential areas of improvement may include awareness of their needs by institutional leaders and collaboration among faculty across the college. The study reflects that the college should pay more attention to non-academic services, according to the student's point of view. There is a statistically significant impact on the quality of the services provided by the college on the stakeholders' satisfaction level (0.05). The study showed the dimensions of service quality that are most important in the satisfaction of the internal stakeholders: reliability and responsiveness.

**Keywords:** Higher Education Services, Internal Stake Holders' Satisfaction, Students UAE

## INTRODUCTION

The higher education service sector is one of the fastest-expanding industries in the UAE. The rapid growth in this sector is characterized by increased student enrolment, increased Government expectations and regulations to offer quality service, heightened expectation of service quality by well-informed internal stakeholders, and the emergence of competitive private universities. Service quality in education is therefore gaining prominence with the high service quality for enhanced internal stakeholder satisfaction and retention. Despite the presence of a quality management system in college in terms of proper documentation, manuals, and regular surveys, among others, it has been

observed that the quality of the services provided does not meet the students and staff's expectations leading to dissatisfaction as exemplified in:

## REVIEW OF RELATED LITERATURE

The Quality revolution has set the stage for a more demanding society. According to Anita Quinn, et.al. Of Michigan Technological University, Houghton, MI, USA, (2009), quality experts believe that 'measuring customer satisfaction at an educational establishment might be regarded by educators as one of the greatest challenges of the quality movement' (Cloutier & Richards, 1994, p. 117). This challenge is only one of several that surround quality improvement efforts in higher education.'

**Service Quality Models:** The construct of service quality has given rise to scholarly debate with extensive literature revealing, the absence of consensus on the measurement of service quality, owing to service intangibility, heterogeneity and multidimensionality (Navarro et al., 2005). Empirical review by Kang and James (2004) and Kay and Pawitra (2001) points to the similarity in thoughts that the Service Quality (SERVQUAL) model pioneered by Parasuraman, Berry, and Zeithaml (1985) is widely accepted in the measurement of service quality. Though it is widely used, scholars continue to question its completeness, operational effectiveness and its conceptualization (Sureshchandar, Rajendran & Anatharaman, 2002). Interest in the measurement of service quality is attributed to the relationship between service quality and the costs involved, the profitability of ventures, customer satisfaction and retention (Shekarchizadeh, Rasli & Hon-Tot, 2011).

**Nordic Model:** Early conceptualization of service quality was formed by Gronroos (1982, 1984), he defined service quality by technical or outcome (what consumers receive) and functional or process related (how consumers receive the service) dimensions (Gronroos, 1982, 1984, 1988). Image build up by technical and functional quality and the effect of some other factors (marketing communication, word of mouth, tradition, ideology, customer needs and pricing). The nordic model is based on the disconfirmation paradigm by comparing perceived performance and expected service. This was the first attempt to measure the quality of service. Gronroos's model was general and without offering any technique for measuring technical and functional quality. Rust & Oliver (1994) tried to refine the Nordic model through The Three-Component Model. They suggest three components: service product (i.e., technical quality), service delivery (i.e., functional quality), and service environment but they did not test their model and just a few support have been found

**SERVQUAL Model:** Parasuraman, Zeithaml, & Berry (1985) made a new model of service quality measurement and tried to cover the weakness of the Nordic model by offering a new way of measuring service quality. In the SERVQUAL model, they suggest using the gap or difference between the expected level of service and the delivered level of service for measuring service quality perception with five dimensions: Reliability, Responsiveness, Assurance, Empathy, and Tangibility. SERVQUAL is an analytical tool,

which can help managers to identifying the gaps between variables affecting the quality of the offering services (Seth, Deshmukh, & Vrat, 2005).

**Multilevel Model:** Because inconsistency was reported in SERVQUAL factors, in 1996 Dabholkar, Thorpe and Rentz proposed the multilevel model for service quality. They suggest changing the structure of service quality models to a three-stage model: overall perceptions of service quality, primary dimensions, and Sub dimensions. This model was for evaluating service quality in the retail store. Although multilevel proposes a new structure, it needs to generalize for different areas and consider the effect of some other factors such as environment, price, etc. In addition, there is a lack of identifying attributes or factors that define the subdimensions. The Multilevel model by Dabholkar et al., (1996)

