

# **How Do EMU Students Choose their Universities: Importance-Performance Analysis**

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## ABSTRACT

Higher education has been a very competitive service sector and quality has become an important concept in this competitive industry. Therefore, measuring service quality in higher education has attracted a lot of attention recently.

This study identifies the factors that are important to students in the stage of choosing their higher education institution and measures performance of their university on various attributes of quality. More specifically the service provided by EMU as perceived by its students will be measured and the factors that are important in the decision making of students' choice of joining EMU will be identified.

The Importance – Performance analysis is used to analyze data. The study indicates a service gap in EMU, that is the importance attached to the EMU service quality attributes is greater than the respondents' perceived performance for all of these attributes. This study revealed that efforts to improve service provided by EMU should be concentrated on the tangibility dimension. Students are not satisfied with the physical appearance of building and class rooms as well as with campus in general. More facilities for accommodation, food and recreation should be created. Reliability of service provided is also not performing well. Students are not confident that money they spent on the degree reflect quality of education service offered. And, finally, empathy is the dimension that requires further attention. Foreign students are not satisfied with provided support services.

**Keywords:** service quality, higher education, Importance – Performance analysis, North Cyprus.

## ÖZ

Yüksek öğrenimde rekabet arttıkça kaliteli eğitim kavramı da önemini artırmıştır. Bu yüzden eğitim kalitesini ölçmek her geçen gün daha fazla dikkat çeker olmuştur. Bu çalışma ile öğrencilerin üniversite seçerken nerelere önem verdiğini ortaya çıkaracak ve bu eğitim kalitesini oluşturan bu maddeler düşünüldüğünde kurumun performansı değerlendirilecektir. Üniversite tercihlerini DAÜ olarak yapan öğrencilere üniversite seçerken nelere önem verdikleri sorulacak ve bu maddeler düşünüldüğünde DAÜ'nün performansının değerlendirilmesi istenecektir.

Importance – Performance tekniği kullanılarak veriler analiz edilmiştir. Çalışma DAÜ'de bir hizmet boşluğu olduğunu bulmuştur. Bu hizmet boşluğu eğitim kalitesini ölçmek için kullanılan ifadelerle verilen önem ile DAÜ'nün bu maddelere karşı gösterdiği hizmet performansı arasında bir fark olmasından kaynaklanmıştır. Çalışma sonuçlarına göre, DAÜ'nün eğitim kalitesini yükseltmek için kalite kavramının somut boyutu yani binaların ve sınıf odalarının fiziksel durumunun iyileştirilmesine gerek vardır. Daha fazla konaklama, yeme ve rekreasyon imkanı yaratılmalıdır. DAÜ'nün güvenilirlik boyutu da iyileştirilmelidir. Yani öğrenciler eğitime harcadıkları her kuruşun karşılığını almadıklarını düşünmektedirler. Ayrıca, eğitim kalitesini oluşturan empati boyutunun da iyileştirilmesi gerektiğini düşünmektedirler. Yabancı öğrenciler sunulan destek hizmetlerinden tatmin olmadıklarını belirtmişlerdir.

**Anahtar kelimeler:** yüksek öğrenim, eğitim kalitesi, DAÜ.

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# Chapter 1

## INTRODUCTION

### 1.1 Introduction

The service sector is an important and inherent component of economy of any country. It makes a direct and significant contribution to GDP and job creation, and provides crucial inputs for the rest of the economy, thus having a significant effect on the overall investment climate, which is an essential determinant of growth and development. Some service sectors such as the health, education, water and sanitation sectors, are also directly relevant to achieving social development objectives. The service sector accounts for a significant proportion of GDP in most countries, including low income countries, where it frequently generates over 50% of GDP. The process of development usually coincides with a growing role of services in the economy (OECD, 2008).

Many services are key inputs to all or most other business e.g. infrastructure services such as energy, telecommunications and transportation; financial services which facilitate transactions and provide access to finance for investment; health and education services which contribute to a healthy, well-trained workforce; and legal and accountancy services which are part of the institutional framework required to underpin a healthy market economy. These service sectors are thus a key part of the investment climate, and can have a much wider impact on overall business

performance and the level of investment, and hence growth and productivity in the economy (OECD, 2008).

The search of quality has become an important consumer trend (Parasuraman *et al.* 1985, 1988) and service industries focused on the measurement of a consumer and perceived quality satisfaction has arisen (Berry *et al.* 1988).

Along with the extend competition in various service sectors, institutions of higher education are also operating in a rivalry environment struggling for students who are considered to be the main customers of universities. But what makes the university to be successful and profitable? As Berry *et al.* (1988) mentioned, “service company is actually defined by its service quality” (Berry *et al.* 1988). Higher education is considered as a service since it has all the classical features that every service exhibits: it is intangible and heterogeneous, meets the criterion of inseparability by being produced and consumed at the same time, satisfies the perishability criterion and assumes the students’ participation in the delivery process (Cuthbert 1996a).

Education covers all activities of educating, instructing or teaching and is principally concerned with knowledge acquisition through learning and instruction. Education can be considered as the principal instrument, which can assist both individuals and nations to shape their destinies. Over time, higher education has played a unique role in shaping both individuals and cultures. It has helped in nurturing skilled human resources of societies thereby propagating knowledge and know-how, both of which have long been considered as the essential driving forces of economic and societal growth.

Higher Education (HE) also referred to as tertiary education, third stage, third level, and post secondary education, is the educational level following the completion of a school providing secondary education. It includes undergraduate and post graduate education.

After a long period of time for higher education being a centralized, government-managed area, last few decades show the strong tendency of higher education moving to mass-market service with many alternatives available. Higher education nowadays faces commercial competition as a result of the development of global education markets and the reduction of government funds that forces tertiary institutions to seek other financial sources to provide sustainable quality for its customers. Institutions of higher education have to deal not only with the “end product” of their activity – which knowledge and skills students got but also with the process of this activity – how students perceive their educational experience. These new realities of higher education sector call attention to the process of measuring service quality in one particular institution in order to draw a conclusion if the students as the main customers of the university are satisfied with the service provided.

## **1.2 Aim of the research**

The study has two key objectives:

- to identify the factors that are important to students in the stage of choosing institution where to study at;
- to measure performance of their university on various attributes of service quality provided by EMU.

## **1.3 Significance of the study**

Measuring service quality in higher education is increasingly important for attracting and retaining tuition-based revenues. The practical value of this study is to address those attributes of service quality in higher education, which are of the most importance so that the management of the institution could focus its efforts on it. The research aims to help management of the university to allocate resources in the most efficient and effective way, so that those attributes that require improvement will be emphasized.

In order to get insights into the higher education service quality and one particular institution – Eastern Mediterranean University, provided, this research consists of six distinctive sections. In the first section, review of relevant literature will be presented. The methodology used in the study is described with the justification of selecting these particular research methods. After the findings of the research are presented and finally, conclusions with research limitations and practical implications are drawn.

There have been studies on measuring student satisfaction in EMU. The study is significant because it expands the research conducted in previous studies. The importance of the study lies in the fact that it measures the present satisfaction in EMU, while at the same time identifying the attributes of higher education that are most important in EMU and how EMU performs with regards to the attributes of higher education.

#### **1.4 Research Questions**

There are many variables that influence the overall level of student experience in a university setting. There are several factors that impact the level of student

satisfaction in a university. Measuring the level of satisfaction is not an easy task as it has several driving factors. This study will use higher education service quality attributes to measure the satisfaction of EMU students.

Following the objective of the study the research questions are:

*RQ 1. To determine the underlying factors of service quality those mostly affect the students' decision to study at one particular university.*

*RQ 2. To measure the actual performance and students' level of satisfaction with service quality at EMU based on these factors.*

## **Chapter 2**

### **LITERATURE REVIEW**

#### **2.1 Service quality**

Service quality has attracted a well-deserved attention from marketing scholars (Brady and Cronin, 2001). As a result of this discussions there can be pointed out various definitions of what “service quality” is. Whilst quality has been described as “units of goodness packed into a product or service” (Ghobadian et al., 1994, p. 44), when combined with the intangible (Mcdougall and Snetsinger, 1990) and heterogeneous (Dickens, 1994) nature of a service encounter, “service quality is a measure of how well the service level delivered, matches customer expectations” (Parasuraman et al., 1985, p. 42). Perceived quality, whether in reference to a product or service, has been defined by Arnould, Price, Zinkhan (2002) as “the consumer’s evaluative judgment about an entity’s overall excellence or superiority in providing desired benefit” (p. 742). Coulthard (2004) defined perceived quality as “the consumers’ judgment about an entity’s overall excellence or superiority, which can be viewed as distinct from objective quality in as much as it is a form of attitude, related in part to satisfaction, and resulting from a comparison of expectations with perceptions of performance” (p. 480).

In the service industries, “the delivery of service through customer expectations, has been the product of a gradual evolution from quality is excellence, to quality is value, to quality is conformance to specifications, to most recently, quality is meeting



and/or exceeding customers' expectations" (Pariseau and McDaniel, 1997, p. 206). This principle of meeting or even exceeding customers' expectations gives competitive advantage to a firm. Both research and practice established that providing a high level of service quality could help service provider "to earn higher market share" (Buzzell and Gale, 1987), "increase profitability" (Kearns and Nadler, 1992) and give "the opportunity to attain a competitive price premium" (Parasuraman et al., 1994).

The research into service quality (Seth et al., 2005) originates from non-academic contexts; Parasuraman and his colleagues accomplished a notable piece of work in this field. Based on qualitative interviews with 14 executives in four service businesses and 12 customer focus groups, Parasuraman et al. (1985) propose the gaps model which is the most widely applied framework for conceptualizing service quality (Clewes, 2003, p. 72). In the model different kinds of quality gap (e.g. the understanding gap, the design gap, the delivery gap and the communication gap) are identified, and the most important gap being the one between customer expectations of service and customer perceptions of the service actually delivered. The proposed model suggests that service quality depends on the size and direction of this gap, which in turn depends on the nature of the other quality gaps. From the gaps model Parasuraman et al. (1988, 1991) develop the SERVQUAL, a general-purpose instrument for assessing service quality which (in its final format) comprises two sets of 22 Likert scales aiming to measure consumers' expectations and perceptions, respectively, on five generic dimensions with the acronym "RATER", i.e. Reliability, Assurance, Tangibles, Empathy and Responsiveness (Law, 2013).

Despite its undoubted popularity in the service quality literature, SERVQUAL has not remained immune from criticism. Cronin and Taylor (1992, p. 55) were one of the antagonists of SERVQUAL: they claimed the model to be “inadequate”, finding the “expectations” measure to be inconsequential and confusing. They introduced another model, which eliminated the disconfirmation principle and operated only the “performance” measurement of service delivery. Having entitled this system as SERVPERF, Cronin and Taylor used just half of the SERVQUAL’s items (Angell et al., 2008). As a result, the new instrument has received approval and support from different researchers as a practical and easy-to-manage tool (Babakus and Boller, 1992).

Both academics and practitioners generally acknowledged that “SERVQUAL” and “SERVPERF” to be the most appropriate and feasible methodologies that are applicable in a wide variety of industries and disciplines (Angell et al., 2008).

Academics have to decide whether to use SERVQUAL or SERVPERF in higher education. Though there are examples, which justify the use of both frameworks in the past (Pariseau and McDaniel, 1997; Cuthbert, 1996), it has been argued if one of these methods is absolutely appropriate to use as an instrument to measure service quality in higher education setting. According to O’Neill (2003), because “over time perceptions may change” (Abercrombie, 1967), “despite SERVQUAL’ use is effective in service exchanges that are short, the university exchange is longitudinal, thus making the measure less suitable”. In essence, students’ “perceptions” change over short periods of time (Hill, 1995), making “perceptions to expectations” measure of SERVQUAL “fundamentally flawed due to the ignorance of time on student perception” (O’Neill, 2003, p. 210).

Due to the fact that neither SERVQUAL norSERVPERF seemed completely appropriate in their applicability to higher education, researchers have been working on finding alternative frameworks to measure service quality. And potential solution was found. In 1977 Martilla and James introduced importance-performance analysis (IPA) as an effective tool for measuring service quality (Angell et al., 2008).

### **2.1.1 Service quality in higher education**

The constructs of service quality and customer satisfaction are closely related. A number of studies conducted in a wide variety of disciplines have shown a moderate to strong relationship between consumer satisfaction and service quality, which can be extended to include other relevant constructs such as perceived value and behavioral intentions (Cronin et al., 2000; Tam, 2004). To a large extent such phenomena also occur in the field of post-secondary education where many operations and decisions are increasingly affected by business principles (Law, 2013).

According to Crawford (1991), students in general are considered as the “primary customers” of a university. It is usually argued that decision of which university to attend is a major decision in an individual’s life. That decision might affect entire future employment, thus students look for evidence of service quality when making this decision (Donaldson and McNicholas, 2004). According to Angell et al. (2008), higher education institutions need to acknowledge the competitive nature of attracting students and realize the importance of measuring service quality. It is generally argued that recruiting students who are viewed as customers require increasing universities’ competitiveness (Gao, 2012).

It has been found out that when a student faces an uncertain and high-risk decision-making challenge of choosing which university to enter, he or she “will look for evidence of service quality”, which confirms its importance in the university functioning (Donaldson and McNicholas, 2004, p. 349). Therefore, it is essential for the management of higher education institution to keep in mind existing rivalry in attracting students and the necessity of measuring the service quality to be competitive and successful. The importance of this has been claimed by Sines and Duckworth (1994, p. 2) who summarized this position by saying that: “it’s time for educational institutions to face two facts: they are in a competitive battle for students, and students are customers”. (Angell et al., 2008)

Sigala and Baum (2003) mentioned that it becomes even more difficult to attract students, since new generation students have more influence and greater awareness as consumers, becoming more interactive and selective as regards their future and Ford et al. (1999) suggested that institutions need to better understand the nature and quality of the service offered, because of the high competitive intensity surrounding business-related courses. Oldfield and Baron (2000, p. 86) claimed that “institutions should address the issue of quality, not only through the traditional routes of accreditation and course review, students’ feedback questionnaires on the quality of course delivery and teaching, but also through evaluating what students themselves consider to be elements in service quality” (Zafiropoulos, 2008).

