Service Quality Measurement: The case of the Professional Business Academy

Prepared by:

This study intended to determine the quality gap in educational services provided to the students of Business Academy. The study used a quantitative methodology, and was based on the disconfirmation paradigm. The quantitative measuring instrument used was SERVQUAL, which reveled once again as an effective tool in measuring service quality. The results indicate mostly negative quality gaps in all the dimensions of Servqual (Tangibles, Responsiveness, Reliability and Empathy) which is associated with dissatisfaction. As a conclusion, management should pay attention to all service quality dimensions and take proper actions in order to reduce them. The results and the conclusion are discussed in detail.

The research questions/objectives of this study are:

"How does the university perform in terms of Service Quality according to student perceptions?"

"Are there any gaps in the student's perceptions of Service Quality?"

"What is the discrepancy that exists between the managerial point of view and those of the students?"

"What actions can be taken in order to minimize the areas with negative quality gaps?"

Additional questions/objectives of this study are:

"Are there any gender differences in service quality evaluations?"

"Are there any academic year group differences in service quality evaluations?"

"What dimensions are most correlated with the overall service quality evaluation and word of mouth?"

Methodology

Quantitative research is employed in order to answer the research questions/ objectives. The research instrument used is an industry specific adapted version of the Servqual questionnaire. The SERVQUAL research instrument comprises a concise multiple-item scale with high reliability and validity. It is used to ascertain the service expectations and perceptions of clients and as a result can improve organizational Service Quality. The Servqual questionnaires were distributed to randomly selected students from the three years of undergraduate studies. The study took place in the academic year 2014-2015 in January. There were 300 questionnaires distributed hand to hand from a secretary of the university, waiting for a response, from a total population of 700 students. 282 Questionnaires were returned and usable, yielding a response rate of 94%.

The Dimensions and Variables of Measurement

The research instrument was divided into three sections; the first section comprised 25 questions, divided into 4 -5 questions for each generic dimension of service quality (namely, tangibles, responsiveness, reliability, assurance and empathy).

In the first part, that is the expectation section, students were asked to answer the questions about the ideal situation in their opinion.
We had to choose between two questions formats: "Excellent universities should have…" and "How important is for excellent universities to have…"
All measurement items were rated using a 7-point Likert scale consisting of "not important at all" to "very much important". The questionnaire is listed as appendix A.
The first format has a tendency to impose high expectation therefore higher scores and can affect the reliability of the data, while the second format is less imposing and asks for a direct opinion without compromising judgments, therefore of higher validity.

• **Tangibles** consist in the physical surroundings represented by objects.
The appearance of the universities' physical facilities, equipment, personnel and communication materials
The variables (questions): educational equipments, library, sport and recreation facilities, lecture rooms and the transportation facilities.

• **Responsiveness** – The university's willingness to help students and provide fast and efficient service performance

The variables: effective problem solving, immediate response to requests of students, information provided in time promised, and preparedness for responding at the requests of the students.

• **Reliability** – the university's ability to provide accurate and dependable services. This is a dimension that deals with the academic side of the university.
The variables: Safety and reliability of service, teaching style of the academics, approach of the academics, trusted academic material, and the university's up-to date knowledge

• **Assurance** - consisting of the ability, knowledge and skills of the university's staff to create confidence in students. This dimension deals mostly with the administrative staff.

The variables: keeping of promises, helpfulness of the administrative staff, friendliness of the administrative staff, and speed of operations.

• **Empathy** – the university's sense of belonging and commitment of staff to all students and readiness to provide each student with personal service.

The variables: personal attention, patience in responding, individual treatment, respecting of the learners feedback, having student's best interests at heart.

Two more variables that are comprised in the first part of the questionnaire are:
-Importance of the university's links with the industry, and
-Importance of the university's high level of research

The second section of the research instrument deals with the actual perceptions of the service delivered. Students expressed their evaluation on the present situation and rated the importance of the measurement dimensions according to their judgment.
There are six more added variables in the second part of the questionnaire, of high importance regarding the study:
•   Satisfaction of choosing this university
•   Was it a wise one, the decision of choosing this university?
•   In total this is a good university
•   How is your university, compared to others, in the following aspects:
            A) Quality of academics