**Hierarchical Model:** In 2001 Brady and Cronin, suggested a new model by combining four models. They improved SERVQUAL (Parasuraman, et al., 1988) by specifying what needed to be reliable, responsive, empathic, assured and tangible. Brady and Cronin adopted service quality perception based on evaluation by the customer in three dimensions: 1. Interaction Quality (i.e., functional quality) 2. Physical Environment Quality 3. Outcome Quality (i.e., technical quality) (Gronroos, 1984; Rust & Oliver, 1994). In addition, they accept multi-level service quality perceptions and multidimensional (Dabholkar, et al., 1996). Service quality has three primary level dimensions in this conceptualization such as interaction, environment and outcome with three sub-dimensions for each one: Interaction (Attitude – Behavior – Expertise), Environment (Ambient Conditions – Design – Social Factors), and Outcome (Waiting Time – Tangibles – Valence. A new model conceptualized by this hierarchical model and SERVQUAL factors is specified into subdimensions. Brady and Cronin have improved the service quality framework and solved the stalemate in this theory. It defines service quality perception and a clear form of service quality measurement. In SERVQUAL measurement, service outcomes were not considered, but Brady & Cronin's model seems to fill this void (Pollack, 2009)

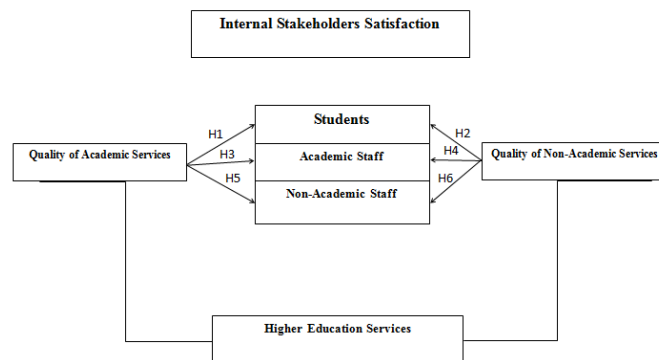
**SERVPERF;** SERVPERF (Service Performance) was created on basis of a critique of SERVQUAL by J.J. Cronin and S.A. Taylor in 1994. They claimed that Parasuraman's study of relations between expected and experienced quality is not the proper approach to quality assessment. The SERVPERF measures quality as an attitude, not satisfaction. However, it uses the idea of perceived service quality leading to satisfaction. But it goes further and connects satisfaction with further purchase intentions.

**Theoretical Foundation of Study;** educating large numbers of people to a high standard and disseminating knowledge can be considered the main objectives of today's higher education sector. Since the stakeholders (students, administrators, faculties and various public entities) are from diverse sectors of society, it makes the higher education sector very complex, demanding and competitive. In the higher education sector, being excellent can be interpreted as 'very good' or 'exceptional'.

**Measuring Service Quality;** in most European countries, public and private higher education institutions are joining the quality revolution which was pioneered by the US in

this decade of globalization. In one Romanian paper, the authors mentioned that 'Within the frame of a more and more demanding and competitive educational market, student's opinion about the quality of educational services is crucial and should be taken into consideration when adopting policies for quality enhancement in Romanian universities.' They further highlighted, 'the need for higher education institutions to acknowledge student's expectations and perceptions, in order to assure and improve the quality of educational services..' (Diana Sopon, Bogdan Cuza, 2013)

## Conceptual Framework



## Hypotheses Of The Research

**H1:** There is no statistical significant impact of quality of academic services on the student satisfaction.

**H2:** There is no significant statistical impact of the quality of Non- academic services on the student satisfaction.

**H3:** There is no statistical significant impact of the quality of academic services on the satisfaction of the academic staff.

**H4:** There is no statistical significant impact of the quality of Non-academic services on the satisfaction of the academic staff.

**H5:** There is no significant impact of the quality of academic services on the satisfaction of the Non- academic staff.

**H6:** There is no significant impact of the quality of Non-academic services on the satisfaction of the Non- academic staff.

## RESEARCH DESIGN AND METHODOLOGY

One of the essential determinants of national competitiveness in this global era is the quality of higher education. This quality comes from excellent learning and public satisfaction with the service delivered (Hanasya, Abdullah, & Warokka, 2011). One of the best ways to do so is through direct feedback from its internal and external stakeholders proportionally, i.e., between student and lecturer

### **Research Design:**

A questionnaire was developed using the SERVPERF instrument and distributed through online forms using a convenience sampling technique to the internal stakeholders in Khawarizmi International College. The questionnaire was broadcast on both campuses to determine their perceptions of service quality and which service is more important from different perspectives in the college. Secondary data has been collected related to student records from respective institutions.