It is worth noting that an important branch of the research into educational quality is based on the concept of student satisfaction (Rowley, 1996). A notable piece of work in this branch is the Student Satisfaction Approach developed at the University of Central England, UK (Harvey et al., 1997), which has now been implemented at

some institutions around the world (Kane et al., 2008). A special feature of this methodology is that the areas of concern (i.e. the questionnaire items in each year of the survey) about which students are asked to rate their satisfaction and importance are not pre-specified, but are student-determined on the basis of feedback from focus-group sessions and telephone interviews, and comments collected from the previous years' surveys. Nevertheless, student satisfaction is a complex concept (Wiers-Jenssen et al.,2002) that is affected by various factors (Brown and Mazzarol, 2009; Zineldin et al., 2011); different models have been proposed for its measurement (Bryant, 2006;DeShields et al., 2005; Serenko, 2011) but there are potential overlap (Douglas et al.,2006) between student satisfaction surveys and other surveys on student assessment of educational quality (Richardson et al., 2007; Denson et al., 2010) of which the designers of QA systems should be aware (Law, 2013).

Firdaus (2006a) proposed HEdPERF (Higher Education PERFormanceonly), a new and more comprehensive performance based measuring scale that attempts to capture the authentic determinants of service quality within higher education sector. The 41-item instrument has been empirically tested for unidimensionality, reliability and validity using both exploratory and confirmatory factor analysis. (Zafiropoulos, 2008)

## **2.2 Importance – Performance analysis**

Martilla and James employed the same disconfirmation principle as SERVQUAL when they constructed the Importance – Performance Analysis model in 1977. As “an absolute performance measure of customer perception” (Wright and O'Neill, 2002, p. 26), the framework requires the subtraction of “Importance” scores from

“performance” scores to see whether disconfirmation exists (Martilla and James, 1977). Another practical function of IPA is to identify the more influential dimensions in the service exchange by evaluating the “importance” assigned to various service dimensions by customers (Gao, 2012).

Considering that there is still no common opinion whether SERVQUAL’s five dimensions are transferrable to the educational setting, IPA provides researchers with the flexibility to implement their own constructs without basing on the traditional dimensions of reliability, assurance, tangibles, empathy, and responsiveness. Consequently, having the diagnostic ability properties similar to SERVQUAL, and not necessitating the account for the longitudinal characteristics of the service exchange, IPA also applies its importance measure to determine where resource allocation is most critical (Lovelock et al., 1998). This practical feature is best represented by means of the “IP” matrix – a valuable benefit of IPA. The matrix, as shown in Figure 1, is designed to plot service factors using both their mean “importance” and “performance” scale scores. Importance scores are plotted on the vertical Y-axis, with performance scores on the horizontal X-axis. The matrix further aids in the decision-making process through its division into four quadrants, each with its own strategy, i.e. concentrate here, keep up the good work, low priority, and possible overkill, directing policy makers in service exchange decisions (Angell et al, 2008).



Figure 1: Importance – Performance Matrix

Source: adapted from Martilla and James (1977)

Joseph and Joseph (1997) were among the first researchers who introduced IPA into the context of higher education, using a sample of graduate students majoring business at a New Zealand university. Taking into account Martilla and James' (1977) recommendations, qualitative methods were firstly used to generate a set of items to be tested in the questionnaire. Then, they ran factor analysis which identified seven factors –“determinants of service quality in education”, as the authors referred to them. These factors inter alia include: “academic reputation”, “careers opportunities”, “program issues”, “cost/time”, “physical aspects”, “location”. These are rather different from the SERVQUAL five dimensions, illustrating that the sector of higher education is considerably distinguished from other industries (in regards to service evaluation). Overall, the authors found that “only two service attributes

performed higher than their importance scores” (p. 19), whereas the other attributes that the researchers assumed to be underestimated by students turned out to score higher than expected. As a result, Joseph and Joseph (1997) suggest that universities need to explore whether the areas on which they are focusing their efforts coincide with the factors that students view as important.

The use of IPA has advantages and disadvantages. Disadvantages are that it is limited in its definitions of satisfaction, considering the role of importance and performance as a symmetrical relationship, when academics (Vavra, 1997) would argue that satisfaction has levels that are more complex and require functional and dysfunctional questions that have asymmetrical answers.

The second major difficulty facing IPA is the measurement of importance and performance. In this regard, performance has generally been less controversial than importance: the usual measurement procedure has been to take the mean of the performance ratings obtained from an appropriate group of people by means of a metric or Likert scale. However, a variety of means exist to perform importance measurement.



## **Chapter 3**

### **METHODOLOGY**

#### **3.1 Methodology**

This study was conducted in order to determine the underlying factors of service quality that most affect the students' decision to study at one particular university (objective one) and to measure the actual performance and students' level of satisfaction with service quality at EMU based on these factors (objective two).

With this purpose a questionnaire was designed to collect data. IPA and statistical methods are used to analyze data. The questionnaire used for this study had four sections (see Appendix A). There were two main sections, which covered two broad elements. The first section covers certain aspects of the higher education institution that might be considered by students before choosing the university. The questions attempt to get respondents rating of the importance on some 28 higher education service quality attributes. 5 point Likert scales is used for Section 1 of the questionnaire. The Likert scales for importance ranges from 1 to 5. A scale of 1 indicates very unimportant, 2 indicates unimportant, 3 indicates not applicable, 4 indicates important and 5 indicates very important.

The second section is related to certain aspects of the service that respondents have been experiencing at EMU. Questions from this part of questionnaire attempt to get students rating of the satisfaction on the same as in importance section 28 higher

education service quality attributes. The same 5 point Likert scales is used for this section of the questionnaire. The Likert scales for satisfaction ranges from 1 to 5. A scale of 1 indicates strongly disagree, 2 indicates disagree, 3 indicates neutral, 4 indicates agree and 5 indicates strongly agree.

The third section of the questionnaire aims to measure the overall satisfaction with the EMU experience and intention to continue study at the university and spread positive word-of-mouth. Section consists of four statements about EMU to which students using the same 5 Likert scale for satisfaction have to indicate the extent to which they agree with these statements. Also there are three open-ended questions aiming to learn for what students can praise the university, for what – criticize and what they would like to change in EMU.

The fourth section of the questionnaire covers the demographic elements of the study and the questions asked in this section include questions related to the respondent's sex, age, nationality, status of the study, department or faculty as well as the respondent's level and year of study.

### **3.2 Sample**

The population of this study includes all undergraduate and graduate students from all schools and departments currently enrolled in EMU.

This research with sample size of 300 was conducted in March 2016. A combination of non-probability sampling techniques was used. First, self-selection sampling was employed: all the students known by the author were invited to take part in the research. Data were collected from those who responded. Furthermore, all those students were asked to encourage other students they knew to get involved. The

group of respondents gradually expanded as a snowball sample. And finally the random sampling technique was used for this study. Thus, any undergraduate or graduate student was implored to participate in the study. There was no particular stratification for the study.

### **3.3 Pilot Study**

The questionnaire for this study was adapted from the research of Essam Ibrahim, Lee Wei Wang & Abeer Hassan (2013). A pilot study was conducted to see whether the questions were understandable and not confusing. The pilot study also provided a window of opportunity to make adjustments or corrections deemed necessary. A total of 15 questionnaires were distributed for this purpose. Students from different faculties and schools, nationality, sex, were targeted for the pilot study. Based on the feedback recorded from the respondents, very minor adjustments were made.

### **3.4 Questionnaire**

Aiming to develop a research framework, relevant literature was extensively reviewed to explore service factors relating to teaching and learning in higher education.

The questionnaire began with a brief introduction and explained the purpose of the study. The rest of the questionnaire was constructed in four sections, from those first section refers to importance of certain aspects of the higher education institution, Section 2 and Section 3 refer to actual performance and satisfaction with the EMU experience and last, fourth section is about demographical segment of the sample (Appendix 1).

Section one focused on the “importance” of the higher education institutions’ 28 attributes.

The actual “performance” rating of the EMU was measured in Section two. To avoid confusing respondents, the questions were arranged at the same order as they were in the previous section (Dillman, 2000).

Section three provided an opportunity for students to make any further comments about the service provided by EMU and obtain some qualitative data.

The last, fourth section of the questionnaire focuses on demographic characteristics and covers elements like gender age, nationality, status, faculty, level and respondent year of study.

The rating scale was designed to contain five points representing the possible range of opinions about the service. As shown in Table 1, participants were required to measure the “importance” of each service attribute by means of a 5-point Likert scale.

Table 1: 5-point Likert scale rating “Importance”

“Very Unimportant”	“Unimportant”	“Not Applicable”	“Important”	“Very Important”
1	2	3	4	5

The “performance” of the university was also rated with a 5-point Likert scale, as indicated in Table 2.

Table 2: 5-point Likert scale rating “Performance”

“Strongly Disagree”	“Disagree”	“Neutral”	“Agree”	“Strongly Agree”
1	2	3	4	5

### 3.5. Importance-Performance Analysis.

With the global economy slipping into a recession, many companies are faced with difficulties and constraints placed on their available resources. Companies in the face of resource constraint must decide how scarce resources can be best deployed to achieve the highest level of customer satisfaction. Worthy of mention is the fact that the issue of limited resources is not new. Researchers and companies have over time looked for ways to prioritize the utilization of scarce resources. One such way to prioritize the limited resources is through the use of the importance-performance analysis (IPA).

IPA developed by Martilla and James (1997) is a technique based on the conceptual foundations of multi-attribute choice models, and is designed to identify the strengths and weaknesses of an object in terms of two dimensions, which consumers employ in evaluating that object (Yavas and Shemwell, 2001).

One is the relative importance of the attribute the respondent uses to evaluate their views, while the other is the respondent’s evaluation of performance itself (Shemwell and Yavas, 1996).

Once the attribute ratings of both importance and performance are obtained, they are then used in conducting a quadrant analysis. The quadrant analysis is simply a graphical technique used in analyzing importance and attribute ratings (Dillon *et al.*, 1993). It seeks to organize the satisfaction-importance data in such a way that areas of underperformance are quickly visualized, with the possibility of implementing corrective measures. Thus, it prioritizes activities and transforms the collected data into a diagnostic tool. The analysis points out important aspects of the service from the customers' perspective.

With this approach, the mean reported for importance and performance is plotted to reveal an "action grid" for each attribute. It is called an 'action grid' because the different grids solicit different managerial attention and action.

IPA yields insights into which product or service attribute a firm should focus on to achieve customer satisfaction. There are two implicit assumptions underlying the IPA:

- attribute performance and attribute importance are two independent variables and
- the relationship between quality attribute performance and overall performance is linear and symmetric.

The first assumption relays the notion that both importance and performance can be treated as individual variables, and thus can be evaluated on an individual and independent basis. On the other hand, the second assumption indicates that quality and overall performance are related in the sense that a high performance score will most certainly lead to a high score in overall performance of the service.

Keytet *al.*, (1994), assert that the IPA can be enhanced step determining the discrepancy score which is calculated by taking the difference of reported importance and performance score for each attribute.

IPA overtime has aided management as a tool in making marketing decisions. The framework of IPA has been extended to several sections of the services industries including banking (Ennew *et al.*, 1993), ski resorts (Hudson & Sheperd, 1998; Uysa *et al.*, 1991), hotels (Martin, 1995), escorted tours (Duke & Persia, 1996), dentistry (Nitse & Bush), health care (Dolinsky & Caputo, 1991), restaurants Keytet *al.*, 1994), and online service environments (O'Neill *et al.*, 2001).

### **3.6. Importance-Performance Quadrant Analysis.**

Martilla and James (1977) devised Importance–Performance Analysis (IPA) as a simple graphical tool to further the development of effective marketing strategies based on judgments of the importance and performance of each attribute. The key objective of IPA is diagnostic in nature: this technique aims to facilitate identification of attributes for which, given their importance, the product or service underperforms or over performs. To this end, the importance measure represents the vertical axis, and the performance measure constitutes the horizontal axis of a two-dimensional graph. These two axes divide the IPA grid into four quadrants where every attribute shows up according its mean rating on importance and performance scales. In the original version of IPA, the appearance of an attribute in the top left quadrant of the grid is indicative of underperformance, and its appearance in the bottom right quadrant is indicative of over performance. Product or service improvement efforts should focus on attributes in the former situation, while

attributes in the latter situation are candidates for possible cost-cutting strategies (Fig. 1)(Abalo et al., 2007).

The meanings of these four quadrants in IPA are as follows: (Daniels & Marion, 2006; Shieh& Wu, 2007). Quadrant I has the characteristics of both high performance and importance, which indicates that the firm has been performing well to gain competitive advantage. Quadrant II has high performance but low priority. That is, the firm has overemphasized (possible overkill) the items located in this quadrant. The items falling in Quadrant III has the characteristics of both low performance and importance, which can be considered as the minor weakness. Finally, Quadrant IV has low performance but high importance. The area of “concentrate here” suggests that any item falls in this quadrant requires immediate attention for improvement and is the major weakness (Wu, 2009).

Therefore, Importance-Performance Analysis provides a useful and easily understandable guide for identifying the most crucial product or service attributes in terms of their need for managerial action, as a means to develop successful marketing programs to achieve advantage over competitors (Abalo et al., 2007).



<p style="text-align: center;">QUADRANT I</p> <p style="text-align: center;">“High Importance/Low Satisfaction”</p> <p style="text-align: center;"><b>“Concentrate Here”</b></p>	<p style="text-align: center;">Quadrant II</p> <p style="text-align: center;">“High Importance/High Satisfaction”</p> <p style="text-align: center;"><b>“Keep Up the Good Work”</b></p>
<p style="text-align: center;">Quadrant III</p> <p style="text-align: center;">“Low Importance/Low Satisfaction?”</p> <p style="text-align: center;"><b>“Low Priority”</b></p>	<p style="text-align: center;">Quadrant IV</p> <p style="text-align: center;">“Low Importance/High Satisfaction”</p> <p style="text-align: center;"><b>“Possible Overkill”</b></p>

Figure 2: Importance Performance Quadrant

## Chapter 4

### ANALYSIS and FINDINGS

As stated earlier, data were collected by means of four sectionsurvey that was distributed to 335 undergraduate and graduate students currently studying at EMU. The response rate was 89.6% because only 324 questionnaires were returned, and24 questionnaires were discarded due to incomplete entries. As such, only 300 questionnaires were usable.

