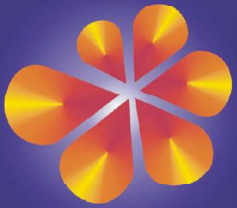


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La cooperación y nuevos enfoques estratégicos ante la complejidad del entorno empresarial globalizado

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Evaluation of Student Satisfaction using the Importance-Satisfaction Analysis: A Case Study of Economics and Administration Faculty of Qafqaz University

Hikmat Akhundov¹

Paula Odete Fernandes²

Abstract

Global economic recession era places serious pressure on private Higher Education Institutions (HEI), which resulted as decrease in the university spending's budget. Therefore, HEI forced to develop more competitive ways to find new financial resources for rapid technological and organizational changes (Savsar, 2012). The purpose of this study is to implement ImportanceSatisfaction Analysis (IPA) matrix to evaluate the student's satisfaction and assess importance of different attributes in terms of student's perception. The students that participated in this study enrolled in the academic year, 2015/2016, in the Economics and Administration Faculty-Qafqaz University. In order to perform study, survey method applied to collect the data and number of received valid questionnaire were 266. Descriptive analysis used to identify profile of respondents, also find satisfaction and importance degree for each attributes. To evaluate differences between groups, built association between variables, find relation between variables and answering to the research hypothesis an inferential analysis was performed. Moreover, IPA matrix was being used to explore the attributes that needs improvement that perceived as attributes that are more important for the students. The result showed that generally students are satisfied with service quality offered by HEI on sample of the Qafqaz University. IPA matrix highlighted the main attributes, which performs well, namely Academic Services and Teaching aspects, and in another hand needs to concentrate in Undergraduate program and External Relations. In addition, research found that loyalty of students is very low and there is a negative correlation between loyalty and satisfaction.

Keywords: Importance-Satisfaction Analysis, Customer Satisfaction, Service Quality, Higher Education Institution, Students.

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Introduction

The main objective of all companies is to attract new and maintain current customers to develop their business. In this frame, offensive marketing strategies designed to attract new customers, and defensive marketing strategies used to keep the current customer at the company (Erickson, 1993). As the result of growing competition among companies, offensive marketing is very difficult to implement. The cost of attracting the new customer is very high rather than keeping the current customer. In addition, the low growth and high competition are the general characteristics of all industries (Fornell & Wernerfelt, 1987) which makes difficult to attract customers' attention. Therefore, companies need constantly monitor and follow their current customer, understand how company performs from point of customer, are the customers satisfied or not.

As the service provider, Higher Education Institutions (HEI) offer different services to stakeholders of institution and need to have knowledge of the main aspects that influence the decision-making process of potential stakeholders to choose an institution. Since the students are, the main stakeholder of the HEI, institutions need to give more attention to the service quality offered to students; also, satisfaction of the students should be priority.

Taking into consideration the above, main objective of this study is to assess satisfaction of students and importance of different aspects of university services from student's perception. In addition, evaluate quality of different services offered to students. Moreover, study will examine how student's satisfaction and importance of different aspects differs in terms of different demographic profile of students such as age, gender, region, study area.

Evaluation of service quality in higher education is relatively new phenomenon. Research related service quality and customer satisfaction has been implemented mainly in commercial organizations. However, there is not so many research made on students' satisfaction and service quality in higher education. Therefore, literature review section tries to provide description of the main theoretical frame based on scientific papers, specifically highlighting service quality, measuring satisfaction and measuring service quality in HEI.

In research methodology section, primarily research objectives defined and hypothesis determined; further data collection process, data analysis techniques and sampling explained. Data collected using survey method, which includes 42 main questions that categorized to evaluate importance and satisfaction of eight different aspects. In order to know profile of respondents nine questions asked. Sample included 266 questionnaire received from population that consist of 1 322 students.

In the last section, frequency analyse applied to study respondent's profile. Descriptive analysis used to find mean and standard deviation of satisfaction and importance dimension. In addition, to find average satisfaction rate and average importance rate for each latent variables. To analyse all research hypothesis inferential analysis used as a tool. In addition, inferential analysis used to investigate differences, association and relation between variables.

Overall, to know profile of respondents and analyse research objectives descriptive analysis will be applied. To analyse the research hypothesis inferential and IPA matrix will be used. For complete and concise presentation of the results, different tables, figures, diagrams and detail descriptions are used. All the results found from analyses were summarized in the conclusion part of master thesis, which presents the most important findings of this work.

1. Literature review

Higher Education occurs after secondary education and it is an optional level of formal learning. This type of education delivered at universities, academies, institutions and colleges. Successful completion of higher education program results in the awarding of diplomas, certificates. Higher education includes teaching, research, etc. Higher Education in most countries refers to Bachelor and Master degree or Doctor of Philosophy.

For the management of Higher Education Institutions, it is necessary to apply market oriented strategies and principles, which used in profit-making institutions (Deshields, Kara, & Kaynak, 2005). Institutions perceive the importance of higher education as a service, therefore putting attention on satisfying student needs and meeting their expectations (Deshields, Kara, & Kaynak, 2005). According to the views of Oldfield and Baron (2000, p.86) higher education can observe as a “pure” service. Institutions should be more service oriented and act with their students as a customer for satisfying their needs (Gruber, Fub, Roediger, & Glaser-Zikuda, 2010). There are debate among researchers that students are customer or not. Introduction of tuition fees changes status and attitude of student to customer and expectation of them as other consumer of service sectors (Temizer & Turkyilmaz, 2012).

There is a competition in higher education market and quality of services delivered differentiate an institution from their competitor. As the service provider, higher education institutions needs to provide service that exceeds students expectation, which does not automatically rather, it should be intentionally managed.

Emphasizing the qualification of Higher Education Institution as a service, it is important to stress that Higher Education Institution, like other organizations, have many different stakeholders with several interest and needs.

Definition of stakeholder and its meaning creates a big dilemma among researchers that what kind of entity should be stakeholder. For better understanding stakeholder in the context of higher education, primarily it is important to define stakeholder. Common sense seems to dictate that groups, people, institutions, organizations, natural environments are generally could be potential or actual stakeholder (Mitchell, Agle, & Wood, 1997).

For the truth, universities have complicated stakeholder environment. When it comes to the stakeholder of Higher Education, Chris and Simms (2010) in their research found that main stakeholder group of university are the students, which are followed by local businesses. Next identified group of stakeholder is the staff of university. Common sense seems to dictate that stakeholder divided into two group: internal and external stakeholder. Personnel and students are the internal, while partners are external stakeholder of universities (Kettunen, 2014).

Higher Education Institutions have to satisfy the requirement of various stakeholders. Specifically, Gruber, Fub, Roediger and Glaser-Zikuda (2010) argue that each stakeholder has her own particular need which, tends to different view of quality. Because, the customer supplies only some part of the universities funding, management of stakeholder is the complex thing for the universities.

When public support for the private Higher Education Institutions decreases, significance of external stakeholder increases (Benneworth & Ben, 2010). For the Higher Education Institutions, essential thing is not only to detect their stakeholder but classify and rank them. To identify, which partners and customers are important for the future success, for the mission of the university (Kettunen, 2014). When it comes to the

topic of stakeholders of Higher Education Institutions`, most of the researchers agree with the stakeholders of HEI as described in Table 1.

Table 1. Stakeholders of Higher Education Institution.

Group	Stakeholder characteristic
Students	Pays tuition fee, gets education service, get advantage of administrative services, pay ancillary services as accommodation, food.
Parents	Decides from whom to take the service, pays for the service, usually main person for contact.
Research sponsorship	Provides budget for purchasing information or activities to create services or products
Society	Gets advantage of services, pays indirectly via tax
Job Market	Purchases service or product
Academics	Benefits from the research activities of the teaching staff.
Accreditation Units	Controls products or service design and checks service offer
Staff/Teaching staff	Controls and supports products or service offer.

Source: Sahin (2009, p. 107).

Identifying the main stakeholder of the HEI are very difficult (Cuthbert, 1996). However, according to the view of different researchers, student is the primary and important stakeholder of the Higher Education Institutions. Beside the students are main stakeholder of universities, they already play a key role in delivery and production process of service (Hill, 1995). The satisfaction rate of students and parents is comparable to the prestige of the university and related with expected income and employment after graduation (Moraru, 2012). Therefore, universities should take into consideration student's expectation while building strategic development plans and policies. Aim of universities is to take part in top positions in university ranking, basically, increasing student satisfaction to highest point and decrease dissatisfaction rate to minimum and consistently become preferred by the student (Sahin, 2009).