                        B) Quality of students
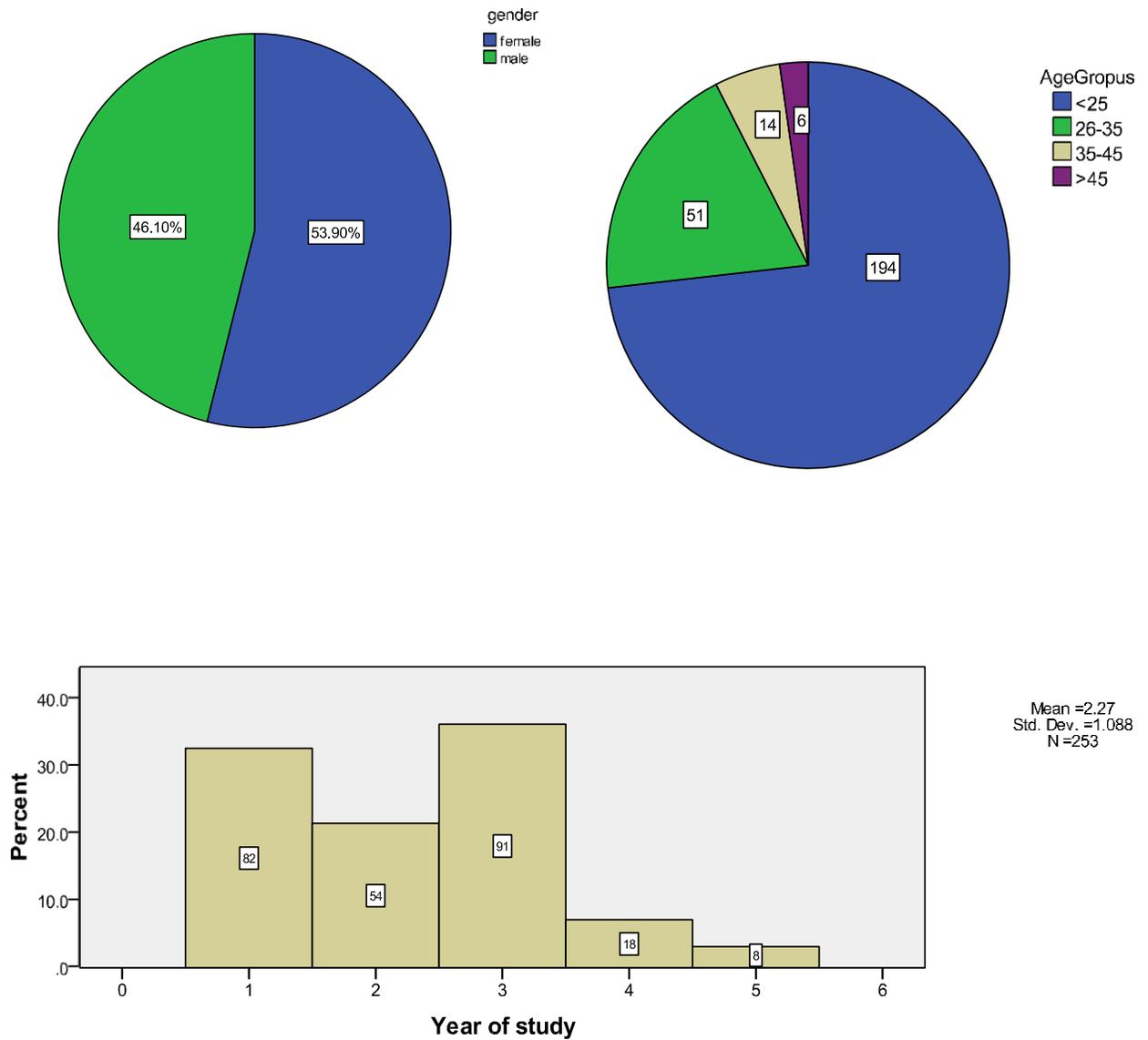
                        C) Quality of curricula

- I will say good things about this university to other people
- I will strongly recommend this university

The third part of the questionnaire deals with demographic information.