Once all surveys were compiled, means were calculated on all attributes. This was done initially on the entire sample and then by extracting each component of each research question. Statistical Package for the Social Sciences (SPSS) was used to conduct the analyses.

Sixty one percent (184) of respondents were males while thirty nine percent (116) of the respondents were female (see Table 1).

Table 1: Respondent profile by Gender

Gender	Number of Respondents	Percentage Total
Female	116	38.7
Male	184	61.3
Total	300	100

Three percent (8 students) of the respondents were 17 years or younger. Twenty six percent (77 students) of the respondents were between the ages of 18 and 21 years, while thirty nine percent of all respondents (118 students) were between the ages of 22 and 25 years. Twenty eight percent of the students (84 respondents) were between the ages of 26 and 29. Finally, four percent (13 students) of the respondents were 30years old or above (see Table 2).

Table 2: Respondent profile by Age

AGE	Number of Respondents	Percentage total
17 years old and below	8	3
18-21	77	26
22-25	118	39
26-29	84	28
30 years old and older	13	4
Total	300	100

Nationality was broadly grouped into five main categories: Turkish, African, Iranian, CIS and Arab. 17 percent (50) of respondents were Turkish. This group of the respondents includes those students who indicate themselves as Turkish or Cypriot. 24 percent (73 respondents) were African from countries such as Nigeria, Sudan, Zimbabwe and Cameroon. 14 percent (42 respondents) were Iranian. 17 percent (50 respondents) were from CIS countries such as Kazakhstan, Russia, Azerbaijan, Turkmenistan and Kyrgyzstan. Finally, 28 percent (85 respondents) were from Arab

speaking countries such as Egypt, Syria, Saudi Arabia, Irak, Palestine and Morocco (see Table 3).

Table 3: Respondent profile by Nationality

NATIONALITY	Number of Respondents	Percentage Total
TURKISH	50	17
AFRICAN	73	24
IRANIAN	42	14
CIS	50	17
ARAB	85	28
TOTAL	300	100

Regarding the status of education, the vast majority of respondents – 97 percent (292 students) were of full-time study, while only 3 percent (8 students) were of part-time (see Table 4).

Table 4: Respondent profile by Status of study

STATUS	Number of Respondents	Percentage Total
FULL-TIME	292	97
PART-TIME	8	3
TOTAL	300	100

With regards to faculties and schools, 61 respondents (21%) were from the Faculty of Business and Economics. 45 respondents (15%) were from the Engineering Faculty, while 37 respondents (13%) were from the Tourism and Hospitality Faculty. 28 respondents (9%) were from the Medicine Faculty. The faculties of Education and Arts and Science each had 27 respondents (9%). And, finally Architecture, Communication and Media studies and Computing and Technology faculties each had 25 respondents (8%) (see Table 5).

**Table 5: Respondent Profile by Faculty /School**

FACULTY/SCHOOL	Number of Respondents	Percentage Total
ARCHITECTURE	25	8
BUSINESS AND ECONOMICS	61	21
EDUCATION	27	9
TOURISM AND HOSPITALITY	37	13
ARTS AND SCIENCE	27	9
COMMUNICATION AND MEDIA SCIENCE	25	8
ENGINEERING	45	15
COMPUTING AND TECHNOLOGY	25	8
PHARMACY/MEDICINE	28	9
TOTAL	300	100

Sixty two percent of respondents participated in the survey (187 students) are getting their bachelor degree. Thirty five percent are Master students (106 respondents). And, finally, only three percent (7 students) are working on their Ph.Ds (see Table 6).

Table 6: Respondent profile by Level of study

LEVEL OF STUDY	Number of Respondents	Percentage Total
BACHELOR DEGREE	187	62
MASTER DEGREE	106	35
PH. D.	7	3
TOTAL	300	100

Of 300 respondents, 72 students (24%) were currently in their first year of study. 100 respondents (33%) were in the second year of their studies, 49 respondents (16%) were third year students, 52 respondents (17%) were fourth year students, 15 students (6% respondents) were in their fifth year . And, finally, 12 respondents (4%) had chosen “other” year of study (see Table 7).

Table 7: Respondent Profile by Year of Study.

Current year of study	Number of Respondents	Percentage Total
Year 1	72	24
Year 2	100	33
Year 3	49	16

Year 4	52	17
Year 5	15	6
Other	12	4
TOTAL	300	100

#### **4.1 Important higher education attributes.**

In order to examine the most important attribute in choosing the university, means analysis was used. There are 28 attributes listed in the questionnaire. The means ranged between 3.20 and 3.90 (with standard deviation range between 0.99973 and 1.31200 respectively). It is important to note that the Likertscale indicated values of 1 as “very unimportant”, 2 as “unimportant”, 3 as “not applicable”, 4 as “important” and 5 as “very important”. Mean scores for importance for the higher education attributes revealed that for importance of attributes, “Wide provision of various support services to foreign students” had the highest mean score, with a score of 3.90 and standard deviation of 1.08407. On the other hand, “Scheduled lectures being rarely postponed or cancelled” had the lowest mean score for importance with a value of 3.20, and standard deviation of 1.24464(see Table 8).

Attributes with the highest means for importance include: “wide provision of various support services to foreign students”, “provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”, “sincere intention in resolving students problems and concerns”, “provision of professional skills required for good academic performance and for future

employment” and “academics being knowledgeable on students’ subject of study” (see Table 8).

On the other hand, attributes of higher education with lower mean scores for importance include: “employees being approachable and easy to contact”, “fulfilling students’ requirements at the right time”, “willingness of non-academic staff to provide necessary assistance” and “scheduled lectures being rarely postponed or cancelled”(see Table 8).

Table 8: Important attributes for EMU education quality attributes.

HIGHER EDUCATION ATTRIBUTES	N	Mean	Std. Deviation
“Wide provision of various support services to foreign students”	300	3.90	1.08407
“Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	300	3.87	1.06427
“Sincere intention in resolving students problems and concerns”	300	3.87	1.16410
“Provision of professional skills required for good academic performance and for future employment”	300	3.86	1.16441
“Academics being knowledgeable on students’ subject of study”	300	3.86	0.99973
“Good library facilities: sufficient number of available seats and the availability of learning and research materials”	300	3.79	1.25155
“Faculty and other staff are of professional character”	300	3.78	1.30279



“Interesting and easy to understand learning materials”	300	3.76	1.15788
“Money spent on the degree should reflect quality of education service offered”	300	3.74	1.27392
“Convenient campus with accommodation, food and recreation facilities”	300	3.72	1.13397
“Provision of emergency services to foreign students”	300	3.69	1.04825
“Appealing physical appearance of buildings and class rooms”	300	3.65	1.13023
“Willingness to provide academic assistance/help to students”	300	3.64	1.16647
“Good understanding of foreign students’ specific needs”	300	3.64	1.16441
“Staff understand the range of specific challenges facing foreign students”	300	3.63	1.05720
“Use of advanced and modern teaching and IT facilities”	300	3.62	1.31200
“Employees of the institution being polite”	300	3.60	1.22679
“Promoting error-free records and documentations”	300	3.59	1.09231
“Provision of prompt response/feedback to students”	300	3.58	1.21435
“Fulfilling previous commitments/promises to students”	300	3.56	1.13885
“Class sizes being kept to minimum to allow personal attention”	300	3.54	1.13119
“Provision of tailored advice to foreign students upon arrival on matters inside and outside university life”	300	3.53	1.19467
“Fair and consistent assessment of students work”	300	3.51	1.28920

“University opening hours being convenient and well publicized”	300	3.51	1.03605
“Employees being approachable and easy to contact”	300	3.49	1.17235
“Fulfilling students’ requirements at the right time”	300	3.48	1.16934
“Willingness of non-academic staff to provide necessary assistance”	300	3.32	1.15269
“Scheduled lectures being rarely postponed or cancelled”	300	3.20	1.24464

The mean scores for perceived performance (satisfaction) of higher education attributes were compiled. The mean scores ranged between 2.71 and 3.24 (with standard deviations of 0.91926 and 1.30828 respectively). It is important to note that the Likertscale indicated values of 1 as “strongly disagree”, 2 as “disagree”, 3 as “neutral”, 4 as “agree” and 5 as “strongly agree”. The highest score being around 3 indicates that the general performance of the university is relatively low. Factors that are important and affect the choice of higher education institution are not performed well by EMU.

The results also revealed that the highest performance score as perceived by the respondents for the service quality attributes of EMU was “My university provides accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.” with a mean score of 3.24 and a standard deviation of 1.16130.

Other attributes with the highest mean score for performance include: “My university provides accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”, “Staff at my university are willing to provide academic assistance to students when needed” and “Class sizes at EMU are kept to minimum to allow personal attention”.

In contrast, “EMU has appealing physical appearance of buildings and class rooms” had the lowest performance mean score of 2.71 and a standard deviation of 1.30828 (see Table 9). Other attributes of higher education in EMU with the lowest mean scores for perceived performance include the following statements about EMU: “EMU fulfils students’ requirements at the right time “, “I am confident that money I spent on the degree worth the quality of education service offered” and “EMU has appealing physical appearance of buildings and class rooms” (see Table 9).

Table 9: Performance for the EMU education quality attributes.

EMUATTRIBUTES	N	Mean	Std. Deviation
“My university provides accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	300	3.24	1.16130
“Staff at my university are willing to provide academic assistance to students when needed”	300	3.15	1.06251
“Class sizes at EMU are kept to minimum to allow personal attention”	300	3.08	1.17397
“Academics at EMU are knowledgeable on students’ subject of study”	300	3.07	0.94438
“Employees of EMU are approachable and easy to	300	3.06	1.07405

contact”			
“Faculty and other staff of my university are of professional character”	300	3.05	1.08985
“Academics provide fair and consistent assessment of students work”	300	3.03	1.05022
“My university provides interesting and easy to understand learning materials”	300	3.02	0.99813
“My university shows sincere intention in resolving students problems and concerns”	300	3.01	1.20613
“Scheduled lectures at EMU are rarely postponed or cancelled”	300	3.01	1.09414
“EMU provides emergency services to foreign students”	300	2.99	1.06788
“Students are given the professional skills they require for good academic performance and for future employment”	300	2.98	1.10462
“EMU has good library facilities: sufficient number of available seats and the availability of learning and research materials”	300	2.97	1.24812
“My university fulfils its commitments/promises to students”	300	2.94	1.01460
“My university provides prompt response/feedback to students”	300	2.93	1.04524
“Staff at my university understand the range of specific challenges facing foreign students”	300	2.93	0.91926
“Employees of my institution are polite”	300	2.91	1.14464
“Staff at my university understand the specific needs of foreign students”	300	2.91	0.95127

“My university promotes error-free records and documentations”	300	2.86	0.96445
“EMU gives tailored advice to foreign students upon arrival on matters inside and outside university life”	300	2.86	1.03148
“EMU has convenient opening hours that are well publicized”	300	2.85	1.08231
“EMU offers various support services to foreign students”	300	2.81	1.06251
“EMU has convenient campus with accommodation, food and recreation facilities”	300	2.79	1.14259
“EMU has advanced and modern teaching and IT facilities”	300	2.76	0.95244
“Non-academic staff at EMU are willing to provide necessary assistance to students when needed”	300	2.75	1.07689
“EMU fulfils students’ requirements at the right time”	300	2.74	1.05570
“I am confident that money I spent on the degree worth the quality of education service offered”	300	2.72	1.25114
“EMU has appealing physical appearance of buildings and class rooms”	300	2.71	1.30828

The overall grand means for importance and performance attributes of higher education in EMU were also computed. The results revealed grand means of 3.64 for importance and 2.93 for performance of the attributes of higher education in EMU. These grand means are important when constructing the IPA grids, as they are used as medians for the respective axis.

### 4.3 Analysis for Overall Satisfaction with the services provided by EMU.

The mean scores for perceived performance (satisfaction) with the services provided by EMU were computed. The mean scores ranged between 2.63 and 2.91 (with standard deviations of 1.05003 and 1.37798 respectively). It is important to note that the Likertscale indicated values of 1 as “strongly disagree”, 2 as “disagree”, 3 as “neutral”, 4 as “agree” and 5 as “strongly agree”.

The results also revealed that the level of satisfaction and the intention to continue education or recommend the EMU to others are not positive (see Table 10).

Table 10: Mean scores of satisfaction with the services provided by EMU.

EMUATTRIBUTES	N	Mean	Std. Deviation
“My overall opinion of the services provided by EMU is very good”	300	2.63	1.19912
“Overall, I am satisfied with EMU experience”	300	2.83	1.05003
“If I’m going to continue my graduate education I will study at EMU”	300	2.71	1.26672
?I am willing to encourage my friends to study in EMU	300	2.91	1.37798
Overall mean	300	2.77	1.22346

The overall mean for satisfaction with the EMU services and willingness to continue education and recommend the institution is 2.77 that is below the neutral score of

3.00. This figure shows that the overall satisfaction of students with the EMU experience is very low. Low satisfaction leads to dissatisfied customers and dissatisfied customers can't be loyal customers and won't spread good worth-of-mouth.

#### **4.4 Importance - Performance Analysis for EMU higher education attributes.**

Paired t-tests are run to test whether there are any differences between the importance scores and the perceived performance score of higher education attributes. The tests are done for the twenty eight attributes of service quality in higher education. There are statistically significant differences between the importance and perceived performance score of higher education for each of the attributes. In addition, importance scores were higher than the perceived performance score for all the attributes (see Table 11). This analysis showed that for all of the service quality higher education attributes of EMU the level of performance is lower than the level of importance!

The results also revealed that the highest difference between the importance scores and the perceived performance score of higher education attributes was for **“Wide provision of various support services to foreign students”** with a mean difference of 1.09 and a **standard deviation of 1.49848**. Attribute **“Scheduled lectures being rarely postponed or cancelled”** had the lowest difference with the mean difference of 0.19 and a **standard deviation of 1.49558** (see Table 11).

The paired differences between the importance scores and the perceived performance score of higher education attributes were compiled. The differences ranged between

0.19 and 1.09 (with standard deviations of 1.49558 and 1.49848 respectively). Attributes with the highest differences include: “Wide provision of various support services to foreign students”, “Money spent on the degree reflect quality of education service offered” and “Appealing physical appearance of buildings and class rooms”.