This part of study endorses that there are many different stakeholders in higher education. However, the main focus group for this study is the student as the leading stakeholder of the Higher Education Institutions.

The concept of service quality in Higher Education has become important issue for institutions. As the increase in the demand of higher education, competitors also increased in higher education market. Therefore, for gaining competitive advantage, increasing number of customer and at the result improving the profitability, institutions need better service quality, which can differentiate them from competitor. Literature related to service quality in higher education is not develop as for the other service organizations. Many of the researcher focused on the commercial services (Parves & Wong, 2010). On the other hand, institutions also need to understand that they are in competitive market and needs student for surviving (Oldfield & Baron, 2000). To define quality, institutions turned their focus to internal resources, evaluation of these resources such as service in the library, the number of faculties, etc. Due to high competition, cost-efficiency,

responsibilities and service inducement forced institutions to shift their focus to the quality of service, which encourage to use efficient allocation and use of resources and to produce satisfied graduates that can be employable (Koslowski, 2006). According to the view of Harvey and Green (1993) quality was used in different five ways in debate related to higher education: “perfection, excellence and fitness for purpose, transformation and value for money and how quality can contribute to various functions that education can claim to influence” (Maguire & Gibbs, 2013, p.41).

Today globalization affect the economies all over the world. Organization focus point changing from profit maximization to maximize the profit through the customer satisfaction (Seth, Deshmukh, & Vrat, 2005). When consumer or customer is pleased with the goods or services, it has called satisfaction. Customer happiness is the main signal of customer satisfaction. Evaluating customer satisfaction is very hard, because it is the human feelings.

Nowadays delivery of service as important as process. The concept of loyalty and satisfaction of student have attracted much interest in recent years and turn out as one of the major goals of all educational institutions. The main motivation for the growing emphasis on student satisfaction is that increase in the student satisfaction leads to a stronger competitive position resulting in attracting future students and keeping the existing ones (Temizer & Turkyilmaz, 2012). Satisfaction of the students should have considered as the priority by the institutions due to intensive competition among competitors, internationalization spirit and day-by-day increase in the expectation of the students towards higher educational institution (Ravindran & Kalpana, 2012). Furthermore, from research perspective, education institutions sector represents a very interesting discipline to examine, because one would to know the level of education provided and satisfaction of students.

The researches highlights that satisfaction is comparing level of expectation and perceived performance. Expectation of student can start before they enrolled to institution; therefore, it is important for researcher firstly to define what the students expect from higher education institution (Palacio, Meneses, & Perez, 2002). In contrary, many researchers believe that satisfaction is the level of expectation and perception during university years. However, many researcher faces problem of creating definition for the student satisfaction because, many studies focused on commercial customer satisfaction therefore, there is a big question that to put student as customer or not (Hom, 2002).

Loyalty is the customer behaviour and attitude to differentiate one brand from others due to satisfaction with this brand, comfort, familiarity with the brand or because of performance of the brand. Loyalty is the part of defensive marketing strategy, which focus on holding current customer and gaining more profit from them. On the contrary, offensive-marketing strategies focuses on gaining new customers. Nowadays so many organization wants to establish loyalty program with their customer, which encourages customer to shop from same brand consistently. There are two main objective of the loyalty due to firms want to establish. Firstly, increase sales revenue by raising customer purchase and second one is to make hard bond with the customer (Uncles, Dowling, & Kathy, 2002). There are two critical factors for the loyalty. Primary is the emotional extension to the product or service, which was high compared to other market alternatives. Next one is to repeat purchase (Griffin, 1995). Features of loyal customers could be summarized as follow:

- Price sensitivity of loyal customers are less;
- Serving to loyal customers are cheaper;
- Loyal customers give affirmative recommendation on their most-loved brand;

- Loyal customer don't buy product of other company's;
- Loyal customers repurchase.

The main goal of any companies is to make profit and increase profitability over times. Loyalty of customer is one the way to achieve this goal. Loyal customer keeps in touch with their favourite firms for years and spend large share of their budget to company.

In higher education, to establish loyal customers, institutions require to establish good relationship with the students who provides financial base for the higher education institutions. Specifically, for gaining competitive advantage student loyalty is the main strategy because, finding new students are more expensive than keeping existing ones (Rofas-Mendez, Vasquez-Parraga, Kara, & Cerda-Urrutia, 2009). It apparently assumed that loyal student may compensate after graduation as alumni or may continue their next study at the same institute. Indicators of loyal student specification could be:

- Student ready to recommend higher education Institution;
- Student ready to choose same higher education institution again;
- Student ready to recommend the study programme of institution.

Service quality as defined by Parasuraman, Zeithaml and Berry (1988) is the difference of customer expectation and their perception of service. Main objective of service quality is to satisfy needs and wants of customers. Evaluation of service quality will show that offered services are good or not, is customer satisfied or not. In this context, it shows that service quality is the determinant of satisfaction. In addition, empirical study of Spreng, Mackenzie and Olshavsky (1996) suggest that there is a relationship between service quality and satisfaction. Specifically, authors argued that as a result of good service quality satisfaction obtained.

In the context of higher education, in order to satisfy stakeholders, it is necessary to provide high quality services, primarily to students, which are the main stakeholder of higher education institutions. In addition, it is important to understand how different aspects of services affects satisfaction of students regarding service quality. Moreover, research on student satisfaction and service quality proved that different service quality dimensions such as tangibility, responsiveness, reliability, assurance and empathy have a big relationship with the student satisfaction (Hasan, Ilias, Rahman, & Razak, 2008).

2. Research Methodology

2.1 Objectives of the study and research hypothesis

The first purpose of this study is to explore students' perceptions of service quality and their satisfaction rate. Aim of this research is to find how different aspects important for Economics and Administrative sciences and Industrial Engineering department of Qafqaz University, by the perception of undergraduate and master students and do they satisfied or not? In addition, to evaluate satisfaction rate of students according to the different aspects. Does the student satisfaction varies based on different aspects or not? Which aspects more important for the students and which of them are less important? Additionally, study examined whether there is a relation between different demographic factors and aspects.

After noticing aims of the study now, turn to define the main objectives of the study. Specific objectives of the research are the following:

O₁: Identifying loyalty of students.

O₂: To assess importance of different aspects in terms of student`s perception.

O₃: To determine student`s satisfaction according to different aspects.

O₄: Identifying positioning of each attributes in IPA matrix.

O₅: To give suggestions to the management of university to improve service quality provided to students.

The findings from this study will fill the gaps related to students` satisfaction and importance of different aspects perceived by students.

Based on the objectives of the study main research hypothesis (H) of the study are:

H₁: There are differences in overall satisfaction and importance by study area.

H₂: There are differences in overall satisfaction and importance by academic years (Bachelor and Master Degree).

H₃: There are differences in overall satisfaction and importance between Bachelor and Master Degree.

H₄: There is a positive association between overall satisfaction and loyalty.

H₅: There is a positive relationship between the satisfaction level and importance level.

H₆: Main attributes will be positioning in quadrant B, "Keep up the good work" in IPA matrix.

2.2 Data collection

To collect data for investigating quantitative research, questionnaire method used for collecting primary data. The data collected during March and April in 2016, in the second semester of 2015/2016 academic year. For conducting research, Qafqaz University has chosen as a target organization. Qafqaz University is located in Khirdalan city, Azerbaijan. Further, study choose Economics and Administrative science faculty that consists of seven departments and Industrial Engineering department as sample. To collect data there were two possible ways to choose: online data collection or paper-based data collection. However, Shawver, et al. (2016) in their research argued that there are many disadvantages of online data collection. Firstly, resarchers` lack of control over the environment where study is being taken. There is a possibility that respondent answer wrongly regarding to demographic questions, or can take the survey more than one time. On the contrary, in the paper based data collection study completed inside the class with the supervision of the teachers. Therefore, for this study paper based data collection method chosen. It would be very hard to supervise students while completing online survey.

2.3 Design of Questionnaire

For selecting different determinants of students satisfaction, the study choose previous literature as a base (Joseph & Joseph, 1997; Alves, 1998; Pike, 2004; Silva & Fernandes, 2011). Questionnaire consists of two parts. First part of questionnaire included questions about demographical details. In the second part questions were related to satisfaction and importance of different aspects and were measured with the a five-point Likert scale. Questions are asked to find out students` opinions or attitudes to given situation.