### **Research Objectives:**

**RO1:** Study the impact of the quality of higher education services on the internal stakeholders' satisfaction.

**RO2:** Studying staff satisfaction with service quality impacts students' satisfaction.

**RO3:** Identify the essential educational services influencing the internal stakeholders' satisfaction.

### **RESEARCH METHODOLOGY**

The descriptive research methodology will use a non-probability (convenience) sampling technique by distributing questionnaires to obtain qualitative and quantitative information. A combined survey which includes SERVPERF based on HEdPERF aspects, will be conducted among the representative sample of 1264 students and 147 staff members, selected from various disciplines. The population consists of the currently enrolled students of Khawarizmi international college, the full-time academic staff and the full-time non-academic staff of the institution. This private higher education institution is located in Abu Dhabi and Alain, United Arab Emirates. A total number of 1264 respondents from a population of 1600 students, an unlimited number of 54 respondents from a population of 71 academics and 93 respondents as a sample from a population of 111 non-academic staff.

**Instrument:** SERVPERF instrument, proposed by Cronin and Taylor (1992), is used to measure the service performance in the college. SERVPERF comprises 20 items (5 scales Likert-type) with five dimensions: tangibles, reliability, responsiveness, assurance and empathy. Reliability (5 items) is the ability to perform the service accurately and dependably; tangibles (3 items) refers to the appearance of physical factors such as equipment, facilities and personnel; empathy (4 items) involves providing individual attention and care to customers; responsiveness (4 items) is the willingness to give help and prompt service to customers; and finally assurance (4 items) refers to the knowledge and courtesy of employees and their ability to convey trust and confidence.

The data gathered was analyzed using the IBM SPSS program.

**Research Philosophy:** The literature about service quality in the higher education sector needs to be developed more. Many researchers have traditionally focused on commercial services (Sultan and Wong, 2010).

## RESULTS AND DISCUSSIONS

The following table summarizes the reliability test results for the study variables. All of the variables show an alpha coefficient of more than 0.6.

### Reliability Analysis for Research Variables

No.	Variables	Cronbach's Alpha	No. of Statements
1	Perception on Service quality of academic services	.850	19
2	Perception on Service quality of Non-academic services	.947	21

### Data Analysis

#### Perception on Service quality of academic services

Common Factor Analysis (CFA) for Perception on Service quality of academic services

Statement	Person Corr.	Sig.
1. The college meets the deadlines of its promised academic service.	.750**	.000
2. The college shows sincere interest in solving any academic problem I encounter:	.753**	.000
3. The college ensures its academic services perform properly the first time	.717**	.000
4. The college accomplishes the academic services it promises to provide:	.753**	.000
5. The college keeps my academic records safe and organized :	.678**	.000
6. The college allows me to obtain my academic information easily:	.766**	.000
7. The college provides me with the appropriate academic service:	.796**	.000
8. The college is always willing to assist me in solving any academic issue:	.765**	.000
9. The college is never too busy to respond to my academic requests:	.822**	.000
10. The attitudes of the college Academic Staff encourages confidence in the students:	.715**	.000
11. I feel reassured by the quality of academic services the college provides:	.817**	.000
12. Employees in the college have adequate knowledge to answer my academic questions:	.717**	.000
13. The college pays individual attention to my academic concerns:	.763**	.000
14. The academic staff working hours of the college are convenient for me:	.653**	.000
15. The college academic staff has their students' interest at heart	.774**	.000
16. The college understands the specific academic needs of their students	.810**	.000
17. The college has up-to-date academic equipment	.706**	.000
18. The academic physical facilities are visually appealing:	.457**	.000
19. The academic physical environment of the college is clean:	.562**	.000

\*\* Correlation is significant at the 0.01 level (2-tailed).



The above table shows the correlation coefficients between each paragraph (all included sentences) for Perception on Service quality of academic services, where the value of the correlation coefficient between (0.457 – 0.817) which is a positive correlation. The value of each paragraph level is less than 0.05 and thus considered to be honest and intended to measure.