In contrast, attributes of higher education with the lowest differences include the following: “Scheduled lectures being rarely postponed or cancelled“, “Employees being approachable and easy to contact” and “Class sizes being kept to minimum to allow personal attention” (see Table 11).

Table 11: Paired differences of higher education service quality attributes

Attribute	Df.	Mean difference	t	Std. deviation	P value (sig.)
“Advanced and modern teaching and IT facilities”(IMP) – “Advanced and modern teaching and IT facilities” (SAT)	299	0.86	9.905	1.50961	.000
“Appealing physical appearance of buildings and class rooms” (IMP) – “Appealing physical appearance of buildings and class rooms” (SAT)	299	0.94	9.600	1.70189	.000
“Good library facilities” (IMP) – “Good library facilities” (SAT)	298	0.82	8.492	1.66173	.000
“Faculty and other staff are of professional character” (IMP) – “Faculty and other staff are of professional character” (SAT)	299	0.73	7.100	1.77269	.000
“Provision of interesting and easy to understand learning materials” (IMP) – “Provision of interesting and easy to understand learning					



materials”(SAT)	299	0.74	8.513	1.50553	.000
“Convenient campus with accommodation, food and recreation facilities” (IMP) – “Convenient campus with accommodation, food and recreation facilities” (SAT)	299	0.93	10.082	1.60337	.000
“Fair and consistent assessment of students work”(IMP)–“Fair and consistent assessment of students work” (SAT)	299	0.49	5.032	1.67506	.000
“Sincere intention in resolving students problems and concerns” (IMP) –“Sincere intention in resolving students problems and concerns” (SAT)	299	0.86	9.122	1.63919	.000
“Fulfilling students’ requirements at the right time” (IMP) –“Fulfilling students’ requirements at the right time” (SAT)	299	0.73	8.394	1.51323	.000
“Scheduled lectures being rarely postponed or cancelled” (IMP) –“Scheduled lectures being rarely postponed or cancelled” (SAT)	299	0.19	2.239	1.49558	.000
“Class sizes being kept to minimum to allow personal attention” (IMP) –“Class sizes being kept to minimum to allow personal attention” (SAT)	299	0.46	4.896	1.61560	.000
“Fulfilling previous commitments/promises to students” (IMP) –“Fulfilling previous commitments/promises to students” (SAT)	299	0.63	7.372	1.47236	.000
“Promotion of error-free records and documentations” (IMP) –“Promotion of error-free records and	298	0.73	8.761	1.43898	.000

documentations” (SAT)					
“Provision of accurate information for educational services” (IMP) –“Provision of accurate information for educational services” (SAT)	299	0.62	7.722	1.39808	.000
“Provision of prompt response/feedback to students” (IMP) –“Provision of prompt response/feedback to students” (SAT)	299	0.65	7.767	1.44954	.000
“Willingness to provide academic assistance to students” (IMP) –“Willingness to provide academic assistance to students” (SAT)	299	0.50	5.659	1.52021	.000
“Willingness of non-academic staff to provide necessary assistance” (IMP) – “Willingness of non-academic staff to provide necessary assistance” (SAT)	299	0.57	6.834	1.45316	.000
“Employees being approachable and easy to contact” (IMP) – “Employees being approachable and easy to contact” (SAT)	299	0.43	4.738	1.55972	.000
“Employees of the institution being polite” (IMP) – “Employees of the institution being polite” (SAT)	299	0.69	7.224	1.64647	.000
“Provision of professional skills” (IMP) –“Provision of professional skills” (SAT)	299	0.89	10.336	1.48588	.000
“Money spent on the degree reflect quality of education service offered” (IMP) – “Money spent on the degree reflect quality of education service offered” (SAT)	299	1.02	9.881	1.78799	.000

“Wide provision of various support services to foreign students” (IMP) – “Wide provision of various support services to foreign students” (SAT)	299	1.09	12.638	1.49848	.000
“Academics being knowledgeable on students’ subject of study” (IMP) – “Academics being knowledgeable on students’ subject of study” (SAT)	299	0.79	10.563	1.29544	.000
“Staff understand the range of specific challenges facing foreign students” (IMP) – “Staff understand the range of specific challenges facing foreign students” (SAT)	299	0.69	9.307	1.29029	.000
“University opening hours being convenient and well publicized” (IMP) – “University opening hours being convenient and well publicized” (SAT)	299	0.66	7.823	1.46873	.000
“Provision of emergency services to foreign students” (IMP) – “Provision of emergency services to foreign students” (SAT)	299	0.70	8.425	1.43230	.000
“Provision of tailored advice to foreign students” (IMP) – “Provision of tailored advice to foreign students” (SAT)	299	0.73	8.136	1.54702	.000
“Good understanding of foreign students’ specific needs” (IMP) – “Good understanding of foreign students’ specific needs” (SAT)	299	0.73	9.009	1.39707	.000

#### **4.5. Tests to identify differences in Importance and Satisfaction based on demographics.**

#### 4.5.1. Differences based on Gender

Independent-samples t-tests were conducted to see whether there were any differences in the attributes of service quality in higher education according to gender. There were only three attributes with statistically significant differences according to gender. Thus, male respondents perceived “appealing physical appearance of buildings and class rooms” more important than female (mean for males 3.83, mean for females 3.38,  $p < 0.01$ ). Male respondents also perceived “fair and consistent assessment of students work” more important than female (mean for males 3.64, mean for females 3.31,  $p < 0.01$ ). And, finally, males perceived “sincere intention in resolving students problems and concerns” more important than females (mean for males 4.00, mean for females 3.67,  $p < 0.05$ ) (see Table 12).

Table 12: T-tests for GENDER Importance

HIGHER EDUCATION ATTRIBUTES	GENDER	N	Mean	P value (sig.)	Std. deviation	Std. error mean
“Appealing physical appearance of buildings and class rooms”	Female	116	3.38	.007	1.20618	.11199
	Male	184	3.83		1.04655	.07715
“Fair and consistent assessment of students work”	Female	116	3.31	.006	1.39822	.12982
	Male	184	3.64		1.20183	.08860
“Sincere intention in resolving students problems and concerns”	Female	116	3.67	.038	1.20705	.11207

	Male	184	4.00		1.12108	.08265
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Independent-samples t-tests also were conducted to see whether there were any differences in the evaluation of received quality provided by EMU according to gender. There was only one attribute with statistically significant differences according to gender. Female respondents more agree that “EMU has convenient opening hours that are well publicized” than male (mean score for females 2.98, for males 2.77,  $p < 0.05$ ) (see Table 13).

Table 13: T-test for GENDER Performance.

EMUATTRIBUTES	GENDER	N	Mean	P value (sig.)	Std. deviation	Std. error mean
“EMU has convenient opening hours that are well publicized”	Female	116	2.98	.035	1.02984	0.9562
	Male	184	2.77		1.10871	.08174

Independent-samples t-tests also were conducted to see whether there were any differences in the general satisfaction with the quality provided by EMU according to gender. It is found that there are no differences between males and females for satisfaction with the EMU experience and the intention to continue further studies here and recommend the institution to others.

#### 4.5.2. Differences based on the Level of study.

Independent-samples t-tests were conducted to see whether there were any differences in the service quality attributes of EMU based on the level of study of the

respondents. Statistically significant differences were found between the perception of the important service quality attributes of EMU undergraduate and graduate students(see Table 14).

Thus, graduate students perceived “Appealing physical appearance of buildings and class rooms” more important than undergraduate students (mean score for graduate 3.71, mean score for undergraduate 3.62,  $p<0.05$ ). Graduate students perceived “Good library facilities: sufficient number of available seats and the availability of learning and research materials” more important than undergraduate students (mean score for graduate 3.89, mean score for undergraduate 3.72,  $p<0.05$ ). Graduate students perceived “Faculty and other staff are of professional character” more important than undergraduate students (mean score for graduate 4.04, mean score for undergraduate 3.63,  $p=0.00$ ). Graduate students perceived “Interesting and easy to understand learning materials” more important than undergraduate students (mean score for graduate 3.90, mean score for undergraduate 3.67,  $p<0.01$ ). Graduate students perceived “Convenient campus with accommodation, food and recreation facilities” more important than undergraduate students (mean score for graduate 3.83, mean score for undergraduate 3.65,  $p<0.01$ ). Graduate students perceived “Fulfilling students’ requirements at the right time” more important than undergraduate students (mean score for graduate 3.60, mean score for undergraduate 3.40,  $p<0.05$ ). Graduate students perceived “Class sizes being kept to minimum to allow personal attention” more important than undergraduate students (mean score for graduate 3.65, mean score for undergraduate 3.47,  $p<0.05$ ). Graduate students perceived “Fulfilling previous commitments/promises to students” more important than undergraduate students (mean score for graduate 3.58, mean score for undergraduate 3.44,  $p<0.05$ ). Graduate students perceived “Provision of accurate

information for educational services” more important than undergraduate students (mean score for graduate 3.66, mean score for undergraduate 3.54,  $p < 0.05$ ). Graduate students perceived “Provision of prompt response/feedback to students” more important than undergraduate students (mean score for graduate 4.03, mean score for undergraduate 3.76,  $p = 0.00$ ). Graduate students perceived “Willingness to provide academic assistance/help to students” more important than undergraduate students (mean score for graduate 3.81, mean score for undergraduate 3.54,  $p = 0.00$ ). Graduate students perceived “Employees being approachable and easy to contact” more important than undergraduate students (mean score for graduate 3.64, mean score for undergraduate 3.40,  $p < 0.05$ ). Graduate students perceived “Provision of professional skills required for good academic performance and for future employment” more important than undergraduate students (mean score for graduate 3.90, mean score for undergraduate 3.84,  $p < 0.05$ ). Graduate students perceived that “Money spent on the degree should reflect quality of education service offered” more important than undergraduate students (mean score for graduate 3.89, mean score for undergraduate 3.66,  $p < 0.05$ ). Graduate students perceived “Wide provision of various support services to foreign students” more important than undergraduate students (mean score for graduate 3.99, mean score for undergraduate 3.86,  $p < 0.05$ ). Graduate students perceived “Academics being knowledgeable on students’ subject of study” more important than undergraduate students (mean score for graduate 4.02, mean score for undergraduate 3.76,  $p < 0.05$ ). Graduate students perceived “University opening hours being convenient and well publicized” more important than undergraduate students (mean score for graduate 3.65, mean score for undergraduate 3.43,  $p < 0.01$ ). Graduate students perceived “Provision of emergency services to foreign students” more important than undergraduate students (mean score for

graduate 3.78, mean score for undergraduate 3.63,  $p < 0.05$ ). Graduate students perceived “Good understanding of foreign students’ specific needs” more important than undergraduate students (mean score for graduate 3.74, mean score for undergraduate 3.57,  $p < 0.01$ ).

Table 14: T-tests for the LEVEL OF STUDY Importance

HIGHER EDUCATION ATTRIBUTES	LEVEL OF STUDY	N	Mean	P value (sig.)	Std. deviation	Std. error mean
“Appealing physical appearance of buildings and class rooms”	Undergraduate	187	3.62	.029	1.19146	.08713
	Graduate	113	3.71		1.02366	.09630
“Good library facilities: sufficient number of available seats and the availability of learning and research materials”	Undergraduate	187	3.72	.038	1.28586	.09403
	Graduate	113	3.89		1.19046	.11199
“Faculty and other staff are of professional character”	Undergraduate	187	3.63	.000	1.39082	.10171
	Graduate	113	4.04		1.10137	.10361
“Interesting and easy to understand learning materials”	Undergraduate	187	3.67	.005	1.22057	.08926
	Graduate	113	3.90		1.01739	.09571
“Convenient campus with accommodation, food and recreation	Undergraduate	187	3.65		1.20574	.08817



facilities”	Graduate	113	3.83	.001	0.99913	.09399
“Fulfilling students’ requirements at the right time”	Undergraduate	187	3.40	.034	1.21576	.08890
	Graduate	113	3.60		1.08183	.10177
“Class sizes being kept to minimum to allow personal attention”	Undergraduate	187	3.47	.034	1.18350	.08655
	Graduate	113	3.65		1.03311	.09719
“Fulfilling previous commitments/promises to students”	Undergraduate	187	3.44	.029	1.21148	.11248
	Graduate	113	3.58		1.09378	.08063
“Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	Undergraduate	187	3.54	.004	1.12271	.08210
	Graduate	113	3.66		1.04035	.09787
“Provision of prompt response/feedback to students”	Undergraduate	187	3.76	.000	1.13034	.08266
	Graduate	113	4.03		0.92514	.08703
“Willingness to provide academic assistance/help to students”	Undergraduate	187	3.54	.000	1.25392	.09170

	Graduate	113	3.81		0.98696	.09285
“Employees being approachable and easy to contact”	Undergraduate	187	3.40	.017	1.21972	.08919
	Graduate	113	3.64		1.07788	.10140
“Provision of professional skills required for good academic performance and for future employment”	Undergraduate	187	3.84	.047	1.21192	.08862
	Graduate	113	3.90		1.08533	.10210
“Money spent on the degree should reflect quality of education service offered”	Undergraduate	187	3.66	.012	1.32002	.09653
	Graduate	113	3.89		1.18587	.11156
“Wide provision of various support services to foreign students”	Undergraduate	187	3.86	.039	1.12427	.08221
	Graduate	113	3.99		1.01327	.09532
“Academics being knowledgeable on students’ subject of study”	Undergraduate	187	3.76	.042	1.03220	.07548
	Graduate	113	4.02		0.92565	.08708
“University opening hours being convenient and well publicized”	Undergraduate	187	3.43	.001	1.10209	.08059
	Graduate	113	3.65		0.90554	.08519

“Provision of emergency services to foreign students”	Undergraduate	187	3.63	.024	1.10117	.08053
	Graduate	113	3.78		0.95183	0.8954
“Good understanding of foreign students’ specific needs”	Undergraduate	187	3.57	.009	1.23518	.09033
	Graduate	113	3.74		1.03319	.09719

Independent-samples t-tests also were conducted to see whether there were any differences in the performance of EMU for each service quality attribute as perceived by graduate and undergraduate students. It is found that there are differences between undergraduate and graduate students’ perceptions for EMU service quality attributes.