The second part includes the follows latent variables: a. Quality of General Aspects: Which includes questions about Modern facilities, clean facilities, Sport facilities, Cultural activities, Association of students; b. Quality of Library: Easy access to shelves, Ways of consulted rapidly, Warmth of its staff, Interest in solving the problems of student; c. Quality of Computer Laboratory facilities: Availability of laboratories and computer facilities, Ability to use after classes, Existence training in computer tools; d. Quality of Social Services: Financial aid for students, Existence of medical support to students, Availability of accommodation for students, Existence of canteens, Knowledge of rules and procedures, Trust and safety in services, Information service completion, Interest in solving the problems of student, Simple rules and procedures, Warmth of its staff; f. Quality of Academic Services: Simple procedures, Knowledge of rules and procedures, Interest in solving problems of student, Trust and safety in service, Information service completion, Quick response, Warmth of its staff; g. Quality of Teaching Aspects: Friendliness of the teachers, Personalized attention, Easy communication with teachers, Clarity and precision in the exposure of knowledge, Scientific expertise of teacher, Fair assessment, Advice the basic bibliography; h. Quality of Undergraduate Programs: Updated content, Several career opportunities; and i. Quality of External Relations: Getting the internships, Exchange programs with foreign universities, Conferences and seminars, Internet connection

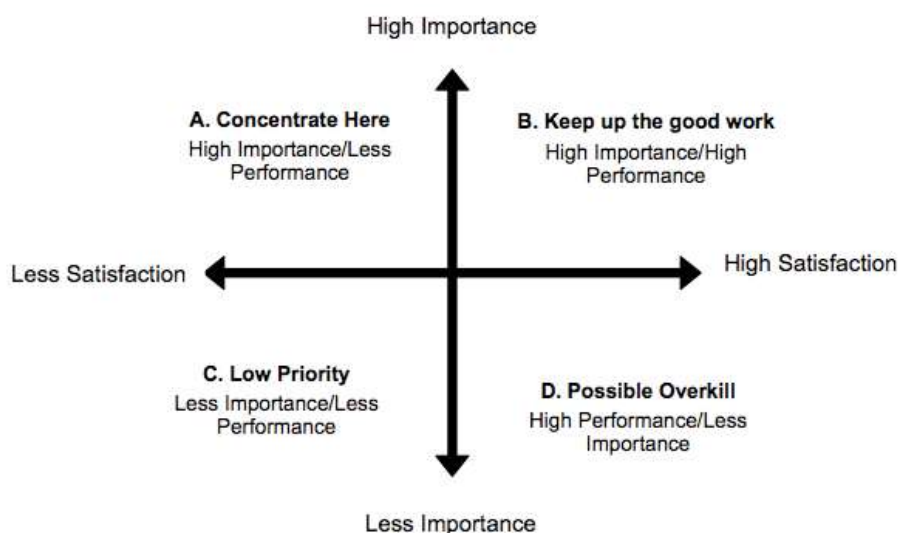
It was analysing the reliability for the second part, and reliability as a term means how “repeatability” or “consistency”. For measuring reliability of the scale, there are three methods: test-retest, alternative forms and internal consistency (Smith & Albaum, 2013). In the research, used internal consistency method. In which, should be calculated Cronbach`s alpha. It was applied reliability test for the satisfaction questions which the number of questions is 42. According to the result of test, Cronbach`s alpha is equal to 0.939, which is more than 0.9 that shows reliability of questions related to importance dimension is very good. In addition, Cronbach`s alpha for the satisfaction dimension is equal to 0.946, which is also more than 0.9 that show reliability is very good.

2.4 Data analysis techniques

According view of Catherina and Gretchen (1995) data analysis is processing mass of collected data and bringing of this data to order and structure. It is unsettled, enigmatic, lengthy and attractive process. For increasing customer overall satisfaction Importance-Performance Analysis is the useful and simple techniques, which can help managers to explore the attributes that can be improved (Silva & Fernandes, 2011). Martilla and James (1977) to evaluate elements of marketing program found Importance-Performance Analysis (IPA). In addition, Martilla and James (1977, p.79) argue that “It is a low cost, easily understood technique that can yield important insights into which aspect of the marketing mix a firm should devote more attention as well as identify areas that may be consuming too many resources”. Further, IPA model identifies aspects that performance is low and requires improvement also which aspects important for customers. In addition, IPA tool specifies aspects, which has high effect on customer satisfaction.

The IPA tool acknowledge satisfaction as the factor of two components: Importance of the products or services offered by and performance of organizations in providing these services (Martilla & James, 1977). In other words, it evaluates satisfaction of customer according to two factors: Importance of aspects from view of customer and Performance of these aspects. After, separately showing the importance and performance, IPA tool demonstrate overall satisfaction (Figure 1).

Figure 1. Importance-Performance Matrix.



Source: Martilla and James (1977, p. 78).

This tool classifies different aspects into four categories for setting priorities. The four categories are: “Concentrate here”, “Keep up the good work”, “Low priority”, “Possible overkill”, which are shown in Figure 1. Each quadrant offers different strategies for the management in order to identify weaknesses for improving to get high customer satisfaction.

- Quadrant A. ‘Concentrate here’ quadrant represents an area in which attributes are important and performance could be improved. Producing maximum results constructive action should be concentrated.
- Quadrant B. ‘Keep up good work’ quadrant indicates competitive advantage of product or service and strengths. Attributes situated in this area performing well and need continued investment (Sever, 2015).
- Quadrant C. ‘Low priority’ quadrant illustrates that attributes are not performing well, but is not considered important for the customer. Therefore, management should not extremely focus on this area.
- Quadrant D. ‘Possible overkill’ quadrant illustrates that attributes in this area less important for customer, but performs very well, satisfaction of customer good.

There are four stages included in IPA tool. First stage is to define the aspects to measure. In the second stage, required to separate performance and importance measures. Next stage is to calculate means for importance and performance of each aspect and scheme on the vertical and horizontal axes of the matrix. In the fourth stage, analyse importance-performance grid (Deacon & Du Rand, 2012).

Importance-Satisfaction analysis improved on the base of Importance-Performance Analysis. Importance-Performance/Satisfaction analysis made confusion among researcher’s because of little differentiation between performance and satisfaction. Main distinction was that satisfaction could be used instead of performance. Are these definitions give same meaning or they are different? Baker and Crompton (2000) states that previously performance and satisfaction have been used interchangeably. Therefore, authors

explained differentiation as performance evaluates providers' output on the contrary satisfaction examines visitors outcome. Common sense seems to dictate that satisfaction become main assessment for service quality. Therefore, performance exchanged with satisfaction (Tonge & Moore, 2007; Aktas, Aksu, & Çizel, 2007). IPA tool used for evaluating student satisfaction in HEI by many researcher (e.g., Silva & Fernandes, 2011; Ford, Joseph, & Joseph, 1999).

Table 2 highlights objectives, research hypothesis, and the techniques were used to treat the data.

Table 2. Data Analysis Techniques.

Label	Objectives or Research Hypothesis	Data analysis technique
O ₁	Identifying loyalty of students.	Graph with relative and absolute frequencies
O ₂	To assess importance of different aspects in terms of students' perception.	Frequency tables
O ₃	To determine students' satisfaction according to different aspects.	Frequency tables
O ₄	Identifying positioning of each attributes in IPA matrix.	IPA Matrix
O ₅	To give suggestions to the management of university to improve service quality provided to students.	IPA Matrix
H ₁	There are differences in overall satisfaction and importance by study area.	Kruskal-Wallis test
H ₂	There are differences in overall satisfaction and importance by academic years (Bachelor and Master Degree).	One-Way ANOVA test
H ₃	There are differences in overall satisfaction and importance between Bachelor and Master Degree.	t-Student test
H ₄	There is a positive association between overall satisfaction and loyalty.	Phi test
H ₅	There is a positive relationship between the satisfaction level and importance level.	Pearson Coefficient Correlation
H ₆	Main attributes will be positioning in quadrant B, "Keep up the good work" in IPA matrix.	IPA Matrix

In order to analyse demographic profile of respondents will be used descriptive analysis, which will show absolute and relative frequencies. To conduct average satisfaction and importance rate for each latent variable will be used frequency analysis. In addition, mean and standard deviation will be calculated for each variables of satisfaction and importance.

Inferential analysis will be used to examine hypothesis test. According to type of data different tests will be applied. If data is parametric in that case t-Student test, if data is non-parametric Kruskal-Wallis test will be applied. Seeing differences between two independent sample t-Student test will be used. Kruskal-Wallis test will be used to determine if there are differences between more than two samples. In addition, Importance-Satisfaction Analysis will be applied. To show the results on the IPA matrix median will be used for the satisfaction and importance dimension.