Demographic profile of the Sample

The respondents are 46.10 % male and 53.90 percent female. The age group 18-25 accounts for 73.4 percent of the students

gender
- female
- male

46.10%   53.90%

AgeGropus
- <25
- 26-35
- 35-45
- >45

14 6

51

194

Mean =2.27
Std. Dev. =1.088
N =253

82

54

91

18

8

Percent

Year of study

Charts 1.1, 1.2, 1.3 Demographic profiling of the respondents

Cronbach's Alpha Coefficient (Reliability Analysis)

Cronbach's Alpha is used to measure the reliability of a psychometric instrument and indicates the extent to which a set of items can be used to measure a single latent variable. Cronbach's Alpha can be written as a function of the number of test items and the inter-correlation among these items. The standardized formula is expressed as follows (Cronbach's Alpha, 2007):

$$\alpha = \frac{N \cdot r}{1 + (N-1) \cdot r}$$

Where a = Cronbach's Alpha
N = the number of items;
r = the average of all (Pearson) correlation coefficients between the items.

Cronbach's Alpha increases as the correlation between the items increases.
For this reason, this coefficient is also called the internal consistency reliability of the test. The value of Alpha (a) can range from negative infinity and to positive one, although only positive values make sense. The closer Alpha is to one, the higher the internal consistency reliability). A reliability coefficient of 0.70 or higher is considered acceptable in most cases. It is evident from the formula that as the number of items increase, so does Cronbach's Alpha. Alpha is low when the average inter-item correlation is low.
Hence, as the inter-item correlations are high, and then evidence exists that the items are measuring the same underlying construct and therefore have a high reliability (Cronbach's Alpha, 2007).

The Cronbach's Alpha reliability analysis was processed using the SPSS ver. 17.0 software. The added variables that are questions 24 and 25 comprised in the questionnaire "Importance of the university's links with the industry" and

"Importance of the university's high level of research", are calculated under the reliability dimension.

Table 1.1 – Cronbach's Alphas

All dimensions of service quality have acceptable values of Alpha (> 0.70)

The Cronbach Alpha for the six added variables in the second section, which are:

Expectations		
Dimensions	Nr of items	Cronbach's Alpha
Tangibles	5	**0.624**
Resp.	4	**0.744**
Reliability	5	**0.609**
Assurance	4	**0.657**
Empathy	5	**0.807**

Perceptions		
Dimensions	Nr of items	Cronbach's Alpha
Tangibles	5	**0.830**
Resp.	4	**0.929**
Reliability	7	**0.793**
Assurance	4	**0.829**
Empathy	5	**0.857**

- Satisfaction of choosing this university
- Was it a wise one, the decision of choosing this university?
- In total this is a good university
- How is your university, compared to others, in the following aspects:

A) Quality of academics
B) Quality of students
C) Quality of curricula

- I will say good things about this university to other people
- I will strongly recommend this university

Is at a level of **0.889** which shows that these variables have acceptable values of Alpha

IDENTIFICATION OF GAPS

Mean scores were run for the expectations and the perceptions regarding all dimensions of service quality. Table 4.12 shows a general picture of service quality dimensions scores along with the quality gap. The results indicate that the total service quality is associated with dissatisfaction from the point of view of the students. The overall expectations of the students regarding the service quality was at a level of **6.15** in a Likert scale from 1 to 7, while the perception of the service delivered was **5.63** which indicates a quality gap of **-0.51**. The dimension that received the lowest score is **Tangibles** while **Reliability** is the dimension that received the highest score.

Dimensions	Total Expected Service	Total Perceived Service	Quality Gap
Tangibles	*6.05	* 4.75	-1.30
Responsiveness	6.49	5.88	-0.61
Reliability	6.35	6.05	-0.30
Assurance	6.35	6.05	-0.30
Empathy	5.54	5.44	-0.10
Total Service Quality	6.15	5.63	-0.51