Undergraduate students are more satisfied with EMU’s library facilities than graduate students (mean score for undergraduate 3.11, mean score for graduate 2.75,  $p < 0.05$ ). Graduate students are more satisfied with EMU’ ability to fulfill “students’ requirements at the right time” than undergraduate students (mean score for graduate 2.81, mean score for undergraduate 2.70,  $p < 0.05$ ). Graduate students are more satisfied with EMU’s ability to fulfill “its commitments/promises to students” than undergraduate students (mean score for graduate 3.04, mean score for undergraduate 2.87,  $p < 0.05$ ). Graduate students are more satisfied with EMU’s ability to provide “accurate information for educational services” than undergraduate students (mean score for graduate 3.34, mean score for undergraduate 2.19,  $p < 0.05$ ). Graduate students are more confident that “they are given the professional skills they require

for good academic performance and for future employment” than undergraduate students (mean score for graduate 3.10, mean score for undergraduate 2.90,  $p=0.00$ ). Graduate students are more satisfied with the EMU’s opening hours and awareness of it than undergraduate students (mean score for graduate 2.95, mean score for undergraduate 2.79,  $p=0.01$ ). Graduate students are more satisfied with the EMU’s “tailored advice to foreign students upon arrival on matters inside and outside university life” than undergraduate students (mean score for graduate 2.95, mean score for undergraduate 2.81,  $p=0.00$ ). Undergraduate students are more satisfied with EMU’s staff who “understands the specific needs of foreign students” than graduate students (mean score for undergraduate 2.93, mean score for graduate 2.88,  $p<0.05$ ) (see Tale 15).

Table 15: T-test for the LEVEL OF STUDY Performance.

EMUATTRIBUTES	LEVEL OF STUDY	N	Mean	P value (sig.)	Std. deviation	Std. error mean
“EMU has good library facilities: sufficient number of available seats and the availability of learning and research materials”	Undergraduate	187	3.11	.039	1.20052	.08803
	Graduate	113	2.75		1.29925	.12222
“EMU fulfils students’ requirements at the right time”	Undergraduate	187	2.70	.002	1.11979	.08189
	Graduate	113	2.81		0.94064	.08849
“My university fulfils its commitments/promises to students”	Undergraduate	187	2.87	.049	1.04963	.07676

	Graduate	113	3.04		0.94858	.08924
“My university provides accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	Undergraduate	187	3.19	.044	1.22354	.08947
	Graduate	113	3.34		1.04890	.09867
“Students are given the professional skills they require for good academic performance and for future employment”	Undergraduate	187	2.90	.000	1.18291	.08650
	Graduate	113	3.10		0.95398	.08974
“EMU has convenient opening hours that are well publicized”	Undergraduate	187	2.79	.001	1.13797	0.8322
	Graduate	113	2.95		0.98053	.09224
“EMU gives tailored advice to foreign students upon arrival on matters inside and outside university life”	Undergraduate	187	2.81	.000	1.10490	.08080
	Graduate	113	2.95		0.89483	.08418
“Staff at my university understand the specific needs of foreign students”	Undergraduate	187	2.93	.002	1.02678	.07509
	Graduate	113	2.88		0.81430	.07660

Independent-samples t-tests also were conducted to see whether there were any differences in the general satisfaction with the quality provided by EMU according to

the level of study. But no statistically significant differences were found between undergraduate and graduate students for satisfaction with the EMU experience and the intention to continue further studies here and recommend the institution to others. Only overall opinion of the services provided by EMU showed not essential difference between graduate and undergraduate students with the mean scores 2.65 and 2.68, respectively.

#### **4.5.3. Differences based on Nationality**

Analysis of variance (ANOVA) was conducted to explore whether there are any differences on service quality attributes of EMU among different nationalities. Respondents were divided into five groups; Group 1: Turkish; Group 2: African; Group 3: Iranian; Group 4: CIS; Group 5: Arab. However, no statistically significant differences were identified.

Analysis of variance (ANOVA) was also conducted to explore the impact of nationality on 28 EMU service quality attributes. Respondents were divided into five groups; Group 1: Turkish; Group 2: African; Group 3: Iranian; Group 4: CIS; Group 5: Arab (see Table 16). It is found that there are differences based on nationalities on five service quality attributes ( $p < 0.05$ ).

1. “Academics provide fair and consistent assessment of students work” – the highest mean score of 3.30 is given by African students, while the lowest mean score of 2.69 is given by Iranian students.

2. “Scheduled lectures at EMU are rarely postponed or cancelled” - the highest mean score of 3.30 is given by CIS students, while the lowest mean score of 2.57 is given by Iranian students.

3. “Class sizes at EMU are kept to minimum to allow personal attention” - the highest mean score of 3.24 is given by Arab students, while the lowest mean score of 2.57 is given by Iranian students.

4. “Employees of EMU are approachable and easy to contact” - Turkish and CIS students give the highest mean score of 3.22, while the lowest mean score of 2.60 is given by Iranian students.

5. “EMU has convenient opening hours that are well publicized” - the highest mean score of 3.15 is given by African students, while the lowest mean score of 2.56 is given by Turkish students.

ANOVA test for performance of the EMU depending on the students nationality revealed that Iranian students perceive the service quality of the university worst of all other nationalities.

Table 16: Differences on Performance based on NATIONALITY

EMUATTRIBUTES	GENDER	N	Mean	P value (sig.)	Std. deviation	Std. error mean
“Academics provide fair and consistent assessment of students work”	Turkish	50	2.96	.037	1.02936	.14557
	African	73	3.30		0.98157	.11488
	Iranian	42	2.69		1.17884	.18190

	CIS	50	3.10		0.97416	.13777
	Arab	85	2.95		1.05679	.11463
“Scheduled lectures at EMU are rarely postponed or cancelled”	Turkish	50	2.82		0.94091	.13306
	African	73	3.11		1.14942	.13453
	Iranian	42	2.57	.011	1.08522	.16745
	CIS	50	3.30		0.99488	.14070
	Arab	85	3.09		1.12993	.12256
“Class sizes at EMU are kept to minimum to allow personal attention”	Turkish	50	3.06		1.18511	.16760
	African	73	3.19		1.04957	.12284
	Iranian	42	2.57	.038	1.29054	.19914



	CIS	50	3.10		1.16496	.16475
	Arab	85	3.24		1.17156	.12707
	Turkish	50	3.22		1.09339	.15463
	African	73	3.14		1.10949	.12986
	Iranian	42	2.60	.032	0.96423	.14878
	CIS	50	3.22		0.99571	.14081
	Arab	85	3.04		1.08504	.11769
“Employees of EMU are approachable and easy to contact”	Turkish	50	2.56		0.99304	.14044
	African	73	3.15		1.00928	.11813
“EMU has convenient opening hours that are well publicized”						

	Iranian	42	2.67	.023	1.14053	.17599
	CIS	50	2.96		1.14214	.16152
	Arab	85	2.79		1.08116	.11727

Analysis of variance (ANOVA) was also conducted to explore the impact of nationality on the overall satisfaction with the services provided by EMU and their intention to continue their education here and recommend the institution for others.

Statistically significant differences were found only for overall opinion of the services provided by EMU. Although students from all the countries do not perceive the quality of school being high, there were some differences in mean scores. The lowest mean score belonged to the Iranian students (2.29). And African students have the highest level of satisfaction among all the nationalities (3.04) though the satisfaction is still low (see Table 17).

Table 17: ANOVA test for NATIONALITY Satisfaction

STATEMENTS ABOUT EMU	NATIONALITY	N	Mean	P value (sig.)	Std. deviation	Std. error mean
“My overall opinion of the services provided by EMU is very good”	Turkish	50	2.72		1.10730	.15660

	African	73	3.04		1.11104	.13004
	Iranian	42	2.29	.005	1.08843	.16795
	CIS	50	2.52		1.32849	.18788
	Arab	85	2.46		1.22039	.13273

## 4.6 Importance – Performance Analysis (IPA)

### 4.6.1 Interpretation of IPA scores for all respondents.

Respondents reported importance and perceived performance for each higher education attribute (see Appendix A). Quadrants are assigned based on the intersection of grand mean importance (3.64) and performance (2.93) scores. A discrepancy score is then calculated to measure the gap for each attribute between the importance and perceived performance. Table 21 shows the mean scores for importance and performance of all the attributes in this study as well as the respective quadrant in which they fall. Negative scores indicate that given the importance of the item, the mean performance is potentially problematic. On the other hand, positive scores reveal a respondent is potentially satisfied and such is classified in the overkill zone.

Table 18 lists the attributes plotted.

Table 18: Higher education attributes and discrepancy scores

N	HIGHER EDUCATION ATTRIBUTES	IMP	SAT	Quadrant	DISCREP
1	“Use of advanced and modern teaching and IT facilities”	3.62	2.76	Low priority	-0.86
2	“Appealing physical appearance of buildings and class rooms”	3.65	2.71	Concentrate here	-0.94
3	“Good library facilities: sufficient number of available seats and the availability of learning and research materials”	3.79	2.97	Keep up the good work	-0.82
4	“Faculty and other staff are of professional character”	3.78	3.05	Keep up the good work	-0.73
5	“Interesting and easy to understand learning materials”	3.76	3.02	Keep up the good work	-0.74
6	“Convenient campus with accommodation, food and recreation facilities”	3.72	2.79	Concentrate here	-0.93
7	“Fair and consistent assessment of students work”	3.51	3.03	Possible overkill	-0.48
8	“Sincere intention in resolving students problems and concerns”	3.87	3.01	Keep up the good work	-0.86
9	“Fulfilling students’ requirements at the right time”	3.48	2.74	Low priority	-0.74
10	“Scheduled lectures being rarely postponed or cancelled”	3.20	3.01	Possible overkill	-0.19
11	“Class sizes being kept to minimum to allow personal attention”	3.54	3.08	Possible overkill	-0.46
12	“Fulfilling previous commitments/promises to students”	3.56	2.94	Possible overkill	-0.62

13	“Promoting error-free records and documentations”	3.59	2.86	Low priority	-0.73
14	“Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	3.87	3.24	Keep up the good work	-0.63
15	“Provision of prompt response/feedback to students”	3.58	2.93	Low priority	-0.65
16	“Willingness to provide academic assistance/help to students”	3.64	3.15	Keep up the good work	-0.49
17	“Willingness of non-academic staff to provide necessary assistance”	3.32	2.75	Low priority	-0.57
18	“Employees being approachable and easy to contact”	3.49	3.06	Possible overkill	-0.43
19	“Employees of the institution being polite”	3.60	2.91	Low priority	-0.69
20	“Provision of professional skills required for good academic performance and for future employment”	3.86	2.98	Keep up the good work	-0.88
21	“Money spent on the degree should reflect quality of education service offered”	3.74	2.72	Concentrate here	-1.02
22	“Wide provision of various support services to foreign students”	3.90	2.81	Concentrate here	-1.09
23	“Academics being knowledgeable on students’ subject of study”	3.86	3.07	Keep up the good work	-0.79
24	“Staff understand the range of specific challenges facing foreign students”	3.63	2.93	Low priority	-0.70
25	“University opening hours being	3.51	2.85	Low	-0.66

	convenient and well publicized”			priority	
26	“Provision of emergency services to foreign students”	3.69	2.99	Keep up the good work	-0.70
27	“Provision of tailored advice to foreign students upon arrival on matters inside and outside university life”	3.53	2.86	Low priority	-0.73
28	“Good understanding of foreign students’ specific needs”	3.64	2.91	Concentrate here	-0.73

#### 4.6.2 IPA Quadrant Analysis

All attributes in the study have been plotted on the grid (see Fig 2). The mean score of importance and perceived performance for each research question has been plotted on the above graph. Cut-off points for the graph are based on the overall mean scores for both importance and perceived performance. As it can be seen in figure2, there are four quadrants named “Concentrate here”, “Keep up the good work”, “Low Priority”, and “Possible Overkill”.

##### 4.6.2.1 Quadrant A: “Concentrate here”.

This quadrant embeds all the attributes that have high levels of importance but low levels of perceived performance. Attributes in this quadrant include “appealing physical appearance of buildings and class rooms”, “convenient campus”, “money spent on the degree”, “wide provision of various support services to foreign students” and “good understanding of foreign students’ specific needs”.

##### 4.6.2.2 Quadrant B: “Keep up the good work”.

Attributes that portray a high level of performance and a high level of importance fall in this quadrant. Both importance and performance of attributes in this quadrant are

all high. Attributes such as good library facilities, “faculty and other staff are of professional character”, “interesting and easy to understand learning materials”, “sincere intention in resolving students problems and concerns”, “provision of accurate information for educational services”, “willingness to provide academic assistance to students”, “provision of professional skills required for good academic performance and future employment”, “academics being knowledgeable on students’ subject of study” and “provision of emergency services to foreign students” were placed in this quadrant.

#### **4.6.2.3 Quadrant C: “Low Priority”.**

This attribute embodies all attributes that bear little importance and whose perceived performance by respondents is equally low. Attributes which fell in this quadrant included “use of advanced and modern teaching and IT facilities”, “fulfilling students’ requirements at the right time”, “promotion of error-free records and documentations”, “provision of prompt response and feedback to students”, “willingness of non-academic staff to provide necessary assistance”, “employees of institution being polite”, “staff who understands the range of specific challenges facing foreign students”, “university opening hours being convenient and well-publicized” and “provision of tailored advice to foreign students upon arrival on matters inside and outside university life”.

#### **4.6.2.4 Quadrant D: “Possible Overkill”.**

Overkill pertains to those attributes that need to be de-emphasized. This quadrant needs the least managerial attention. Attributes in this quadrant portray low importance. However, perceived performance in relation to this quadrant is very high. Attributes in this quadrant include “fair and consistent assessment of students work”, “scheduled lectures being rarely postponed or cancelled”, “class sizes being

kept to minimum to allow personal attention”, “fulfilling previous commitments and promises to students” and “employees being approachable and easy to contact”.

Figure 23 illustrates the results of the grids constructed for this study.