2.5 Population vs Sample

The research survey held in Qafqaz University, Baku, Azerbaijan. There are mainly two reasons that Qafqaz University have chosen. First, wanted to know satisfaction of students with the university also, data collection was convenient in this university. Population consist of students from one faculty of Economics and Administrative sciences, which includes six departments (International Relations, Business Administration, Public Administration, World Economy, Finance and Accounting and Audit) also one department of Industrial Engineering.

In Table 3 it is shown that population consist of 1 322 students from bachelor and master degree of Economics and Administrative sciences faculty and Industrial Engineering department. Master degree contains 99 students; 1 223 students are from bachelor degree. It was impossible to examine all population, so it was decided to select the random sample. Questionnaires distributed with the help of teachers during their classes, which covered all departments and academic years. Specifically, want to mention that every respondent belonging to population had equal opportunity to be included into the sample. Only the students of second-class master degree students excluded from sample because, in the 2nd year master degree students were not attending to classes, they were working on their dissertations.

Sample size refers to the process used to determine how many elements of the population should be included in the sample. The questionnaire contains 42 elements, therefore for each element it should been answered by minimum five respondents, which makes totally 210 respondents. Sample consists of 266 respondents, which is more than required sample size. Sample size calculated assuming confidence level of 95%, and confidence interval (margin of error) is 5.37%. A confidence level refers to the percentage of all possible samples that could be expected to include the true population parameter.

Table 3. Population and sample.

Study Area	Year	Population		Final Sample	
		N	%	n	%
International Relations	1st year	29	2%	1	0.4
	2nd year	32	2%	2	0.8
	3rd year	28	2%	0	0
	4th year	35	3%	1	0.4
Business Administration	1st year	60	5%	15	5.7
	2nd year	55	4%	20	7.6
	3rd year	40	3%	16	6.1
	4th year	55	4%	15	5.7
	Master 1st year	72	5%	8	3.0
Public Administration	1st year	40	3%	14	5.3
	2nd year	46	3%	16	6.1
	3rd year	20	2%	9	3.4
	4th year	33	2%	6	2.3

World Economy	1 st year	51	4%	2	0.8
	2 nd year	64	5%	15	5.7
	3 rd year	35	3%	8	3.0
	4 th year	58	4%	2	0.8
	Master 1 st year	12	1%	0	0
Finance	1 st year	56	4%	2	0.8
	2 nd year	66	5%	4	1.5
	3 rd year	59	4%	17	6.4
	4 th year	44	3%	0	0
Accounting and audit	1 st year	28	2%	7	2.7
	2 nd year	25	2%	11	4.2
	3 rd year	22	2%	7	2.7
Industrial Engineering	1 st year			11	4.2
	2 nd year			16	6.1
	3 rd year	242	18.3%	15	5.7
	4 th year			15	5.7
	Master 1 st year	15	1.13	9	3.4
Total		1322	100%	264	100%

Source: Author's own calculation.

In addition, confidence interval is used to express the degree of uncertainty associated with a sample statistic. Significance level for the study is 0.05. In the Table 3, population and final sample could be seen. And for each department and for each year number of students could be observed from Table 3.

3. Presentation and analysis of results

3.1 Profiles of the respondents

According to analyse of students` profile, as shown in Table 4 is possible to observe:

- Number of male students are twice more than female students. 69.92% of sample is male students, and 30.08% of sample is female students.
- This study dominated by 18-22 age group that makes of 84.79% of sample, which is 223 students followed by 23-27 age group that makes 11.03% of sample, which consist of 29 students. Students, whose age is more than 27 makes 2.66% of sample, which consist of 7 students. Smallest part of students` age is less than 18 that makes 1.52% of sample and contains 4 students;
- Azerbaijan divided into 9 regions and from each region, there is a student studying in Qafqaz University. Study highlights that 29.39% (72) of students are from AbsheronBaku region, which followed by Shaki-Zaqatala with the 15.51% (38). Students from Markazi Arran and Ganja-Gazakh region each account 14.69% (36). The 10.61% (26) students are from Sumqayit, 7.35% (18) are from Lankaran-Astara region.

The 3.67% (9), 2.86% (7), 1.22% (3) of students are from Guba-Gusar, Nakhcivan and Karabakh region-which;

- Respondents who participated in this study are from different department. As highlighted about 28.57% (76) of students from Business Administration department, 25.19% (67) are from Industrial Engineering, 16.92% (45) from Public Administration. World Economy and Accounting each contains 9.4% (25 for each department) of respondents, 9.02% (24) from International department and 1.5% (4) from Finance department. The findings show that Business Administration and Industrial Engineering are the biggest departments, which participate in this research;
- Research have done among Bachelor and 1st year Master students. Master 1st year students represents 6.44% (17) of the sample. Bachelor 1st year students represents 19.70% (52), 2nd year represents 31.82% (84) of the sample. Bachelor 3rd year students represent 27.27% (72) and 4th year students represents 14.77% (39) of sample;
- Academic GPA is one of the main indicator of student's overall grade. In this study, divided academic GPA into five groups. 29.06% (77) of students` participated in survey has academic GPA in between 70-79, which is followed by 28.30% (75) that is more than 90. 26.04% (69) of student's GPA is between 80-89, 12.08% (32) of them is between 60-69. Only 4.53% (12) respondent's GPA is less than 59.

Table 4. Socio-demographic characteristics of respondents.

Variable	n	%
Gender		
Female	80	30.08
Male	186	69.92
Age group		
<18	4	1.52
18-22	223	84.79
23-27	29	11.03
>27	7	2.66
Region		
Absheron-Baku	72	29.39
Shaki-Zagatala	38	15.51
Ganja-Gazakh	36	14.69
Central Aran	36	14.69
Sumgayit	26	10.61
Lankaran-Astara	18	7.35
Others	19	7.75
Department		
Business Administration	76	28.57
Industrial Engineering	67	25.19
Public Administration	45	16.92
World Economy	25	9.4
Accounting	25	9.4
International Relations	24	9.02
Finance	4	1.5

Academic Year		
1 st year	52	19.70
2 nd year	84	31.82
3 rd year	72	27.27
4 th year	39	14.77
Master 1 st year	17	6.44
Academic GPA		
>90	75	28.30
80-89	69	26.04
70-79	77	29.06
60-69	32	12.08
<59	12	4.53

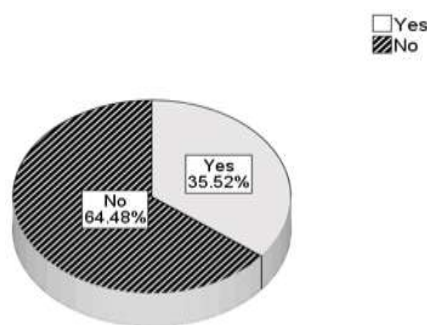
Asked from students` their main source of information about Qafqaz University and the answers are:

- Friends/College: 43.75% (112) of respondents argued that they heard about Qafqaz University from their friends or colleague.
- Bachelor/Master Student: This is the current students of Qafqaz University and 29.69% (76) of respondents argued that their main information source was the current students of Qafqaz University.
- Introduction Tour: Every year University management invites different High schools or preparation courses to university and gives them information about university. In the context of introduction tour, 11.72% (30) of respondents argued their main source of information about Qafqaz University.
- Media: 8.59 % (22) of students argued their main source of information as media.
- Brochure: 6.25% (15) of students` suggested that their main source of information was the brochure, which printed by Qafqaz University.

Another question was that in university entrance exam, was it your first choice to choose Qafqaz University or not. Qafqaz University offers 10% discount if students write Qafqaz University in the first place of their choice. 82.33% (219) of students answered “Yes”, which means that they wrote Qafqaz University as the first choice. On the contrary, 17.67% (47) of students answered “No” which means Qafqaz University was their second or later choice.

The question related to students` profile was that do you want to continue your study in Qafqaz University. From Figure 2, it can be seen that majority of respondents (64.48%) answered that they don`t want to continue their study at Qafqaz University. 35.52% answered that they want to continue their study at the same university. Consequently, it arises question about loyalty, which is the new research topic that should be studied in future. Because, the result shows that majority of students are not loyal but doesn`t exactly shows the reason and the causes for lower loyalty.

Figure 2. Do you want to continue your study at Qafqaz University?



In order to answer to O1: *“Identifying loyalty of students”* From the Figure 2, it could be concluded that students are not loyal to Qafqaz University. Because, majority of students mentioned that they don't want to continue their study in Qafqaz University, which is two times more than students who wants to continue their next study in Qafqaz University.