Table 1.2 Total mean Service quality for the five dimensions of Servqual
*Mean scores for expectations and perceptions in a likert scale from 1 to 7
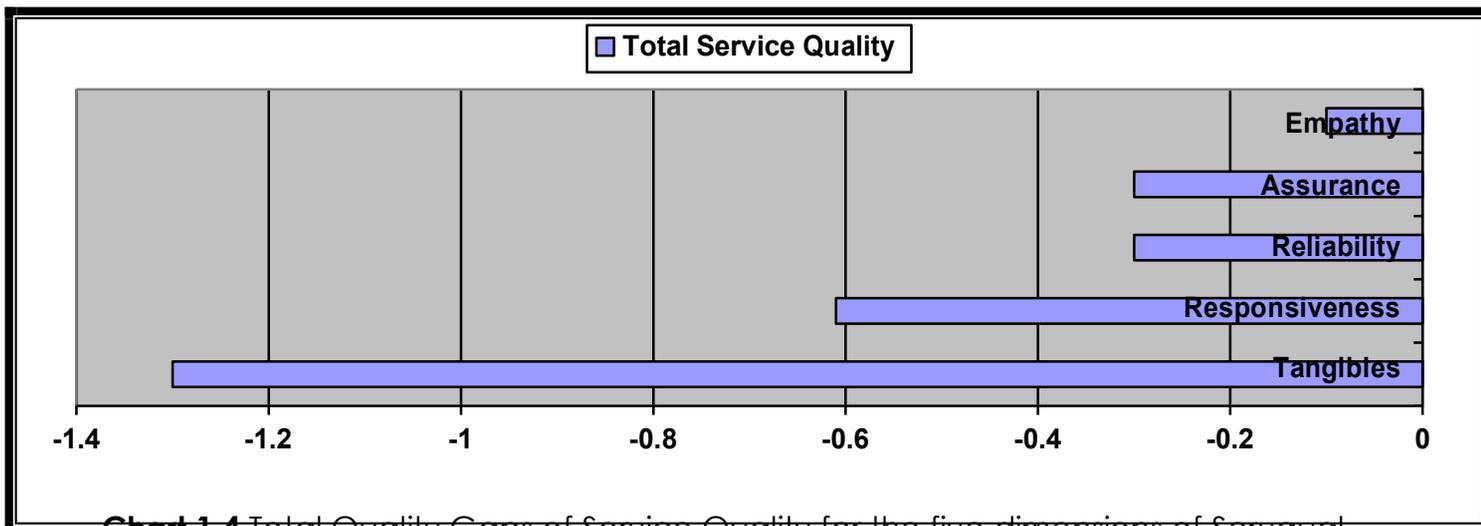

Chart 1.4 Total Quality Gaps of Service Quality for the five dimensions of Servqual

Tangibles

The tangibles dimension measurement (Table 1.3) shows and expectation higher than reality. The quality gap on this dimension is the highest recorded on all dimensions of the service quality. The largest gap is found on the transportation facilities, where is at a level (-1.86). The second largest gap is found on sport and recreation facilities and is at a level of (-1.53). The lowest gap, where the expected and perceived services, are at the highest levels, is found on the Equipments. The equipments and the lecture rooms have lower gaps than facilities and transportation, but still, are elements in need for attention.

Tangibles	Mean Expected Service (SD)*	Mean Perceived Service (SD)	**Quality Gap**
1.Modern Looking Equipments	6.45 (1.01)	6.07 (1.30)	-0.38
2. Library	6.56 (0.75)	5.26 (1.77)	-1.30
3. Sport and Recreation Facilities	5.51 (1.35)	3.98 (2.06)	-1.53
4. Lecture Rooms	6.50 (0.91)	5.68 (1.78)	-0.82
5. Transport	5.24 (1.68)	3.38 (2.06)	**-1.86**
Total	**6.05**	**4.75**	**-1.30**

Table 1.3 Mean scores of expectations, perceptions and quality gap for the tangibles dimension *Standard deviation in parenthesis

Responsiveness

The largest gap (Table 1.4) is found on the "effective problem solving" variable which is at a level of -0.71, followed by "information provided in time promised" which holds a gap of -2.42. The other variables "immediate response to the requests of students' and "preparedness for solving the problems of students' are at a level of -0.59 and -0.48 with no significant differences from the highest gaps in this dimension

Responsiveness	Mean Expected Service (SD)	Mean Perceived Service (SD)	Quality Gap
6.Effective problem solving	6.24 (1.01)	5.53 (1.57)	-0.71
7.Immediate response to requests of students	6.50 (0.97)	5.91(1.46)	-0.59
8.Information provided in time promised	6.70 (0.76)	6.02 (1.91)	-0.68
9.Preparedness for responding at the requests of the students	6.54 (0.58)	6.06 (1.92)	-0.48
Total	**6.49**	**5.88**	**-0.61**

Table 1.4 Mean scores of expectations, perceptions and quality gap for the responsiveness dimension *Standard deviation in parenthesis

Reliability

Reliability is a dimension that dealt with the evaluation of the academic component of the university. This dimension recorded the second lowest negative quality gap (-0.30) compared to the other four. Also in the actual evaluation (perception scores) of the students this dimension recorded the highest evaluation from all the dimensions (total mean perceived service: 6.05). The variable with the highest negative quality gap was "the safety and reliability of the service" which was at a level of -0.65 while the positive quality gap is recorded on "the approach of the academics" which was at a level of 0.02 which is considered as satisfaction, followed by "Teaching style of the academics" which was at a level of -0.30.