### Perception on Service quality of Non-academic services

Common Factor Analysis (CFA) for Perception on Service quality of Non-academic services

Statement	Person Corr.	Sig.
20. The college meets the deadlines of its promised non-academic service:	.757**	.000
21. The college shows sincere interest in solving any non-academic problem I encounter:	.741**	.000
22. The college ensures its non-academic services perform properly the first time:	.774**	.000
23. The college accomplishes the non-academic services it promises to provide:	.808**	.000
24. The college keeps my non-academic records safe and organized:	.457**	.000
25. The college allows me to obtain my non-academic information easily:	.749**	.000
26. The college provides me with the appropriate non-academic service:	.818**	.000
27. The college is always willing to assist me in solving any non-academic issue:	.774**	.000
28. The college is never too busy to respond to my non-academic requests:	.819**	.000
29. The attitudes of the non-academic staff encourages confidence in the students	.711**	.000
30. I feel reassured by the quality of non-academic services the college provides:	.756**	.000
31. The college management is courteous towards me:	.584**	.000
32. Employees in the college have adequate knowledge to answer my non-academic questions:	.762**	.000
33. The college pays individual attention to my non-academic concerns:	.785**	.000
34. The non-academic staff working hours of the college are convenient for me:	.679**	.000
35. The non-academic staff has its student's interest at heart	.844**	.000
36. The college understands the specific non-academic needs of their students	.844**	.000
37. The college has up-to-date non-academic equipment:	.716**	.000
38. The non-academic physical facilities are visually appealing:	.318**	.000
39. The non-academic physical environment of the college is clean:	.398**	.000
40. Employees are well dressed and presentable:	.319**	.000

**. Correlation is significant at the 0.01 level (2-tailed).**

The table shows the correlation coefficients between each paragraph (all included sentences) for Perception on Service quality of Non-academic services, where the value

of the correlation coefficient between (0.318 – 0.844) which is a positive correlation. The value of each paragraph level is less than 0.05 and thus considered to be honest and intended to measure.

### Hypotheses Testing: Regression Analysis

**H1:** There is no statistical significant impact of quality of academic services on the student satisfaction.

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	.328	.027	12.129	.000
The average of Reliability of the academic services	.190	.013	15.016	.000
The average of Responsiveness of the academic services	.233	.016	14.727	.000
The average of Assurance of the academic services	.153	.012	12.983	.000
The average of Empathy of the academic services	.128	.014	9.215	.000
The average of Tangibles of the academic services	.200	.008	23.562	.000
Adjusted R Square = 0.929		Std. Error of the Estimate = 0.189		
Value of F = 3301.017		Significant = 0.000		

**H2:** there is no significant statistical impact of the quality of Non- academic services on the student satisfaction.

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	.077	.035	2.224	.026
The average of Reliability of the non-academic services	.243	.013	18.751	.000
The average of Responsiveness of the non-academic services	.129	.012	10.519	.000
The average of Assurance of the non-academic services	.192	.013	15.105	.000
The average of Empathy of the non-academic services	.214	.013	16.137	.000
The average of Tangibles of the non-academic services	.197	.011	17.419	.000
Adjusted R Square = 0.929		Std. Error of the Estimate = 0.189		
Value of F = 3297.023		Significant = 0.000		

**H3:** There is no statistical significant impact of the quality of academic services on the satisfaction of the academic staff.



Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	.384	.109	3.515	.001
The average of Reliability of the academic services	.205	.052	3.942	.000
The average of Responsiveness of the academic services	.083	.052	1.580	.121
The average of Assurance of the academic services	.164	.057	2.873	.006
The average of Empathy of the academic services	.245	.044	5.516	.000
The average of Tangibles of the academic services	.188	.029	6.553	.000
Adjusted R Square = 0.954		Std. Error of the Estimate = 0.129		
Value of F = 220.291		Significant = 0.000		

**H4:** There is no statistical significant impact of the quality of Non-academic services on the satisfaction of the academic staff.

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	-.040-	.151	-.265-	.792
The average of Reliability of the non-academic services	.289	.061	4.770	.000
The average of Responsiveness of the non-academic services	.244	.062	3.910	.000
The average of Assurance of the non-academic services	.166	.063	2.630	.011
The average of Empathy of the non-academic services	.126	.063	2.006	.051
The average of Tangibles of the non-academic services	.198	.048	4.112	.000
Adjusted R Square =0.936		Std. Error of the Estimate = 0.153		
Value of F = 154.809		Significant = 0.000		

**H5:** There is no significant impact of the quality of academic services on the satisfaction of the Non- academic staff.

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	.110	.106	1.039	.302
The average of Reliability of the academic services	.311	.053	5.840	.000
The average of Responsiveness of the academic services	.291	.047	6.200	.000
The average of Assurance of the academic services	.215	.043	5.031	.000
The average of Empathy of the academic services	-.059-	.050	-1.183-	.240
The average of Tangibles of the academic services	.209	.037	5.720	.000
Adjusted R Square = 0.964		Std. Error of the Estimate = 0.155		
Value of F = 231.97		Significant = 0.000		

**H6:** There is no significant impact of the quality of Non-academic services on the satisfaction of the Non- academic staff.