3.2 Descriptive statistics of the variables in the study

To answer to the O2: *“To assess importance of different aspects in terms of student's perception”* also know the performance value on the institution part mean (M) and standard deviation (SD) were calculated. The result of calculation presented in Table 5. For all the attributes, mean score is more than 4.20, which shows according to student's perception all the aspects are important. The attribute considered the most important were external relations (M=4.51; SD=0.714), which is followed by teaching aspects (M=4.47; SD=0.721) and undergraduate program (M=4.39; SD=0.884) according to the perspective of students. The least important attribute was the general aspects (M=4.20; SD=0.684).

In the external relations attribute, the most important sub attribute considered exchange programs with foreign universities (M=4.56; SD=0.846), on the contrary the least important sub- attribute was conferences and seminars (M=4.41; SD=0.912). Regarding to teaching aspect, sub-attribute clarity and precision in the exposure of knowledge (M=4.68; SD=2.579) was the most important according to perception of the students. The least important sub-attributes were personalized attention (M=4.29; SD=0.884). Concerning undergraduate program, several career opportunities (M=4.55; SD=0.866) was the most important sub-attributes according to student's perception, whereas updated content (M=4.24; SD=1.08) was less important.

Analysing the below table, and respecting to service quality in academic service, analyses highlighted that interest in solving problems of student (M=4.48; SD=0.841) was the most important sub-attributes which followed by warmth of it staff (M=4.42; SD=0.869). However, knowledge of rules and procedures (M=4.23; SD=0.897) and simple procedures (M=4.22; SD=0.929) were the less important sub-attributes according to student's perception. Availability of laboratories and computer facilities (M=4.51; SD=0.910) is the most important sub-attributes in the computer laboratory facilities attributes in which existence of trainings in computer tools (M=4.24; SD=1.006) was least important for students' perception. The most important services related to library was the ways of consulting rapidly (M=4.46; SD=0.832) and interest in solving

problems of student ($M=4.45$; $SD=0.975$), whereas easy access to shelves was the least important for the student perception.

Table 5. Descriptive analysis of Importance attributes (continue)

Item	1	2	3	4	5	Mean	SD
	n (%)	n (%)	n (%)	n (%)	n (%)		
1.General Aspects						4.20	0.684
1.1 Modern Facilities	6(2.3)	1(0.4)	23(8.9)	76(29.6)	151(58.8)	4.42	0.854
1.2 Clean Facilities	4(1.5)	1(0.4)	8(3.1)	64(24.6)	183(70.4)	4.62	0.712
1.3 Sport Facilities	11(4.2)	14(5.3)	71(27.1)	94(35.9)	72(27.5)	3.77	1.044
1.4 Cultural Activities	5(1.9)	9(3.4)	38(14.5)	96(36.6)	114(43.5)	4.16	0.930
1.5 Association of Students	6(2.3)	12(4.7)	37(14.5)	88(34.4)	113(44.1)	4.13	0.985
2. Library						4.33	0.768
2.1 Easy access to shelves	18(6.9)	12(4.6)	39(14.9)	73(27.9)	120(45.8)	4.01	1.189
2.2 Ways of consulted rapidly	4(1.6)	6(2.3)	15(5.8)	76(29.5)	157(60.9)	4.46	0.832
2.3 Warmth of its staff	5(1.9)	6(2.3)	20(7.7)	67(25.8)	162(62.3)	4.44	0.879
2.4 Interest in solving the problems of student	11(4.3)	3(1.2)	14(5.5)	58(22.7)	169(66.3)	4.45	0.975
3. Computer Laboratory facilities						4.34	0.826
3.1 Availability of laboratories and computer facilities	8(3.1)	7(2.7)	25(9.7)	69(26.8)	148(57.6)	4.51	0.910
3.2 Ability to use after classes	8(3.1)	7(2.7)	25(9.7)	69(26.8)	148(57.6)	4.33	0.978
3.3 Existence of training in computer tools	6(2.4)	13(5.3)	27(10.9)	71(28.7)	130(52.6)	4.24	1.006
4. Social services						4.27	0.700
4.1 Financial aid for students	17(6.4)	4(1.5)	36(13.5)	62(24.5)	134(53)	4.15	1.150
4.2 Existence of medical support to students	3(1.2)	11(4.3)	22(8.6)	61(23.8)	159(62.1)	4.41	0.903
4.3 Availability of accommodation for students	7(2.8)	6(2.4)	32(12.7)	55(21.8)	152(60.3)	4.35	0.980
4.4 Existence of canteens	22(8.6)	15(5.9)	16(6.3)	54(21.2)	148(58)	4.12	1.306
4.5 Knowledge of rules and procedures	8(3.1)	7(2.8)	40(15.7)	92(36.2)	107(42.1)	4.11	0.981
4.6 Trust and safety in services	6(2.3)	4(1.6)	25(9.7)	65(25.2)	158(61.2)	4.41	0.901
4.7 Information service completion	6(2.4)	10(3.9)	35(13.7)	75(29.4)	129(50.6)	4.22	0.984
4.8 Interest in solving the problems of student	7(2.7)	13(5.1)	14(5.5)	54(21.2)	167(65.5)	4.42	0.996
4.9 Simple rules and procedures	11(4.3)	7(2.8)	43(17)	77(30.4)	115(45.5)	4.10	1.059
4.10 Warmth of its staff	3(1.2)	6(2.4)	22(8.7)	55(21.7)	167(66)	4.49	0.843
5. Academic services						4.35	0.695
5.1 Simple procedures	5(2)	8(3.2)	31(12.6)	87(35.2)	116(47)	4.22	0.929
5.2 Knowledge of rules and procedures	5(2)	1(0.4)	44(17.8)	79(32)	118(47.8)	4.23	0.897
5.3 Interest in solving problems of student	5(2)	1(0.4)	23(9.3)	59(24)	158(64.2)	4.48	0.841
5.4 Trust and safety in service	4(1.6)	6(2.5)	26(10.7)	65(26.6)	143(58.6)	4.38	0.892
5.5 Information service completion	4(1.6)	8(3.3)	21(8.6)	72(29.4)	140(57.1)	4.37	0.894
5.6 Quick response	1(0.4)	6(2.4)	33(13.3)	66(26.6)	142(57.3)	4.38	0.835
5.7 Warmth of its staff	3(1.2)	8(3.2)	21(8.5)	65(26.2)	151(60.9)	4.42	0.869
6. Teaching Aspects						4.47	0.721
6.1 Friendliness of the teachers	6(2.4)	4(1.6)	15(5.9)	49(19.2)	181(71)	4.55	0.863
6.2 Personalized attention	0(0)	13(5)	35(13.6)	75(29.1)	135(52.3)	4.29	0.884
6.3 Easy communication with teachers	2(0.8)	5(2)	23(9)	68(26.7)	157(61.6)	4.46	0.802

6.4 Clarity and precision in the exposure of knowledge	6(2.4)	19(7.5)	64(25.1)	165(64.7)	1(0.4)	4.68	2.579
6.5 Scientific expertise of teacher	2(0.8)	12(4.7)	22(8.6)	54(21.1)	166(64.8)	4.45	0.893
6.6 Fair assessment	4(1.6)	7(2.8)	15(5.9)	45(17.8)	182(71.9)	4.56	0.851
6.7 Advice the basic bibliography	4(1.6)	7(2.8)	32(13)	71(28.9)	132(53.7)	4.30	0.916
7. Undergraduate Program						4.39	0.884
7.1 Updated content	13(5.2)	5(2)	32(12.7)	59(23.5)	142(56.6)	4.24	1.088
7.2 Several career opportunities	6(2.4)	4(1.6)	15(6)	48(19)	179(71)	4.55	0.866
8. External Relations						4.51	0.714
8.1 Getting the internships	8(3.1)	2(0.8)	19(7.5)	46(18)	180(70.6)	4.52	0.908
8.2 Exchange programs with foreign universities	4(1.6)	7(2.8)	14(5.5)	47(18.6)	181(71.5)	4.56	0.846
8.3 Conferences and seminars	5(2)	7(2.7)	24(9.4)	61(23.8)	159(62.1)	4.41	0.912
8.4 Internet connection	7(2.7)	5(2)	15(5.9)	41(16)	188(73.4)	4.55	0.901

Note: 1-Very Important; 2-Unimportant; 3-Neither Important nor Unimportant; 4-Important; 5-Very important.

Regarding social services quality warmth of its staff ($M=4.49$; $SD=0.843$), existence of medical support ($M=4.41$; $SD=0.903$) and interest in solving problems of the student ($M=4.42$; $SD=0.996$) were the main important sub-attributes students noted. Knowledge of rules and procedures ($M=4.11$; $SD=0.981$) was the least important. Related to general aspects, which showed the least important attribute according to student's perception; while clean facilities ($M=4.62$; $SD=0.712$) highlighted most important sub-attributes, association of students ($M=4.13$; $SD=0.985$) considered the least important. It is possible see the results in previous table.