Reliability	Mean Expected Service (SD)	Mean Perceived Service (SD)	Quality Gap
10. Safety and reliability of service	6.51(0.71)	5.99 (1.49)	**-0.65**
11.Teaching style of the academics	6.55 (0.84)	6.25 (1.15)	-0.30
12.Approach of the academics	5.60(1.69)	5.58(1.64)	**0.02**
13.Trusted academic material	6.58(0.87)	6.25(1.06)	-0.33
14.University's up-to date knowledge	6.51 (0.89)	6.19 (1.09)	-0.32
Total	**6.35**	**6.05**	**-0.30**

Table 1.5 Mean scores of expectations, perceptions and quality gap for the reliability dimension. *Standard deviation in parenthesis

Assurance

The assurance dimension is constructed to measure the administrative component of the university according to its service quality. The highest negative gap is recorded in the "keeping of promises" variable. The students showed the highest expectation on this variable and gave the lowest evaluation score. The variable which received the best scores, in this dimension, is the "friendliness of the administrative staff" (0.02) followed by the "helpfulness of the administrative staff" (-0.29).

Assurance	Mean Expected Service (SD)	Mean Perceived Service (SD)	Quality Gap
15.Keeping of promises	6.66 (0.83)	6.07(1.4)	**-0.59**
16.Helpfulness of the administrative staff	6.50(0.93)	6.21(1.2)	-0.29
17.Friendliness of the administrative staff	5.94(1.37)	5.96(1.50)	0.02
18.Speed of operations	6.31 (1.10)	5.98(1.34)	-0.33
Total	**6.35**	**6.05**	**-0.30**

Table 1.6 Mean scores of expectations, perceptions and quality gap for the Assurance dimension *Standard deviation in parenthesis

Empathy

The empathy dimension dealt mostly with the university's sense of belonging and commitment of staff to all students and readiness to provide each student with personal service. This dimension, according to its quality gap is situated in the first place among the five dimensions of service quality. It recorded a quality gap of -0.25. Among the variables, "patience in responding" recorded the highest negative gap (-2.01) while the lowest negative quality gap is recorded on the "individual treatment" (-0.11) and"respecting the learners feedback"

Empathy	Mean Expected Service (SD)	Mean Perceived Service (SD)	Quality Gap
19.Personal attention	5.13(1.77)	5.00(1.8)	-0.13
20.Patience in responding	6.17(1.10)	5.91(1.30)	**-0.25**
21.Individual treatment	4.81(1.95)	4.70(2.01)	-0.11
22.Respecting of the learners feedback	6.02(1.38)	5.91(1.33)	-0.11
23.Having student's best interests at heart	5.58(1.60)	5.71(1.56)	0.13
Total	**5.54**	**5.44**	**-0.10**

Table 1.7 Mean scores of expectations, perceptions and quality gap for the Empathy dimension *Standard deviation in parenthesis

Other Variables

The added parameters, which don't fall in any of the dimensions of service quality, but nevertheless are of a crucial importance in evaluating a university are presented in tables 4.10 and 4.11. Both variables have received a negative score and the mean perceived service on the "university's link with the industry "is (5.71). No significant differences were found between genders or academic years.

Other Variables	Mean Expected Service (SD)*	Mean Perceived Service (SD)	Quality Gap
24.University's links with the industry	5.31 (1.60)	4.55 (2.02)	**-0.76**
25.University's high level of research	6.46 (0.79)	5.71 (1.54)	**-0.75**

Table 1.8 Mean scores of expectations, perceptions and quality gap for the added parameters. *Standard deviation in parenthesis

Table 1.9 shows a picture of the mean scores for the variables 26-31 which represents the overall judgment off the students, the comparison with the other universities and the word of mouth which is another crucial factor in estimating the quality of an institution. The only difference emerged was on the quality of students variable. ANOVA test indicated that students of the second year tend to be more evaluative on the quality of their peers, comparing to the other universities.