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	.321	.081	3.979	.000
The average of Reliability of the non-academic services	.395	.044	9.003	.000
The average of Responsiveness of the non-academic services	.154	.048	3.193	.002
The average of Assurance of the non-academic services	.187	.052	3.588	.001
The average of Empathy of the non-academic services	-.030-	.046	-.653-	.516
The average of Tangibles of the non-academic services	.191	.034	5.625	.000
Adjusted R Square = 0.952		Std. Error of the Estimate = 0.126		
Value of F =362.582		Significant = 0.000		

Table shows the relationship between staff satisfaction and student’s satisfaction

Satisfaction	Students satisfaction
	Pearson Correlation
	Sig. (2-tailed)
Staff satisfaction	N

## Conclusion

Therefore, higher education institutions may measure their services in light of the new modified model and the dimensions of SERVPERF according to stakeholders' perceptions. Based on the results of the study, the following conclusion has been obtained:

1. The academic staff considers both services essential to their satisfaction.
2. The non-academic staff highlight that the non-academic services are more important than the academic services.
3. Students consider that academic services are more critical than non-academic services.
4. Faculty members seem to be satisfied with acquired services. Potential areas of improvement may include awareness of their needs by institutional leaders and collaboration among faculty across the college.
5. The study reflects that the college should pay more attention to non-academic services, according to the student's point of view.
6. There is a statistically significant impact on the quality of the services provided by the college on the stakeholders' satisfaction at level (0.05)
7. The study showed the dimensions of service quality that are most important in the satisfaction of the internal stakeholders: reliability and responsiveness.

## Recommendations

### Academic Services

#### For Students

- The student records have been documented and have shown a high degree of reliability from the student's perspective. However, it is recommended to digitally archive all relevant student data in the server for ministry requirements, future references and in case of contingency or disaster.
- Consider requesting the President to create a cross-functional "Barrier Buster" team that can identify and resolve service quality issues and implement action plans to rectify those that arise due to ineffective policy. These quality standards also necessitate learning about student needs, communicating with students, helping solve students' problems, and responding to students' demands.
- The college should make sure that it is always busy responding to the academic requests made by the students, like issuing relevant records, results announcements, availability of the courses, and responding to queries related to academics.
- Develop a communication strategy by creating Frequently Asked Questions that helps all internal stakeholders to understand the educational values. The college must continuously ensure to assure the student of their best services to maintain their faith and trust in the college.

- It is recommended to have a regular grievances cell to address the concerns of the students.
- The academic and physical facilities must meet international standards to ensure student retention.

### **For Academic Staff**

- According to the academic staff, whether "The College ensures its academic services perform the first time properly" has the most diminutive meaning, confirming that they have to repeatedly follow up with the academic services to get it done. Hence, it is essential to ensure that Administrative and Personnel Quality is considered while recruiting. Quality standards stipulate the recruitment of a sufficient number of professionally qualified workers and technicians who possess the skills necessary to fulfill their career responsibilities; those responsibilities have been identified clearly and accurately.
- It is recommended that the college authorities make a stipulated time frame within which the requisitions made by academic staff must be solved.
- Activities related to the assurance of support in job security and well-being must be created among the academic staff.
- It is proved in the research that the college ensures the academic staff by paying individual attention to their academic concerns. However, it is found that some of them need help related to the support extended to research.
- It is recommended to provide a state-of-the-art infrastructure that supports the lecture delivery in a much more professional way using intelligent boards.

### **For Non-Academic Staff**

- The response received for the question "The college meets the deadlines of its promised academic service" by the non-academic staff has a minimum mean compared to another aspect. It is recommended to streamline processes and improve support services to track activities and streamline administrative and academic processes across campuses.
- The issues related to non-academic staff need to be addressed faster with a response that adheres to the policy. The quick response will motivate the team and provide them with clarity on their next course of action.
- It is recommended that the college ensure regular training programs for performance improvement for the non-academic staff.
- Ensure that a positive attitude is exhibited about the college working hours. The flexibility of work time can be addressed to meet this concern.

The non-academic staff must have suitable equipment and network connectivity to work and perform efficiently.