To answer to the O3: "To determine student's satisfaction according to different aspects" Mean (M) and standard deviation (SD) calculated for each attributes and sub-attributes, which represented in Table 6. According to the result, only satisfaction with academic services ($M=4.27$; $SD=0.700$) was more than four, which followed by satisfaction of teaching aspects ($M=3.80$; $SD=0.848$) and other attributes with the mean of less than four. The least satisfaction rate was for the undergraduate program ($M=3.36$; $SD=1.155$) and computer laboratory facilities ($M=3.31$; $SD=1.060$). Mean for the satisfaction attributes vary between 3.31 and 4.27, which suggests that, in general students of Economics and Administrative Sciences faculty and Industrial Engineering department are satisfied with the service quality of Qafqaz University.

Highly satisfied sub-attributes for academic services were simple procedures ($M=3.89$; $SD=2.790$) and warmth of its staff ($M=3.82$; $SD=1.217$). However, quick response ($M=3.42$; $SD=1.233$) and interest in solving problems of student ($M=3.42$; $SD=1.252$) were the least satisfied sub-attributes for the students. Regarding to teaching aspects, friendliness of the teachers ($M=4.02$; $SD=1.123$) sub-attribute showed highest satisfaction rate. Despite that, personalized attention ($M=3.66$; $SD=1.165$) demonstrated least satisfaction rate from the point of students. Concerning library, warmth of its staff ($M=4.26$; $SD=0.984$) sub-attribute represented high satisfaction rate on the contrary easy access to shelves ($M=3.05$; $SD=1.488$) had the lowest satisfaction rate. In this point, wants to mention that, in the library it is prohibited for student's access to the shelves, looking for the books and ordering done over the internet or intranet and students could take the books 15 min. after the ordering. However, this decreased satisfaction rate of students significantly. Relating to general aspects, most of students satisfied with the clean facilities ($M=4.45$; $SD=0.791$) but sport facilities

(M=3.05; SD=1.141) represented least satisfaction rate. Satisfaction rate for the sub-attributes of social services vary between 2.81 and 3.97.

Table 6. Descriptive analysis of Satisfaction attributes

Item	1	2	3	4	5	Mean	SD
	n (%)	n (%)	n (%)	n (%)	n (%)		
1.General Aspects						3.64	0.722
1.1 Modern Facilities	10(3.9)	18(7)	73(28.4)	104(40.5)	52(20.2)	3.66	1.003
1.2 Clean Facilities	3(1.2)	4(1.5)	19(7.3)	82(31.5)	152(58.5)	4.45	0.791
1.3 Sport Facilities	29(11.3)	44(17.1)	97(37.7)	58(22.6)	29(11.3)	3.05	1.141
1.4 Cultural Activities	10(4)	26(10.3)	82(32.4)	84(33.2)	51(20.2)	3.55	1.048
1.5 Association of Students	24(9.3)	30(11.7)	63(24.5)	86(33.5)	54(21)	3.45	1.211
2. Library						3.76	0.866
2.1 Easy access to shelves	62(24.2)	34(13.3)	45(17.6)	59(23)	56(21.9)	3.05	1.488
2.2 Ways of consulted rapidly	9(3.5)	10(3.9)	49(19)	84(32.6)	106(41.1)	4.04	1.036
2.3 Warmth of its staff	8(3.1)	7(2.7)	30(11.7)	76(29.6)	136(52.9)	4.26	0.984
2.4 Interest in solving the problems of student	18(7.1)	27(10.7)	42(16.7)	74(29.4)	91(36.1)	3.77	1.245
3. Computer Laboratory facilities						3.31	1.06
3.1 Availability of laboratories and computer facilities	22(8.6)	29(11.3)	70(27.2)	70(27.2)	66(25.7)	3.50	1.228
3.2 Ability to use after classes	34(13.5)	34(13.5)	51(20.3)	80(31.9)	52(20.7)	3.33	1.313
3.3 Existence of training in computer tools	33(13.3)	47(19)	71(28.6)	58(23.4)	39(15.7)	3.09	1.258
4. Social services						3.51	0.770
4.1 Financial aid for students	63(25.4)	33(13.3)	66(26.6)	57(23)	29(11.7)	2.82	1.350
4.2 Existence of medical support to students	12(4.7)	41(16.1)	70(27.6)	79(31.1)	52(20.5)	3.46	1.127
4.3 Availability of accommodation for students	11(4.4)	14(5.6)	47(18.7)	79(31.5)	100(39.8)	3.97	1.099
4.4 Existence of canteens	75(29.4)	41(16.1)	42(16.5)	51(20)	45(17.6)	2.81	1.498
4.5 Knowledge of rules and procedures	19(7.5)	16(6.3)	74(29.1)	83(32.7)	62(24.4)	3.60	1.144
4.6 Trust and safety in services	14(5.5)	10(3.9)	49(19.2)	88(34.5)	94(36.9)	3.93	1.101
4.7 Information service completion	16(6.4)	16(6.4)	68(27.3)	78(31.3)	71(28.5)	3.69	1.142
4.8 Interest in solving the problems of student	29(11.6)	33(13.3)	64(25.7)	72(28.9)	51(20.5)	3.33	1.266
4.9 Simple rules and procedures	19(7.7)	16(6.5)	68(27.4)	87(35.1)	58(23.4)	3.60	1.141
4.10 Warmth of its staff	14(5.7)	14(5.7)	44(17.8)	86(34.8)	89(36)	3.90	1.127
5. Academic services						3.64	1.009
5.1 Simple procedures	11(4.5)	18(7.3)	72(29.1)	70(28.3)	75(30.4)	3.89	2.790
5.2 Knowledge of rules and procedures	14(5.8)	20(8.2)	78(32.1)	70(28.8)	61(25.1)	3.59	1.122
5.3 Interest in solving problems of student	23(9.4)	35(4.3)	60(24.5)	70(28.6)	57(23.3)	3.42	1.251
5.4 Trust and safety in service	17(6.9)	14(5.7)	44(18)	97(39.6)	73(29.8)	3.80	1.138
5.5 Information service completion	19(7.7)	18(7.3)	58(23.5)	85(34.4)	67(27.1)	3.66	1.175
5.6 Quick response	23(9.4)	32(13.1)	62(25.4)	73(29.9)	54(22.1)	3.42	1.233
5.7 Warmth of its staff	18(7.3)	17(6.9)	47(19.2)	71(29)	92(37.6)	3.82	1.217
6. Teaching Aspects						3.80	0.848
6.1 Friendliness of the teachers	11(4.3)	18(7.1)	36(14.2)	77(30.4)	111(43.9)	4.02	1.123
6.2 Personalized attention	13(5.1)	30(11.8)	62(24.4)	75(29.5)	74(29.1)	3.66	1.165
6.3 Easy communication with teachers	13(5.2)	30(12)	37(14.8)	83(33.2)	87(34.8)	3.80	1.188
6.4 Clarity and precision in the exposure of knowledge	13(5.2)	10(4)	54(21.6)	93(37.2)	80(32)	3.87	1.073
6.5 Scientific expertise of teacher	15(6)	13(5.2)	48(19.2)	94(37.6)	80(32)	3.84	1.114
6.6 Fair assessment	18(7.1)	21(8.3)	51(20.2)	85(33.7)	77(30.6)	3.72	1.189
6.7 Advice the basic bibliography	14(5.8)	19(7.9)	57(23.6)	80(33.1)	72(29.8)	3.73	1.141
7. Undergraduate Program.						3.36	1.155
7.1 Updated content	36(14.5)	17(6.8)	71(28.5)	79(31.7)	46(18.5)	3.33	1.265
7.2 Several career opportunities	26(10.5)	28(11.3)	74(29.8)	69(27.8)	51(20.6)	3.37	1.227
8. External Relations						3.45	0.960
8.1 Getting the internships	30(11.9)	25(9.9)	73(29)	73(29)	51(20.2)	3.36	1.246
8.2 Exchange programs with foreign universities	19(7.6)	24(9.6)	70(28.1)	69(27.7)	67(26.9)	3.57	1.200
8.3 Conferences and seminars	11(4.3)	7(2.8)	63(24.8)	83(32.7)	90(35.4)	3.92	1.049
8.4 Internet connection	64(25.4)	35(13.9)	55(21.8)	50(19.8)	48(19)	2.93	1.456

Note: 1-Strongly Disagree; 2-Disagree; 3- Neither agree nor disagree; 4-Agree; 5-Strongly Agree

Highest satisfaction rate determined for the availability of accommodation for the students (M=3.97; SD=1.099) and trust and safety in services (M=3.93; SD=1.101). However, students could be said dissatisfied with the service quality of financial aid for students (M=2.82; SD=1.350) and existence of canteens (2.81; 1.498). Conferences and seminars (M=3.92; SD=1.049) indicated highest satisfaction rate in external relations attribute while internet connection (M=2.93; SD=1.456) demonstrated dissatisfaction according to students. In the undergraduate program attribute, several career opportunities (M=3.37; SD=1.227) sub-attribute indicated higher satisfaction rate than updated content (M=3.33; SD=1.265). Concerning computer laboratory facilities attributes, availability of laboratories and computer facilities (M=3.50; SD=1.228) showed highest satisfaction rate. However, existence of training in computer tools (M=3.09; SD=1.258) demonstrated lowest satisfaction rate from the students.