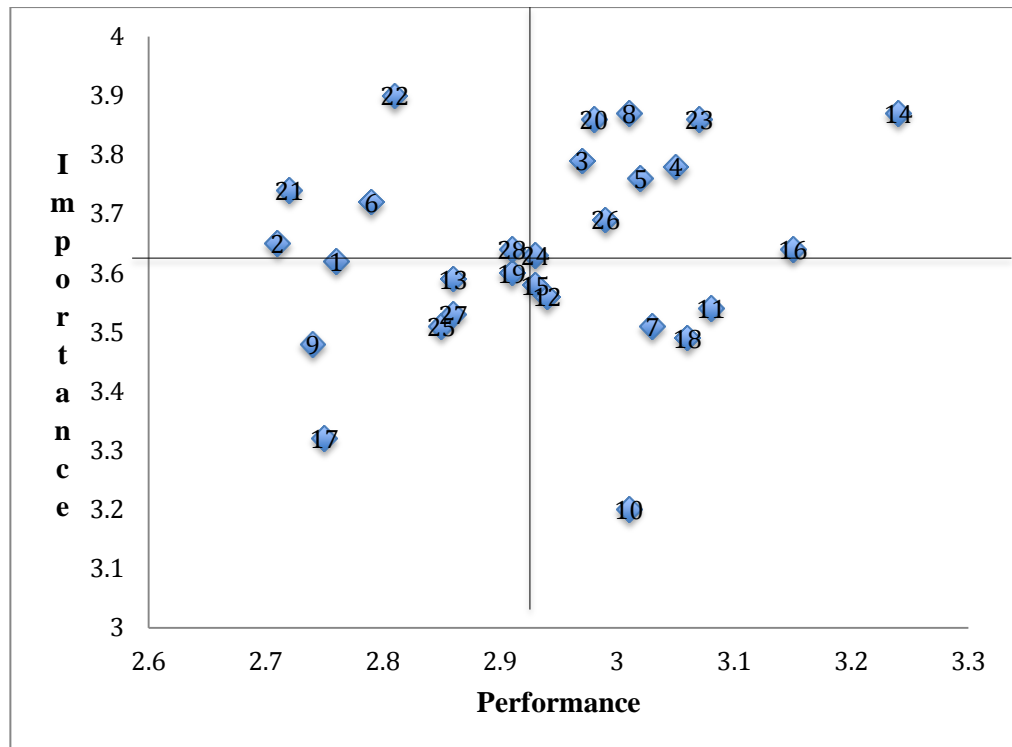


Figure 3: Importance-performance analysis

#### 4.6.3 IPA Quadrant Analysis based on Gender

Further analyses are conducted. IPA grids for gender are also generated. All attributes in the study have been plotted on the grids divided based on gender (see Fig 4 and Fig. 5). Table 19 shows the mean scores for importance and performance of all the attributes for female respondents as well as the respective quadrant in which they fall.

Table 19: Higher education attributes and discrepancy scores for FEMALE respondents

N	HIGHER EDUCATION ATTRIBUTES	IMP	SAT	Quadrant	DISCREP



1	“Use of advanced and modern teaching and IT facilities”	3.44	2.77	Low priority	-0.67
2	“Appealing physical appearance of buildings and class rooms”	3.38	2.61	Low priority	-0.77
3	“Good library facilities: sufficient number of available seats and the availability of learning and research materials”	3.71	2.89	Concentrate here	-0.82
4	“Faculty and other staff are of professional character”	3.71	3.03	Keep up the good work	-0.68
5	“Interesting and easy to understand learning materials”	3.74	3.02	Keep up the good work	-0.72
6	“Convenient campus with accommodation, food and recreation facilities”	3.78	2.84	Concentrate here	-0.94
7	“Fair and consistent assessment of students work”	3.31	3.17	Possible overkill	-0.14
8	“Sincere intention in resolving students problems and concerns”	3.67	2.90	Concentrate here	-0.77
9	“Fulfilling students’ requirements at the right time”	3.43	2.60	Low priority	-0.83
10	“Scheduled lectures being rarely postponed or cancelled”	3.16	2.92	Low priority	-0.32
11	“Class sizes being kept to minimum to allow personal attention”	3.55	3.09	Possible overkill	-0.46
12	“Fulfilling previous commitments/promises to students”	3.54	2.88	Low priority	-0.66
13	“Promoting error-free records and documentations”	3.44	2.83	Low priority	-0.61

14	“Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	3.84	3.30	Keep up the good work	-0.54
15	“Provision of prompt response/feedback to students”	3.57	2.83	Low priority	-0.74
16	“Willingness to provide academic assistance/help to students”	3.65	3.06	Keep up the good work	-0.59
17	“Willingness of non-academic staff to provide necessary assistance”	3.25	2.67	Low priority	-0.58
18	“Employees being approachable and easy to contact”	3.53	3.00	Possible overkill	-0.53
19	“Employees of the institution being polite”	3.59	2.84	Low priority	-0.69
20	“Provision of professional skills required for good academic performance and for future employment”	3.74	2.98	Keep up the good work	-0.75
21	“Money spent on the degree should reflect quality of education service offered”	3.72	2.61	Concentrate here	-1.11
22	“Wide provision of various support services to foreign students”	3.82	2.78	Concentrate here	-1.04
23	“Academics being knowledgeable on students’ subject of study”	3.77	2.97	Keep up the good work	-0.80
24	“Staff understand the range of specific challenges facing foreign students”	3.70	2.88	Concentrate here	-0.82
25	“University opening hours being convenient and well publicized”	3.43	2.98	Possible overkill	-0.45
26	“Provision of emergency services to	3.60	2.97	Possible	-0.763

	foreign students”			overkill	
27	“Provision of tailored advice to foreign students upon arrival on matters inside and outside university life”	3.57	2.82	Low priority	-0.75
28	“Good understanding of foreign students’ specific needs”	3.72	2.86	Concentrate here	-0.86

#### **4.6.3.1 Quadrant A: “Concentrate here”.**

This quadrant embeds all the attributes that have high levels of importance but low levels of perceived performance. Attributes in this quadrant for females include good library facilities, convenient campus, “sincere intention in resolving students problems and concerns”, “money spent on the degree”, “wide provision of various support services for foreign students”, “staff who understands the range of specific challenges facing foreign students” and “good understanding of foreign students’ specific needs”.

#### **4.6.3.2 Quadrant B: “Keep up the good work”.**

Attributes that portray a high level of performance and a high level of importance fall in this quadrant. Both importance and performance of attributes in this quadrant are all high. Attributes such as “faculty and other staff are of professional character”, “interesting and easy to understand learning materials”, “provision of accurate information for educational services”, “willingness to provide academic assistance”, “provision of professional skills required for good academic performance and for future employment” and, finally, “academics being knowledgeable on students’ subject of study” were placed in this quadrant by females.

#### **4.6.3.3 Quadrant C: “Low Priority”.**

This attribute embodies all attributes that bear little importance and whose perceived performance by respondents is equally low. Attributes, which fell in this quadrant in females' opinion, included "use of advanced and modern teaching and IT facilities", "appealing physical appearance of buildings and class rooms", "fulfilling students' requirements at the right time", "scheduled lectures being rarely postponed or cancelled", "fulfilling previous commitments to students", "promotion of error-free records and documentations", "provision of prompt response to students", "willingness of non-academic staff to provide necessary assistance", "employees of the institution being polite" and "provision of tailored advice to foreign students upon arrival on matters inside and outside the university life".

#### **4.6.3.4 Quadrant D: "Possible Overkill".**

Overkill pertains to those attributes that need to be de-emphasized. This quadrant needs the least managerial attention. Attributes in this quadrant portray low importance. However, perceived performance in relation to this quadrant is very high. Females included such attributes as "fair and consistent assessment of students work", "class sizes being kept to minimum to allow personal attention", "employees being approachable and easy to contact", "university opening hours being convenient and well publicized" and "provision of emergency services to foreign students" in this quadrant.

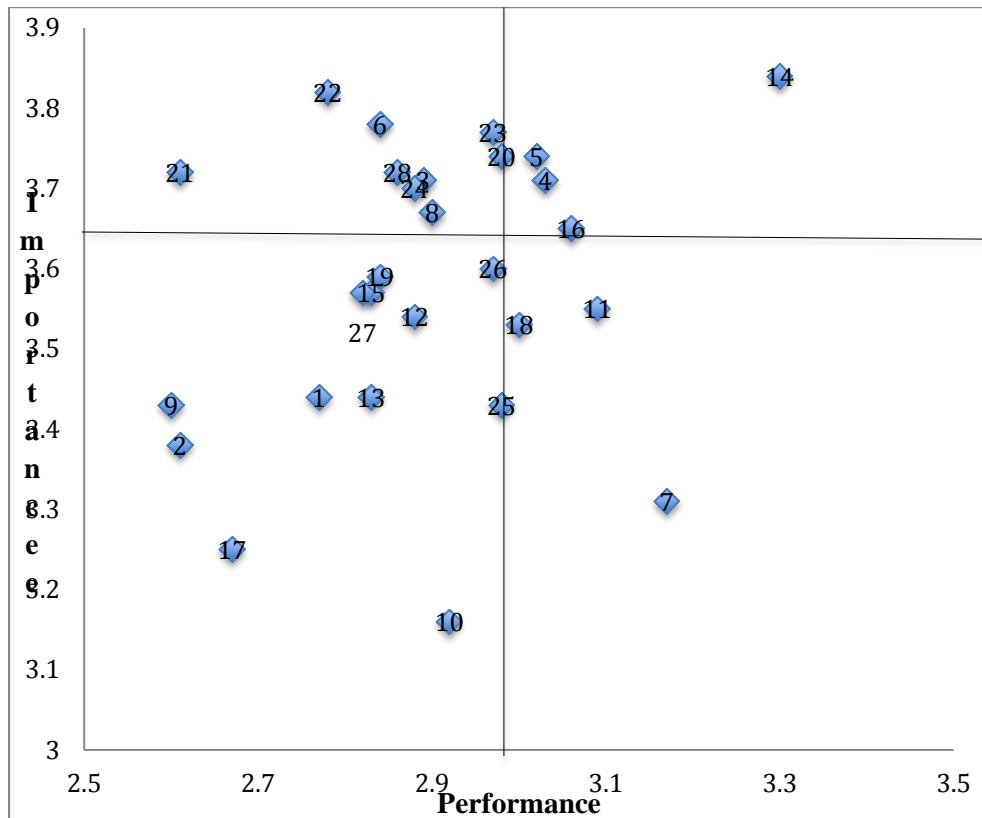


Figure 4: Importance-Performance Analysis for FEMALE respondents.

Table 20 shows the mean scores for importance and performance of all the attributes for male respondents as well as the respective quadrant in which they fall.

Table 20: Higher education attributes and discrepancy scores for MALE respondents

N	HIGHER EDUCATION ATTRIBUTES	IMP	SAT	Quadrant	DISCREP
1	“Use of advanced and modern teaching and IT facilities”	3.73	2.75	Concentrate here	-0.98
2	“Appealing physical appearance of buildings and class rooms”	3.83	2.77	Concentrate here	-1.06
3	“Good library facilities: sufficient number of available seats and the availability of learning and research materials”	3.84	3.03	Keep up the good work	-0.81

4	“Faculty and other staff are of professional character”	3.83	3.07	Keep up the good work	-0.76
5	“Interesting and easy to understand learning materials”	3.77	3.02	Keep up the good work	-0.75
6	“Convenient campus with accommodation, food and recreation facilities”	3.68	2.76	Concentrate here	-0.92
7	“Fair and consistent assessment of students work”	3.64	2.94	Keep up the good work	-0.70
8	“Sincere intention in resolving students problems and concerns”	4.00	3.08	Keep up the good work	-0.92
9	“Fulfilling students’ requirements at the right time”	3.50	2.83	Low priority	-0.67
10	“Scheduled lectures being rarely postponed or cancelled”	3.23	3.07	Possible overkill	-0.16
11	“Class sizes being kept to minimum to allow personal attention”	3.53	3.07	Possible overkill	-0.46
12	“Fulfilling previous commitments/promises to students”	3.58	2.97	Possible overkill	-0.61
13	“Promoting error-free records and documentations”	3.68	2.89	Concentrate here	-0.79
14	“Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	3.89	3.21	Keep up the good work	-0.68
15	“Provision of prompt response/feedback to students”	3.59	3.00	Possible overkill	-0.59
16	“Willingness to provide academic assistance/help to students”	3.64	3.20	Keep up the good work	-0.44

17	“Willingness of non-academic staff to provide necessary assistance”	3.36	2.79	Low priority	-0.57
18	“Employees being approachable and easy to contact”	3.46	3.10	Possible overkill	-0.36
19	“Employees of the institution being polite”	3.61	2.96	Possible overkill	-0.65
20	“Provision of professional skills required for good academic performance and for future employment”	3.94	2.97	Keep up the good work	-0.97
21	“Money spent on the degree should reflect quality of education service offered”	3.76	2.79	Concentrate here	-0.97
22	“Wide provision of various support services to foreign students”	3.96	2.83	Concentrate here	-1.13
23	“Academics being knowledgeable on students’ subject of study”	3.91	3.13	Keep up the good work	-0.78
24	“Staff understand the range of specific challenges facing foreign students”	3.58	2.97	Possible overkill	-0.61
25	“University opening hours being convenient and well publicized”	3.57	2.77	Low priority	-0.80
26	“Provision of emergency services to foreign students”	3.74	3.01	Keep up the good work	-0.73
27	“Provision of tailored advice to foreign students upon arrival on matters inside and outside university life”	3.60	2.89	Low priority	-0.71
28	“Good understanding of foreign students’ specific needs”	3.58	2.94	Possible overkill	-0.64

#### **4.6.3.5 Quadrant A: “Concentrate here”.**

Attributes in this quadrant for males include “use of advanced and modern teaching and IT facilities”, “appealing physical appearance of buildings and class rooms”, convenient campus, “promotion of error-free records and documentations”, “money spent on the degree” and “wide provision of various support services to foreign students”.

#### **4.6.3.6 Quadrant B: “Keep up the good work”.**

Attributes such as good library facilities, “faculty and other staff are of professional character”, “interesting and easy to understand learning materials”, “fair and consistent assessment of students work”, “sincere intention in resolving students problems and concerns”, “provision of accurate information for educational services”, “willingness to provide academic assistance to students”, “provision of professional skills required for good academic performance and for future employment”, “academics being knowledgeable on students’ subject of study” and “provision of emergency services for foreign students” were placed in this quadrant for males.