Other Variables	Mean Perceived Service (SD)	Measuring Scale
26.Satisfaction of choosing this university	6.34(1.19)*	Mean score in a Likert Scale from 1 to 7
27. Was it a wise one, the decision of choosing this university?	6.31(1.25)	Mean score in a Likert Scale from 1 to 7
28. In total this is a good university	6.41(1.10)	Mean score in a Likert Scale from 1 to 7
29.How is your university, compared to others, in the following aspects:		
A) Quality of academics	6.09(1.20)	Mean score in a Likert Scale from 1 to 7
B) Quality of students	5.31(1.44)	Mean score in a Likert Scale from 1 to 7
C) Quality of curricula	6.02(1.16)	Mean score in a Likert Scale from 1 to 7
30.I will say good things about this university to other people	6.32(1.18)	Mean score in a Likert Scale from 1 to 7
31.I will strongly recommend this university	6.46(1.14)	Mean score in a Likert Scale from 1 to 7

Table 1.9 Mean perceived service for the added parameters in the overall evaluation of the university. *Standard deviation in parenthesis

Testing for differences

Variable	Sex **Mean quality gap**		Independent Samples T-test	One way ANOVA
	Male	Female		Academic Year
Tangibles	-0.97	-1.33	No significant differences found between genders	Significant differences between groups, years of study, **only on the perceptions section**, found on variable 1, 2.,3 and 4 Sig 2 tailed P< 0.05
Responsiveness	-0.63	-0.94	Significant differences between sexes, **only on the expectations section**, found on variable 8 Sig. (2 tailed) P<0.05	Significant differences between groups, years of study, **only on the perceptions section**, found on variable 7 and 8 Sig 2 tailed P< 0.05
Reliability	-0.23	-0.30	No significant differences found between genders	Significant differences between groups, **on both sections**, found on variable 10 on expectations and 14 on perceptions Sig. (2 tailed) P<0.05
Assurance	-0.55	-0.56	No significant differences found between genders	Significant differences between groups, years of study, **only on the perceptions section**, found on variable 16 and18 Sig 2 tailed P< 0.05
Empathy	-0.02	-0.07	Significant differences between sexes, **on both sections**, found on variable 20 on expectations and 19 on perceptions Sig. (2 tailed) P<0.05	Significant differences between groups, years of study, **only on the perceptions section**, found on variable 19, 20, 21, 22 and 23 Sig 2 tailed P< 0.05

Table 1.10 Mean scores of quality gap, expectations and reality, categorized according to gender and academic year.

Table 1.10 shows the testing for differences between gender and academic year. Independent Sample T-Test and One way ANOVAs tests are the instruments used to measure these differences. T-test was used to test possible differences between genders and ANOVAs test was used to test possible differences between academic years. The gender was set as the independent variable while the service quality dimensions are set as the dependent variable. The same practice was followed regarding the academic years. **The tests for differences were run on both expectations and perceptions section.** Differences were found **only on variables of both sections.**

Tangibles

- In the variables 1, 2, 4, 5 (respectively modern looking equipments, library, lecture rooms and transportation) differences are not found between genders (p<0.05). As it is shown from the mean quality gap, females tend to have higher expectations and their evaluation of reality is a little bit higher than the males, but still the quality gap is higher. Between the years of studystatistically significant differences are found on variables1,2,3 and 5 (**only on the perceptions p<0.05**) where students of the first and the third year recorded higher scores which mean that they tend to have higher expectations regarding this parameter.

Responsiveness

- Statistically significant differences between genders are found on variable 8 "Information provided in time promised", P<0.05) on the expectation section. Again, female students tend to expect more from the university regarding the responsiveness dimension, and their evaluation of the reality on this dimension is at the same level with the male students. Between academic years, statistically significant differences are found on variables 7 and 8 (p<0.05), namely "Immediate response to requests of students" and "Information provided in time promised", where students of the first and the second years received highest scores, which mean that they tend to expect more information in time promised and preparedness for responding the requests.

Reliability

- Between genders were found no significant differences. Significant differences between groups, **on both sections** , found on variable 10 on expectations(Safety and reliability of service)and 14(University's up-to date knowledge) on perceptions . Students of the second year tend to expect more and the first year students tend to be more judgmental about the university up to date knowledge.