Table 7. Mean and Standard deviation of main attributes.

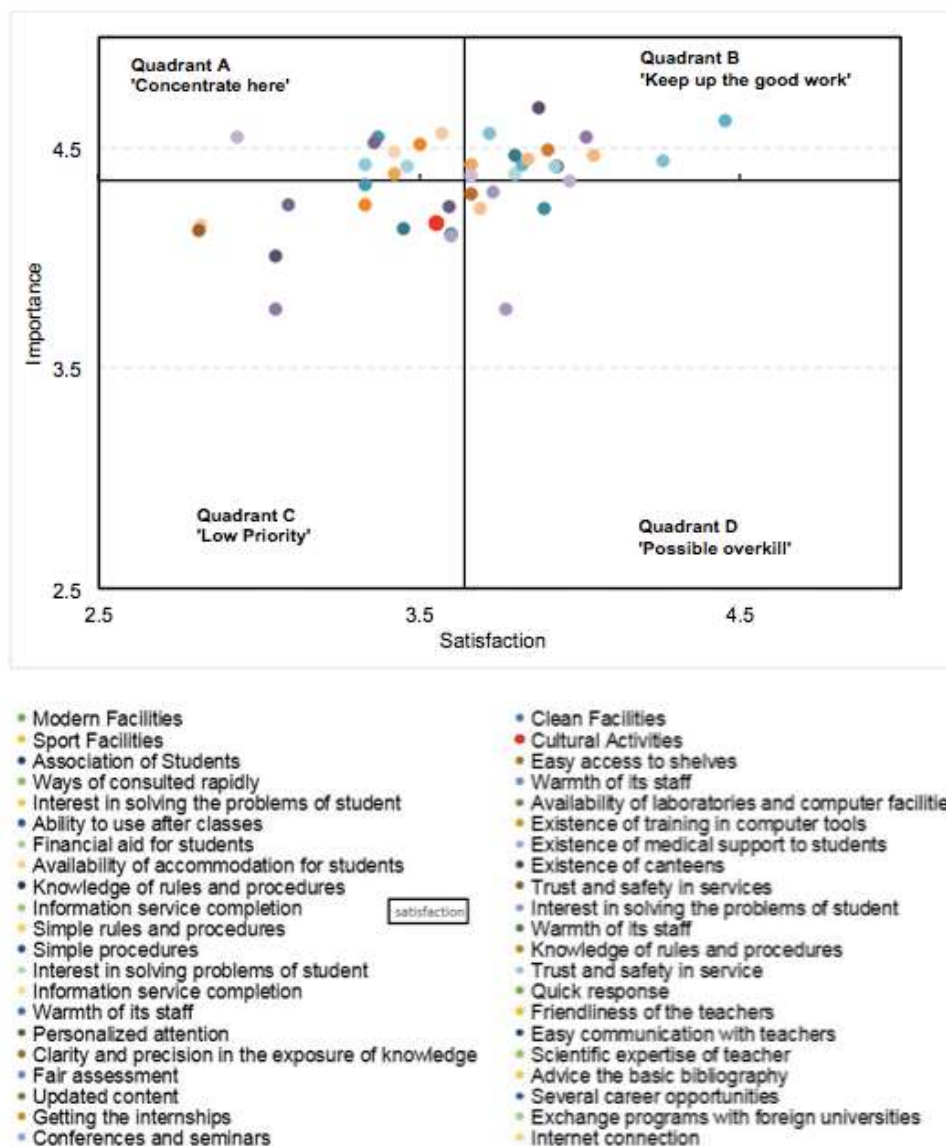
Attributes	Importance			Satisfaction		
	Mean	Standard Deviation	Ranking	Mean	Standard Deviation	Ranking
General Aspects	4.20	0.684	8. ^o	3.64	0.722	4. ^o
Library	4.33	0.768	6. ^o	3.76	0.866	3. ^o
Computer laboratory facilities	4.34	0.826	5. ^o	3.31	1.060	8. ^o
Social services	4.27	0.700	7. ^o	3.51	1.009	5. ^o
Academic Services	4.35	0.695	4. ^o	4.27	0.700	1. ^o
Teaching aspects	4.47	0.721	2. ^o	3.80	0.848	2. ^o
Undergraduate Program	4.39	0.884	3. ^o	3.36	1.155	7. ^o
External Relations	4.51	0.714	1. ^o	3.45	0.960	6. ^o

From the Table 7 can be observed importance and satisfaction mean for each attribute. Mean for the importance vary between 4.20 and 4.51, for the satisfaction mean vary between 3.31 and 4.27. Table shows that External Relations showed highest importance rate but General Aspects represented lowest importance rate. Regarding to Satisfaction Academic Services showed highest satisfaction rate where Computer laboratory facilities showed lowest satisfaction rate.

3.3 Importance-Satisfaction Analysis and Problematic Areas

To answer to the O4: *“Identifying positioning of each attributes in IPA matrix”* it was calculated median for the importance and satisfaction attributes. Then, plotted each attribute on IPA matrix. After plotting each attribute on IPA matrix, result showed that 14 attributes positioning in the Quadrant-C “Low Priority”, (see Figure 3) the result illustrates that attributes in this area less important for the students also these attributes showed less satisfaction rate.

Figure 3. Importance-Satisfaction analysis for each attribute (Median=3.64; 4.35).



Attributes like modern facilities, warmth of its staff in Quadrant - B “Keep up the good work” illustrates that attributes positioning in this area are important for the students and the students satisfied with this attributes. Clean facilities attribute in this area showed highest importance and satisfaction rate. In order to continue performing well with these attributes institution needs to put continues investment. Eight attributes such as availability of accommodation, personalized attention positioned in Quadrant - D “Possible Overkill” illustrates that attributes in this area is not so much important for the students but satisfaction rate showed that students are satisfied with this attributes. The least attributes, seven of them are positioning in Quadrant - A “Concentrate here”. Attributes in this area illustrates these attributes such as interest in solving problems of students, getting internship, career opportunities are important for the students. However, the attributes in this area showed less satisfaction rate moreover, attribute like internet connection illustrated dissatisfaction rate. All this information can be seen in Figure 3.

3.4 Research Hypothesis Proof

To answer to the H1: *“There are differences in overall satisfaction and importance by study area”*. Firstly, One-Way ANOVA test applied because there are seven areas, which is more than two sample. However, normality test had violated because sample size for some study areas were less than 30. Therefore, non-parametric Kruskal-Wallis test applied. Regarding the p-value for overall satisfaction and overall importance is more than 0.05. Which means that there are no differences between study area related to overall satisfaction and overall importance. The result shows that main hypothesis does not corroborated.

For the H2: *“There are differences in overall satisfaction and importance by academic years (Bachelor and Master Degree)”*. After applying One-Way ANOVA, it was founded that p-value for overall satisfaction and overall importance is more than 0.05. The result demonstrates that there is no difference between in overall satisfaction and overall importance by academic years for Bachelor and also for Master Degree. In this sense the hypothesis was not corroborated.

To answer to the H3: *“There are differences in overall satisfaction and importance between Bachelor and Master degree”* Levene`s test firstly applied to test the normality. The test showed that variables did not follow normality as seen in the Table 8. In the next step Independent Samples t-Student test applied and from the result it was observed that pvalue is less than 5 percent. Therefore, hypothesis is corroborated, which means that there are differences in overall satisfaction and importance between Bachelor and Master degree.

Table 8. Levene`s Test and t-Test for identifying differences between Bachelor and Master degree.