#### **4.6.3.7 Quadrant C: “Low Priority”.**

Attributes, which fell in this quadrant in males’ opinion, included “fulfilling students’ requirements at the right time”, “willingness of non-academic staff to provide necessary assistance”, “university opening hours being convenient and well publicized” and “provision of tailored advice to foreign students upon arrival on matters inside and outside the university life”.

#### **4.6.3.8 Quadrant D: “Possible Overkill”.**

Males included such attributes as “scheduled lectures being rarely postponed or cancelled”, “class sizes being kept to minimum to allow personal attention”,



“fulfilling previous commitments to students”, “provision of prompt response to students”, “employees being approachable and easy to contact”, “employees of the institution being polite”, “staff who understands the range of specific challenges facing foreign students” and “good understanding of foreign students’ specific needs” in this quadrant.

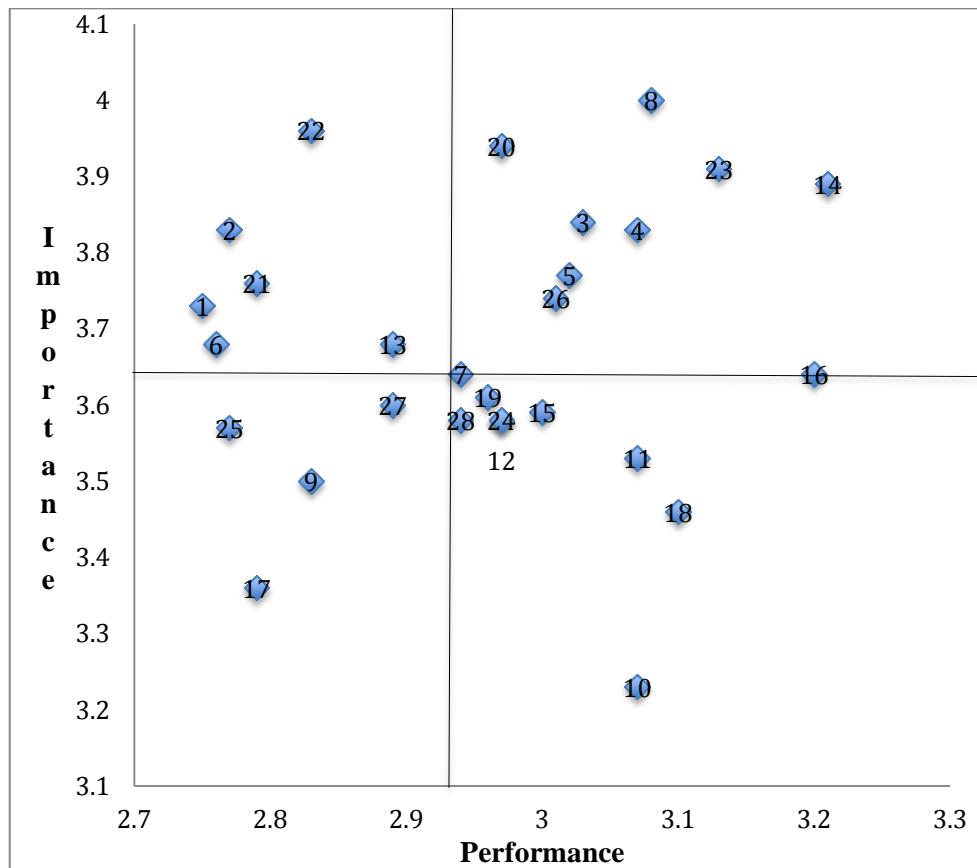


Figure 5: Importance-Performance Analysis for MALE respondents.

The differences based on gender were revealed for half of the all of higher education attributes. These fourteen attributes perceived differently by male and female respondents are: “use of advanced and modern teaching and IT facilities”, “appealing physical appearance of buildings and class rooms”, “good library facilities”, “fair and consistent assessment of students work”, “sincere intention in resolving students problems and concerns”, “scheduled lectures being rarely postponed or cancelled”,

“fulfilling previous commitments to students”, “promoting error-free records and documentations”, “provision of prompt response to students”, “employees of the institution being polite”, “staff understand the range of specific challenges facing foreign students”, “university opening hours being convenient and well publicized”, “provision of emergency services to foreign students” and, finally, “good understanding of foreign students’ specific needs”.

It is worth noting that based on gender, respondents perceive two of the attributes completely differently. So, female respondents place attributes “staff understand the range of specific challenges facing foreign students” and “good understanding of foreign students’ specific needs” in concentrate here quadrant, while male respondents place the same attributes to possible overkill quadrant.

#### **4.6.4 IPA Quadrant Analysis based on the Level of study**

Another grid analysis is used to explore the perceptions of graduate and undergraduate students. All attributes in the study have been plotted on the grids divided based on the level of study (see Fig 6 and Fig. 7). The mean score of importance and perceived performance for each research question has been plotted on the above graph. Cut-off points for the graph are based on the overall mean scores for both importance and perceived performance. As it can be seen in figures, there are four quadrants named “Concentrate here”, “keep up the good work”, “Low Priority”, and “Possible Overkill”.

Table 21 shows the mean scores for importance and performance of all the attributes for undergraduate students as well as the respective quadrant in which they fall.

Table 21: Higher education attributes and discrepancy scores for UNDERGRADUATE students

N	HIGHER EDUCATION ATTRIBUTES	IMP	SAT	Quadrant	DISCREP
1	“Use of advanced and modern teaching and IT facilities”	3.61	2.81	Low priority	-0.80
2	“Appealing physical appearance of buildings and class rooms”	3.62	2.77	Low priority	-0.85
3	“Good library facilities: sufficient number of available seats and the availability of learning and research materials”	3.72	3.11	Keep up the good work	-0.61
4	“Faculty and other staff are of professional character”	3.63	3.07	Possible overkill	-0.56
5	“Interesting and easy to understand learning materials”	3.67	3.04	Keep up the good work	-0.63
6	“Convenient campus with accommodation, food and recreation facilities”	3.65	2.78	Concentrate here	-0.87
7	“Fair and consistent assessment of students work”	3.54	2.93	Low priority	-0.61
8	“Sincere intention in resolving students problems and concerns”	3.86	3.03	Keep up the good work	-0.83
9	“Fulfilling students’ requirements at the right time”	3.40	2.70	Low priority	-0.70
10	“Scheduled lectures being rarely postponed or cancelled”	3.22	2.87	Low priority	-0.35
11	“Class sizes being kept to minimum to allow personal attention”	3.47	3.07	Possible overkill	-0.40
12	“Fulfilling previous	3.44	2.87	Low	-0.57

	commitments/promises to students”			priority	
13	“Promoting error-free records and documentations”	3.44	2.82	Low priority	-0.62
14	“Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	3.54	3.19	Possible overkill	-0.35
15	“Provision of prompt response/feedback to students”	3.76	2.96	Keep up the good work	-0.80
16	“Willingness to provide academic assistance/help to students”	3.54	3.16	Possible overkill	-0.38
17	“Willingness of non-academic staff to provide necessary assistance”	3.32	2.71	Low priority	-0.61
18	“Employees being approachable and easy to contact”	3.40	2.98	Possible overkill	-0.42
19	“Employees of the institution being polite”	3.53	2.84	Low priority	-0.69
20	“Provision of professional skills required for good academic performance and for future employment”	3.84	2.90	Concentrate here	-0.94
21	“Money spent on the degree should reflect quality of education service offered”	3.66	2.76	Concentrate here	-0.90
22	“Wide provision of various support services to foreign students”	3.86	2.75	Concentrate here	-1.11
23	“Academics being knowledgeable on students’ subject of study”	3.76	3.03	Keep up the good work	-0.73
24	“Staff understand the range of specific challenges facing foreign students”	3.56	2.88	Low priority	-0.68

25	“University opening hours being convenient and well publicized”	3.43	2.79	Low priority	-0.64
26	“Provision of emergency services to foreign students”	3.63	2.95	Possible overkill	-0.68
27	“Provision of tailored advice to foreign students upon arrival on matters inside and outside university life”	3.60	2.81	Low priority	-0.79
28	“Good understanding of foreign students’ specific needs”	3.57	2.93	Low priority	-0.64

#### **4.6.4.1 Quadrant A: “Concentrate here”.**

This quadrant embeds all the attributes that have high levels of importance but low levels of perceived performance. Attributes in this quadrant for undergraduate students include convenient campus, “provision of professional skills required for good academic performance and for future employment”, “money spent on the degree” and “wide provision of various support services for foreign students”.

#### **4.6.4.2 Quadrant B: “Keep up the good work”.**

Attributes that portray a high level of performance and a high level of importance fall in this quadrant. Both importance and performance of attributes in this quadrant are all high. Attributes such as good library facilities, “interesting and easy to understand learning materials”, “sincere intention in resolving students problems and concerns”, “provision of prompt response to students” and, finally, “academics being knowledgeable on students’ subject of study” were placed in this quadrant by undergraduate students.

#### **4.6.4.3 Quadrant C: “Low Priority”.**

This attribute embodies all attributes that bear little importance and whose perceived performance by respondents is equally low. Attributes, which fell in this quadrant in undergraduate students' opinion, included "use of advanced and modern teaching and IT facilities", "appealing physical appearance of buildings and class rooms", "fair and consistent assessment of students work", "fulfilling students' requirements at the right time", "scheduled lectures being rarely postponed or cancelled", "fulfilling previous commitments to students", "promotion of error-free records and documentations", "willingness of non-academic staff to provide necessary assistance", "employees of the institution being polite", "staff who understands the range of specific challenges facing foreign students", "university opening hours being convenient and well publicized" and "good understanding of foreign students' specific needs".

#### **4.6.4.4 Quadrant D: "Possible Overkill".**

Overkill pertains to those attributes that need to be de-emphasized. This quadrant needs the least managerial attention. Attributes in this quadrant portray low importance. However, perceived performance in relation to this quadrant is very high. Undergraduate students included such attributes as "faculty and other staff are of professional character", "class sizes being kept to minimum to allow personal attention", "provision of accurate information for educational services", "willingness to provide academic assistance to students", "employees being approachable and easy to contact" and "provision of emergency services to foreign students" in this quadrant.

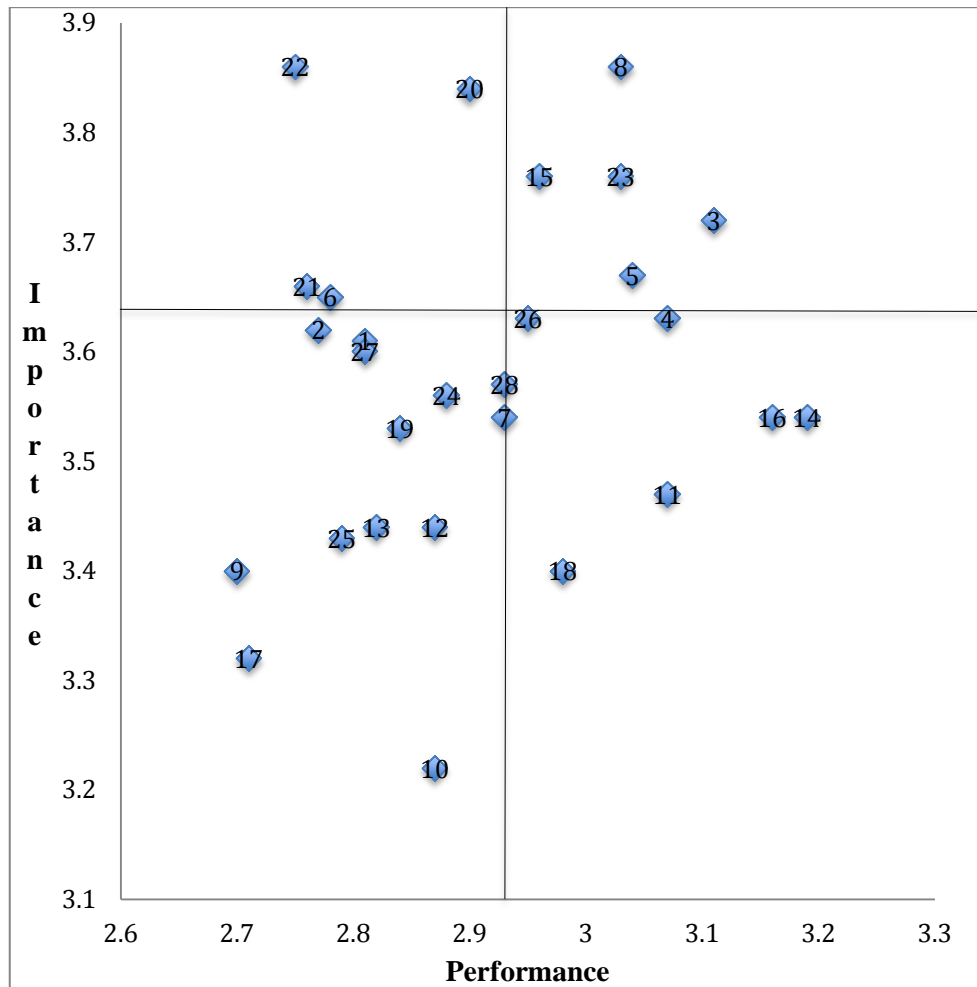


Figure 6: Importance-Performance analysis for UNDERGRADUATE respondents.

Table 22 shows the mean scores for importance and performance of all the attributes for graduate students as well as the respective quadrant in which they fall.