## **Non-Academic Services**

### **For Students:**

#### **Skills Acquisition for Quality improvement:**

- Skills acquisition includes prior identification of skills and capabilities in which students must become proficient, determining professional competencies, and preparing students for the labor market. Programs should seek to provide students with those skills and advertise the program's objectives. Extracurricular activities suitable for students that match their talents must be initiated.
- Minimize time accessing services and locate student services centrally, which would decrease waiting times and improve the quality and expertise of the staff. An automated ticket system has recently been implemented to eliminate queues and save time. Wrap technology around the institution Students needs access to accurate, personalized academic information – Attendance, courses, schedules, timetables, lesson plans, assignments, and library resources.

### **For Academic Staff:**

- Talent Management, Shared Knowledge sessions, organizing various clubs to motivate and build synergy, team building and organization culture. Health Management sessions to be organized.

### **For Non-Academic staff:**

- Non-academic staff must be encouraged to improve their unique talents to represent the college on various occasions. Health, safety and environmental awareness programs must be done. Tours must be arranged at least once a year to build synergy for institutional citizenship and belongingness
- To consider revising Salary, appraisal and Promotion for Staff members, both Academic and Non-Academic, that will motivate them to perform better.
- Interaction and Community Service Quality: Community service activities primarily focus on adopting clear policies to work with community institutions to achieve their mission and objectives, which depends on proper planning. This sort of relationship must be based on cooperation and should include the development of strategies and specific programs to establish priorities.

Develop a communication strategy by creating Frequently Asked Questions that helps all internal stakeholders to understand the educational values.

### **Future Researches:**

- What type of service affects most on the retention of internal stakeholders most?
- Whether the quality of both service types (academic and non-academic) affects internal stakeholder satisfaction, which will be reflected in the retention rate.

- The effectiveness of the proposed model is to measure the quality of services as a mixed model between SERVPERF and HEdPERF.
- The applicability of implementing the study on a large scale.

## References

- Brady, M. K., & Cronin Jr, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *Journal of marketing*, 65(3), 34-49.
- Cloutier, M. G., & Richards, J. D. (1994). Examining customer satisfaction in a big school. *Quality progress*, 27(9), 117.
- Cronin Jr, J. J., & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *Journal of marketing*, 56(3), 55-68.
- Cronin Jr, J. J., & Taylor, S. A. (1994). SERVPERF versus SERVQUAL: reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of marketing*, 58(1), 125-131.
- Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (1996). A measure of service quality for retail stores: scale development and validation. *Journal of the Academy of marketing Science*, 24(1), 3-16.
- Grönroos, C. (1982). An applied service marketing theory. *European journal of marketing*.
- Kang, G. D., & James, J. (2004). Service quality dimensions: an examination of Grönroos's service quality model. *Managing Service Quality: An International Journal*.
- Navarro, X., Krueger, T. B., Lago, N., Micera, S., Stieglitz, T., & Dario, P. (2005). A critical review of interfaces with the peripheral nervous system for the control of neuroprostheses and hybrid bionic systems. *Journal of the Peripheral Nervous System*, 10(3), 229-258.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. 1988, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing*, 49(4), 41-50.
- Pollack, B. L. (2009). Linking the hierarchical service quality model to customer satisfaction and loyalty. *Journal of services marketing*.
- Quinn, A., Lemay, G., Larsen, P., & Johnson, D. M. (2009). Service quality in higher education. *Total Quality Management*, 20(2), 139-152.
- Rasli, A., Shekarchizadeh, A., & Iqbal, M. J. (2012). Perception of service quality in higher education: Perspective of Iranian students in Malaysian universities. *International Journal of Academic Research in Management (IJARM)*, 1(1).
- Rust, R. T., & Oliver, R. W. (1994). The death of advertising. *Journal of Advertising*, 23(4), 71-77.
- Seth, N., Deshmukh, S. G., & Vrat, P. (2005). Service quality models: a review. *International journal of quality & reliability management*.
- Sopon, D., & Cuza, B. (2013). Reflections on romanian higher education: quality improvement of educational services. *Managerial Challenges of the Contemporary Society. Proceedings*, 5, 204.
- Sultan, P., & Wong, H. Y. (2010). Service quality in higher education—a review and research agenda. *International Journal of Quality and Service Sciences*.
- Sureshchandar, G. S., Rajendran, C., & Anantharaman, R. N. (2002). The relationship between service quality and customer satisfaction—a factor specific approach. *Journal of services marketing*.



Tan, K. C., & Pawitra, T. A. (2001). Integrating SERVQUAL and Kano's model into QFD for service excellence development. *Managing Service Quality: An International Journal*, 11(6), 418-430.