	Levene`s test		t-Student test	
	Test value	p-value	Test value	p-value
Overall Importance	4.424	0.036	-5.042	<0.001
Overall Satisfaction	9.020	0.003	-3.814	<0.001

To answer H4: *“There is a positive association between overall satisfaction and loyalty”*. Phi test applied. According to the result in Table 9 p-value is less than 0.05 that means that main hypothesis not corroborated also test value showed minus result, which means that when satisfaction increases loyalty of student decreases.

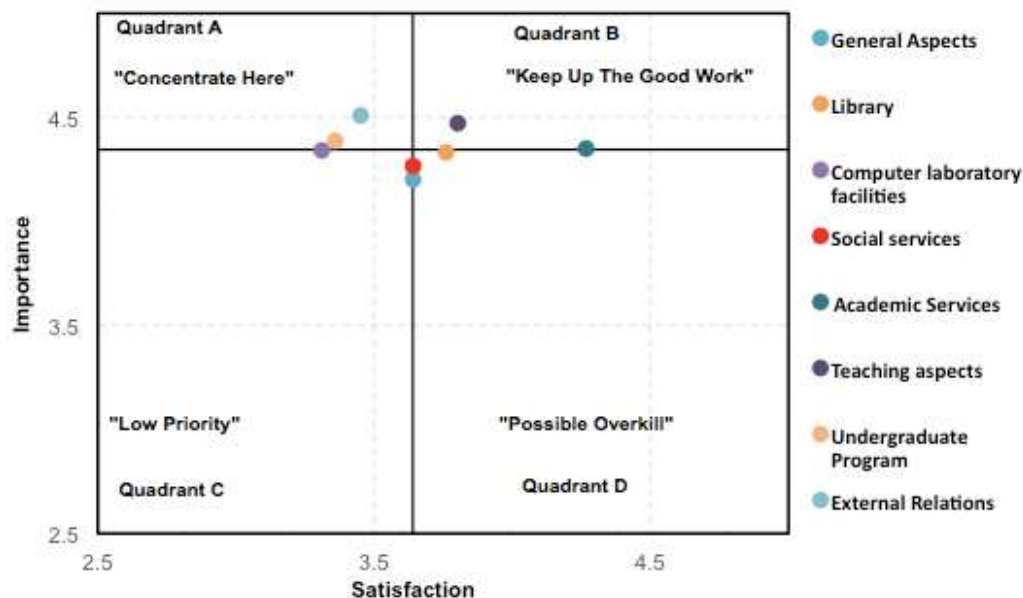
Table 9. Phi Test to identify positive association between satisfaction and loyalty.

	Test value	p-value
Phi test	-0.346	<0.001

The H5: *“There is a positive relationship between the satisfaction level and importance level”*, it was applied the Pearson Coefficient Correlation test to find correlation between satisfaction and importance level. The result showed that p value is less than 0.05 for both overall satisfaction and overall importance. The result shows that the main hypothesis was corroborated.

To answer H6: “Main attributes will be positioning in quadrant B, “Keep up the good work” in IPA matrix”, mean rating for satisfaction and importance calculated, they are plotted on two-dimensional, four quadrant matrix (see Figure 4). For importance, dimension median was 4.345 and for satisfaction dimension median was 3.64. The result showed that main hypothesis not corroborated. Because, only two attributes positioning in Quadrant-B.

Figure 4. Importance-Satisfaction analysis for main attributes (Median=3.64; 4.35).



From the Table 10 result shows that in the “Keep up The Good Work” area two main attributes located. This illustrates that for the attributes Academic Services and Teaching Aspects are very important for the students and this area shows high satisfaction rate for the attributes. This means that university management should invest more on this attributes in order to keep up the good work. Undergraduate Program and External Relations positioned in Quadrant-A, which showed high importance level and less satisfaction level. In order to get maximum results management of university should concentrate on this attributes to increase satisfaction rate. The Social Services and Computer laboratory facility attributes positioning in Quadrant-C, which means that services in this area shows high satisfaction rate but these services are less important for the students. Moreover, General Aspects and Library positioning in Quadrant-D illustrates that attributes in this area is less important for the students and satisfaction rate is low for this attribute.

Table 10. Location of main attributes in IPA matrix.

Attributes	Importance		Satisfaction		Quadrant
	Mean	Standard Deviation	Mean	Standard Deviation	
General Aspects	4.20	0.722	3.64	0.684	Quadrant-D
Library	4.33	0.866	3.76	0.768	Quadrant-D
Computer laboratory facilities	4.34	1.06	3.31	0.826	Quadrant-C
Social services	4.27	0.700	3.51	0.778	Quadrant-C
Academic Services	4.35	1.009	4.27	0.695	Quadrant-B

Teaching aspects	4.47	0.848	3.80	0.721	Quadrant-B
Undergraduate Program	4.39	1.155	3.36	0.884	Quadrant-A
External Relations	4.51	0.960	3.45	0.714	Quadrant-A
Median	4.35	-	3.64	-	-

Suggestions for University Service Management

To answer to the O5: *“To give suggestions to the management of university to improve service quality provided to students”*, it can say that in general students of Economics and Administrative Sciences faculty and Industrial Engineering department are satisfied with service quality offered by Qafqaz University. Also, importance rate of different attributes illustrated that all attributes are very important. However, there are some areas, which showed dissatisfaction like internet connection, existence of canteens and financial aid for the students.

For the providing financial aid will be difficult for the university management but from the second semester of 2015/2016 government issued new legislation to give financial aid for the students who gets high ranking in the class and this will hopefully increase satisfaction rate. Dissatisfaction related to internet connection and existence of canteens need to make research and find exact problems, which decrease satisfaction of students related to these attributes.

In addition, it is necessary for the management of the university to investigate the exact problems regarding to loyalty of students. Furthermore, undergraduate program and External relations showed lowest satisfaction degree, which is illustrated high importance degree. Therefore, these aspects should be improved. For the undergraduate program contents should be updated frequently, management should force teachers to use new content. Lessons should not be just theoretical, it should also add practical information such as visits to companies, inviting managers from commercial companies in order to give seminars. Regarding to External relations, university management should increase internships in university or in other companies. Because, attribute as internship showed low satisfaction rate. In addition, university should focus on exchange programs with other universities, specifically, universities which located in Europe. Moreover, internet connection was the one attribute which showed dissatisfaction degree. In order, to solve this problem and increase quality of internet inside the university, Wi-Fi connection speed should be increased and access to the internet should be safe and easy in every place inside the university.

Overall, few areas need improvement. If the university management will solve these problems, it will increase satisfaction rate of students.

Conclusion, Limitation and Future Research

Martilla and James (1977), in order to improve and analyse business strategies developed Importance-Performance analysis. Since development of Importance-Satisfaction Analysis, Analysis has been applied to different areas. This tool is helpful and very simple to use for identifying strengths and weaknesses of Higher Education Institutions.

Therefore, the study in Qafqaz University used IPA matrix to evaluate students' satisfaction related to service quality. This study has identified the importance of different aspects in terms of student's perception;

determined student`s satisfaction according to different aspects; evaluated overall satisfaction of student`s within given service in terms of different aspect.

The findings show that all attributes of service quality are very important to student`s satisfaction, but External Relations, Teaching Aspects and Undergraduate Program are relatively more important attributes of service quality in Qafqaz University. Interestingly, the findings show that students are satisfied with the all attributes of service quality; academic services, teaching aspects and library rate more highly relative to other attributes.

The findings suggest that there is a positive relationship between the importance and satisfaction of different attributes. In addition, it identified that there are no differences in overall satisfaction and importance regarding study area and academic years. However, interesting part of the result illustrated that there is a negative association between student`s loyalty and overall satisfaction in Economics and Administrative sciences faculty and Industrial Engineering department. Furthermore, study shows that clean facilities, warmth of staff, interest in solving problems of students, existence of medical supports to students, also quick response, friendliness of teachers and having several career opportunities are very important and very satisfying attributes of service quality offered by university. Although, attributes like internet connection, financial aid for students and existence of canteen showed high importance, result regarding to satisfaction uncovered that students are not satisfied with the service quality of these attributes. In general, students are very satisfied with the service quality of very important attributes.

Limitations of the research were that there is less research regarding application of ImportanceSatisfaction Analysis in Higher Education Institutions. Although, there is a plenty of research evaluates relationship between customer satisfaction and service quality, most of these research takes into consideration commercial businesses.

For the future research, it will be interesting to make research regarding student`s satisfaction and loyalty to identify why there is a negative association between loyalty and satisfaction. In addition, taking into consideration some other factors such as tuition fee, location of university also exploring advantage and disadvantage of studying in private university will give more detailed data regarding to student`s satisfaction in Higher Education Institutions.

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