Assurance

- Between genders were found no significant differences. Significant differences between groups, years of study, **only   on the perceptions section**, found on variable 16 and18 Helpfulness of the administrative staff and speed of operations. First years students tend to be more evaluative than their peers

Empathy

Significant differences between sexes, on both sections, found on variable 20 on expectations and 19 on perceptions. Females tend again to have higher expectations and their evaluation of reality is a little bit higher than males. Significant differences between groups, years of study, only on the perceptions section, found on all variables of the empathy dimension
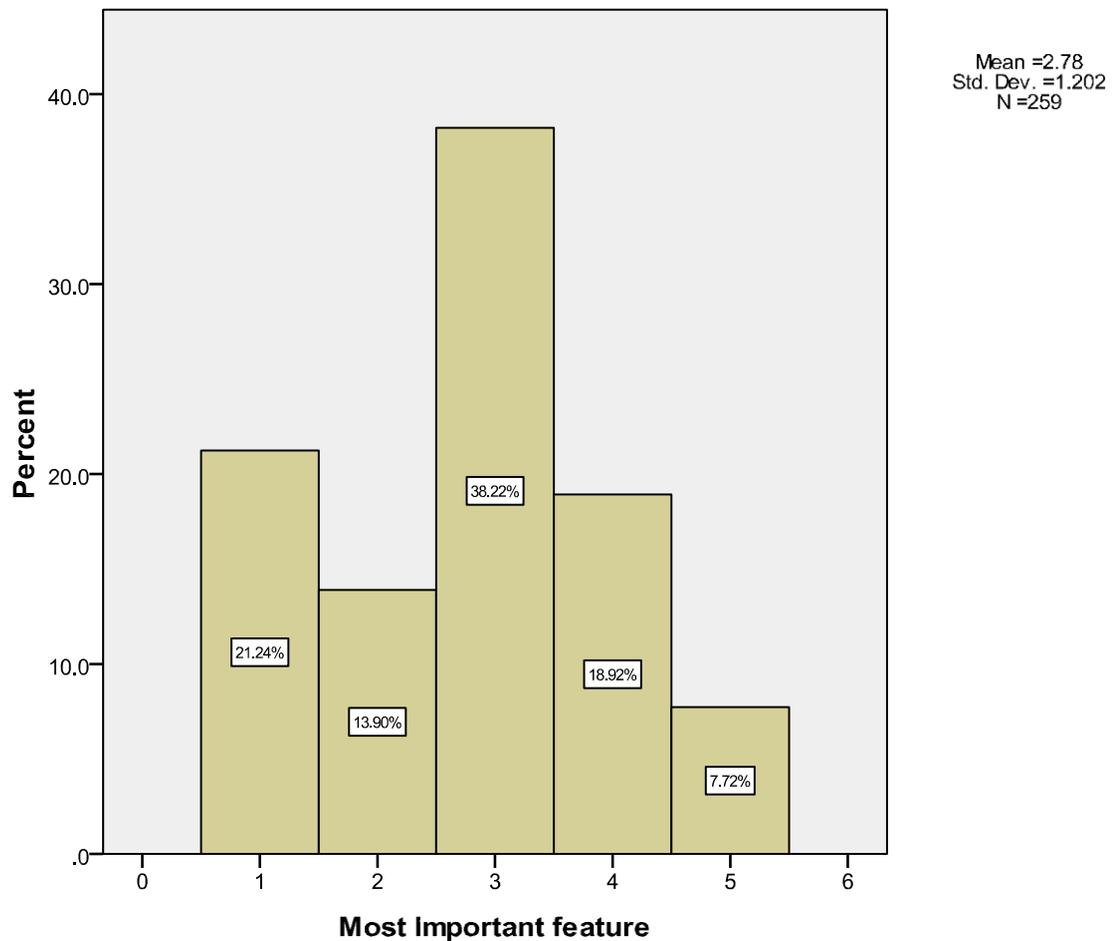
Mean =2.78
Std. Dev. =1.202
N =259

21.24%

13.90%

38.22%

18.92%

7.72%

Percent

Most Important feature

Chart 1.5 Importance of the features according to students

Correlations

Correlations are tests that assess the relationship between two interval variables (Likert scales from 1 to 7). Correlations, first were run in order to test the relationship between **the perceived service and the two satisfaction questions**, **namely "Was it a wise one, the decision of choosing this university?" and "Satisfaction of choosing this university".** The Pearson correlation shows the strength of the relationship. The stronger the association of the two variables the closer the Pearson correlation coefficient, r, will be to either +1 or -1 depending on whether the relationship is positive or negative, respectively. In all variables of measurement positive correlation was found. The **variables of** the **Responsiveness and Reliability dimension recorded the highest correlations with the quality questions**. The variable"keeping of promises" (on the Assurance dimension) recorded the highest score followed by "preparedness for responding at the requests of students" and 'speed of operations"

Dimensions	Pearson Correlation	
Tangibles	Question 26	Question 27
1.Modern Looking Equipments	0.489	0.488
2. Library	0.481	0.492
3. Sport and Recreation Facilities	0.390	0.390
4. Lecture Rooms	0.508	0.514
5. Transport	0.333	0.349
Responsiveness		
6.Effective problem solving	0.608	0.616
7.Immediate response to requests of students	0.678	0.677
8.Information provided in time promised	0.656	0.663
9.Preparedness for responding at the requests of the students	0.686	0.672
Reliability		
10. Safety and reliability of service	0.630	0.618
11.Teaching style of the academics	0.556	0.508
12.Approach of the academics	0.315	0.305
13.Trusted academic material	0.632	0.574

14.University's up-to date knowledge	0.606	0.558
Assurance		
15.Keeping of promises	0.760	0.728
16.Helpfulness of the administrative staff	0.599	0.552
17.Friendliness of the administrative staff	0.340	0.326
18.Speed of operations	0.686	0.689
Empathy		
19.Personal attention	0.383	0.403
20.Patience in responding	0.598	0.585
21.Individual treatment	0.321	0.332
22.Respecting of the learners feedback	0.553	0.545
23.Having student's best interests at heart	0.530	0.556

Table 1.11 Dimensions with the highest correlation with the satisfaction questions

Secondly; correlations **were run in order to test the relationship between the perceived service and the word of mouth (questions "I will say good things about this university to other people" and "I will strongly recommend this university".** Table 1.12 shows the correlations between the service quality dimensions in the perceptions part and the WOM variables.

Dimensions	Pearson Correlation	
Tangibles	**Q30**	**Q31**
1.Modern Looking Equipments	0.436	0.325
2. Library	0.413	0.367
3. Sport and Recreation Facilities	0.301	0.289
4. Lecture Rooms	0.449	0.431
5. Transport	0.259	0.276
Responsiveness		
6.Effective problem solving	0.578	0.564
7.Immediate response to requests of students	0.635	0.634
8.Information provided in time promised	0.564	0.533
9.Preparedness for responding at the requests of the students	0.614	0.555
Reliability		

10. Safety and reliability of service	0.543	0.507
11.Teaching style of the academics	0.543	0.483
12.Approach of the academics	0.313	0.301
13.Trusted academic material	0.549	0.506
14.University's up-to date knowledge	0.493	0.459
Assurance		
15.Keeping of promises	0.629	0.637
16.Helpfulness of the administrative staff	0.548	0.480
17.Friendliness of the administrative staff	0.335	0.323
18.Speed of operations	0.539	0.544
Empathy		
19.Personal attention	0.395	0.387
20.Patience in responding	0.506	0.465
21.Individual treatment	0.331	0.328
22.Respecting of the learners feedback	0.533	0.471
23.Having student's best interests at heart	0.487	0.444

Table 1.12 Dimensions with the highest correlation with the Word of Mouth questions

The Responsiveness and Assurance were the dimensions that recorded the highest scores meaning that are the strongest correlated dimensions with the word of mouth. The variables that has the strongest correlation with the word of mouth was Keeping of promises and on the Assurance dimension.

5.3 Overall Conclusions

The study intended to measure the service quality of the University X of Tirana. The results indicate that the total service quality is associated with dissatisfaction from the point of view of the students. The overall expectations of the students regarding the service quality was at a level of **6.15**
in a Likert scale from 1 to 7, while the perception of the service delivered was **5.63** which indicates a quality gap of **-0.51.** The major objective of this study "How does the university perform in terms of Service Quality" has been fulfilled. A second objective of this study was to determine the quality gaps in the most important dimensions of Service Quality. Table 1.1 shows the overall picture of the most important dimensions of Service Quality along with their quality gap meaning that the second objective of this study was fulfilled as well.

Students rated the satisfaction of choosing this university **6.34,** and as a wise decision was still at the same level, which is relatively satisfactory level according to the management expectations. The students rated **6.32** and **6.46** the word of mouth (I will say good things about this university and I will strongly recommend this university) which is still at an unsatisfactory level according to the managers point of view. The dimensions that are more correlated with the two satisfaction questions are Responsiveness and Reliability. **"keeping of promises "** was the variable more correlated with the quality questions**.** The WOM (word of mouth) questions were correlated more with the Responsiveness and Assurance dimension. Keeping of promises was again the variable more correlated with the word of mouth.