Table 22: Higher education attributes and discrepancy scores for GRADUATE students

N	HIGHER EDUCATION ATTRIBUTES	IMP	SAT	Quadrant	DISCREP
1	“Use of advanced and modern teaching and IT facilities”	3.64	2.66	Concentrate here	-0.98
2	“Appealing physical appearance of buildings and class rooms”	3.71	2.61	Concentrate here	-1.10

3	“Good library facilities: sufficient number of available seats and the availability of learning and research materials”	3.89	2.75	Concentrate here	-1.14
4	“Faculty and other staff are of professional character”	4.04	3.03	Keep up the good work	-1.01
5	“Interesting and easy to understand learning materials”	3.90	2.99	Keep up the good work	-0.91
6	“Convenient campus with accommodation, food and recreation facilities”	3.83	2.81	Concentrate here	-1.02
7	“Fair and consistent assessment of students work”	3.47	3.19	Possible overkill	-0.28
8	“Sincere intention in resolving students problems and concerns”	3.90	2.98	Keep up the good work	-0.92
9	“Fulfilling students’ requirements at the right time”	3.60	2.81	Low priority	-0.79
10	“Scheduled lectures being rarely postponed or cancelled”	3.18	3.25	Possible overkill	0.07
11	“Class sizes being kept to minimum to allow personal attention”	3.65	3.09	Keep up the good work	-0.56
12	“Fulfilling previous commitments/promises to students”	3.58	3.04	Possible overkill	-0.54
13	“Promoting error-free records and documentations”	3.76	2.94	Keep up the good work	-0.82
14	“Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.”	3.66	3.34	Keep up the good work	-0.32



15	“Provision of prompt response/feedback to students”	4.03	2.89	Concentrate here	-1.14
16	“Willingness to provide academic assistance/help to students”	3.81	3.12	Keep up the good work	-0.69
17	“Willingness of non-academic staff to provide necessary assistance”	3.32	2.81	Low priority	-0.51
18	“Employees being approachable and easy to contact”	3.64	3.19	Keep up the good work	-0.45
19	“Employees of the institution being polite”	3.72	3.03	Keep up the good work	-0.69
20	“Provision of professional skills required for good academic performance and for future employment”	3.90	3.10	Keep up the good work	-0.80
21	“Money spent on the degree should reflect quality of education service offered”	3.89	2.65	Concentrate here	-1.24
22	“Wide provision of various support services to foreign students”	3.99	2.92	Concentrate here	-1.07
23	“Academics being knowledgeable on students’ subject of study”	4.02	3.12	Keep up the good work	-0.90
24	“Staff understand the range of specific challenges facing foreign students”	3.73	3.02	Keep up the good work	-0.71
25	“University opening hours being convenient and well publicized”	3.65	2.95	Keep up the good work	-0.70
26	“Provision of emergency services to foreign students”	3.78	3.05	Keep up the good work	-0.73
27	“Provision of tailored advice to foreign students upon arrival on matters inside and outside university life”	3.57	2.95	Low priority	-0.62

28	“Good understanding of foreign students’ specific needs”	3.74	2.88	Concentrate here	-0.86
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#### **4.6.4.5 Quadrant A: “Concentrate here”.**

Attributes in this quadrant for graduate students include “use of advanced and modern teaching and IT facilities”, “appealing physical appearance of buildings and class rooms”, “good library facilities”, convenient campus, “provision of prompt response to students”, “money spent on the degree” and “good understanding foreign students’ specific needs”.

#### **4.6.4.6 Quadrant B: “Keep up the good work”.**

Attributes such as “faculty and other staff are of professional character”, “interesting and easy to understand learning materials”, “sincere intention in resolving students problems and concerns”, “class sizes being kept to minimum to allow personal attention”, “promotion of error-free records and documentations”, “provision of accurate information for educational services”, “willingness to provide academic assistance to students”, “employees being approachable and easy to contact”, “employees of the institution being polite”, “provision of professional skills required for good academic performance and for future employment”, “academics being knowledgeable on students’ subject of study”, “staff who understands the range of specific challenges facing foreign students”, “university opening hours being convenient and well publicized” and “provision of emergency services for foreign students” were placed in this quadrant by graduate students.

#### **4.6.4.7 Quadrant C: “Low Priority”.**

Attributes, which fell in this quadrant in graduate students' opinion, included “fulfilling students' requirements at the right time” and “willingness of non-academic staff to provide necessary assistance”.

#### 4.6.4.8 Quadrant D: “Possible Overkill”.

Graduate students included such attributes as “fair and consistent assessment of students work”, “scheduled lectures being rarely postponed or cancelled”, “fulfilling previous commitments to students” and “provision of tailored advice to foreign students upon arrival on matters inside and outside university life” in this quadrant.

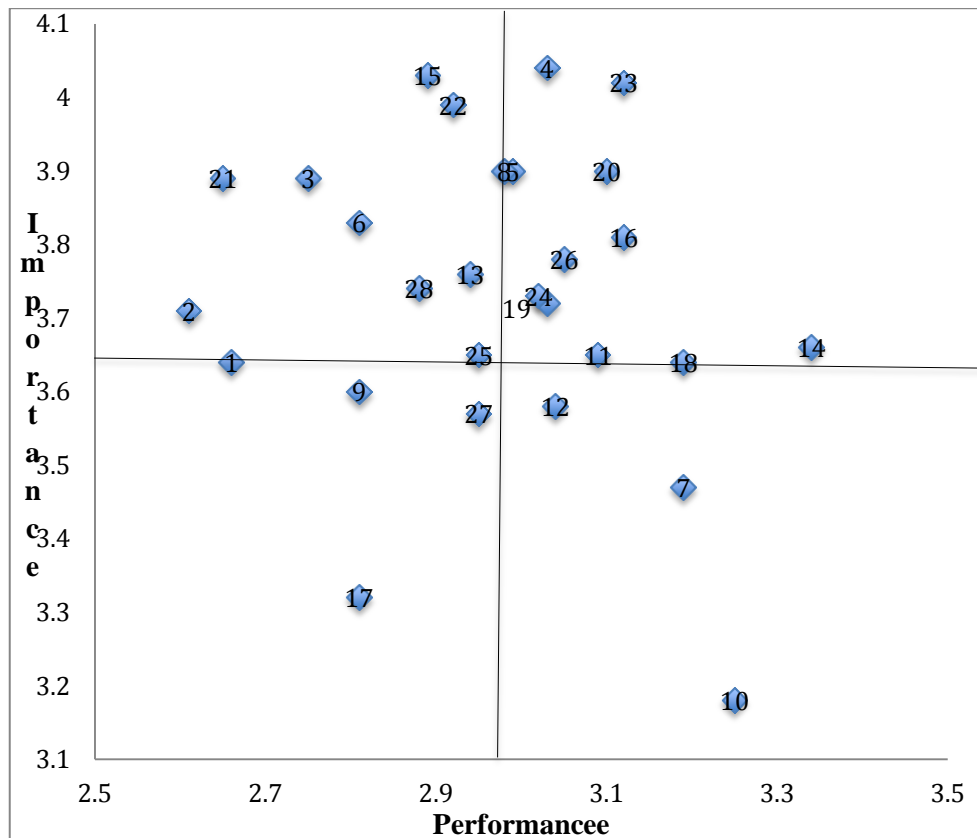


Figure 7: Importance-Performance Analysis for GRADUATE respondents.

Differences based on the level of study were revealed almost for all of the higher education quality attributes. Only eight attributes are perceived as the same by undergraduate and graduate students. These attributes include “interesting and easy

to understand learning materials”, “sincere intention in resolving students problems and concerns”, “fulfilling students’ requirements at the right time”, “willingness of non-academic staff to provide necessary assistance”, “money spent on the degree should reflect quality of education service offered”, “wide provision of various support services to foreign students” and, finally, “academics being knowledgeable on students’ subject of study”.

#### **4.7 Analysis of qualitative data.**

There were some difficulties in the phase of analysis of qualitative data. First of all, these obstacles appeared, as many respondents didn’t answer open-ended questions in section 3. Students were suggested to finish the following three statements: “I would praise the university for...”, “I would criticize the university for...” and “If I were to change something, it would be...”. For the first question many of the students preferred not to answer at all. Among those who continued the statement the most popular answers were those related to assurance:

- “to praise the university that it provides education with international standards”
- “good staff”
- “international university”
- “good quality of education”

There were some respondents who referred to tangibility of service provided by EMU. They mentioned “campus” as the factor they can praise the university for.

“Nothing”, “no”, “no comments”, etc. were used rather often as an answers.

For the second open-ended question in this section answers can be classified into six main groups: “instructors”, “the high price of education”, “the campus (old

buildings, dormitories, no food, library)”, “the lack of non-academic staff knowing English”, “registration process (too time consuming)”, “not taking care of foreign students”.

If students of EMU were given an opportunity to change something, it would be “registration and payment process”, “more good teachers”, “buildings and class design”, “more cheap education”, “more scholarships”, “pay more attention to foreign students”, “the university” and “everything”.

## Chapter 5

### DISCUSSIONS

Importance-Performance analysis is a very useful method to identify attributes, which are of high importance but of low performance and thus, require prompt improvement; and attributes, which are of low importance but of high performance and thus, can be reduced in efforts, both financial and physical. Discrepancy scores can be used as a very important tool in locating areas that require of attention. Ford *et al.*, (1999) state that discrepancy scores allow researchers to identify immediate problem areas as it relates to a particular attribute. This study uses both IPA and discrepancy scores to identify problem areas.

There are several interesting findings in the current study. To begin with, the analysis of the data revealed that performance for twenty eight service quality attributes at EMU were perceived to be lower than importance. For all of these service quality attributes, perceived performance was relatively lower than perceived importance levels. This implies an overall shortfall in the quality of service provided. This will most likely lead to dissatisfaction. Whenever performance is lower than importance a gap exists, and if the gap is not breached, dissatisfaction is bound to set in (Zeithamlet *al.*, 2006). But it is important to mention that results of these study reflect only the opinion of students participated in the research and cannot be generalized as those reflecting the opinion of all the students studying at EMU.

The most important service quality attribute for EMU as perceived by respondents was “wide provision of various support services to foreign students”. It seems logical that this attribute is perceived as very important at the university with the huge number of students coming here to study from all over the world. On the other hand, the least important service quality attribute for EMU as perceived by respondents was “scheduled lectures being rarely postponed or cancelled”. One of the possible explanations can be that students don’t mind this attribute at the stage of choosing the university to study at.

Based on the perceptions of respondents, EMU displayed the highest satisfaction in “provision of accurate information for educational services”. In contrast, EMU displayed lowest satisfaction in “physical appearance of buildings and class rooms”. These findings reveal that EMU is performing well in provision of various information for educational services but not enough resources are assigned to the tangible component of service quality, particularly, to physical appearance of buildings and class rooms. Respondents would like to study at modern and appealing buildings with comfortable and redesigned class rooms. The most interesting and surprising results of this study lies in fact that for the majority of students participated in the research the most important service quality attributes were those related to tangibility dimension: “appealing physical appearance of buildings and class rooms” and “convenient campus”; while the least important service quality attributes were those related to academic aspect of educational process: “fair and consistent assessment of students work”, “scheduled lectures being rarely postponed or cancelled”, “class sizes being kept to minimum to allow personal attention”, “fulfilling previous commitments and promises to students”.

Another surprising finding of this study is “Low priority” quadrant and attributes, which fall here in respondents’ opinion. They are “use of advanced and modern teaching and IT facilities”, “fulfilling students’ requirements at the right time”, “promotion of error-free records and documentations”, “provision of prompt response and feedback to students”, “willingness of non-academic staff to provide necessary assistance”, “employees of institution being polite”, “staff who understands the range of specific challenges facing foreign students”, “university opening hours being convenient and well-publicized” and “provision of tailored advice to foreign students upon arrival on matters inside and outside university life”. Surprising is the fact that respondents consider those attributes being of little importance!

The results show that male respondents lay more importance on almost all of the higher education service quality attributes than the female respondents. There were only six attributes female respondents perceive more important than males do. These attributes include “convenient campus with accommodation”, “class sizes being kept to minimum to allow personal attention”, “willingness to provide academic assistance to students”, “employees being approachable and easy to contact”, “staff understand the range of specific challenges facing foreign students” and “good understanding of foreign students’ specific needs”. One of the possible reasons can be that male respondents are more concerned about the attributes of service quality when choosing the university. Three attributes were identified to have statistically significant different perceptions on the importance levels between males and females. Males perceived higher degrees of importance on the attributes of “appealing physical appearance of buildings and class rooms”, “fair and consistent



assessment of students work”, “sincere intention in resolving students problems and concerns”.

When the perceptions of respondents on EMU’s performance on the 28 quality attributes were considered, a difference between males and females identified on one attribute. Females agreed more than male respondents that EMU has “convenient opening hours that are well publicized”. As females lay less importance on the attributes of service quality, they are expecting less and therefore, are more satisfied with the actual performance.

Differences for the perceptions of important service quality attributes of EMU were also identified based on the level of study of the respondents. It is found that graduate students perceive all higher education service quality attributes more important than undergraduates do. Graduate students had experience with one particular institution before and are more knowledgeable with the services provided by higher education institutions. They know what to expect and, based on their past experience, know which service they want to receive.

One of the reasons why graduate students lay more importance to some factors and less to others could be that these expectations reflect the experience that the graduate students have gained through undergraduate education while studying in other institutes. After having an educational experience, graduate students may have an image of some “ideal university” in which they would like to continue their education and definitely know which service attributes should this ideal institution include.

Also the age of graduate students is in general higher than the age of undergraduate students, so, they are more serious in aspects concerning their lives, particularly, education.

With regards to nationality, differences were identified for the perception of the performance of five higher education service quality attributes in EMU. These attributes include “academics provide fair and consistent assessment of students work”, “scheduled lectures being rarely postponed or cancelled”, “class sizes being kept to minimum to allow personal attention”, “employees being approachable and easy to contact”, “university opening hours being convenient and well publicized”. Analysis revealed that Iranian students are the most dissatisfied students among all the nationality groups. One of the possible reasons could be that Iranian students are the most academically successful students among all the nationality groups. They come here really for study and to get education. That is why they lay more importance on the educational services provided by EMU. Moreover, there is a large percentage of Iranian students working as assistants in the university, so they can observe the work of the university from inside and notice more details other students can even not to know about it.

It is important to note that the perception of respondents towards overall satisfaction with the EMU experience is very low. This indicates that students are not satisfied with the service provided by EMU. Students also indicated that they are not intended to continue their education in the institution, as they are not willing to encourage others to study here. These results are not positive for the management of the university because it reflects the failure of service delivery. Also the positive word-of-mouth serves as one of the marketing tools. Thus, the management of the

university is highly interested in positive word-of-mouth as a free advertisement for attracting new customers. In contrast, negative word-of-mouth serves as barrier for new students to enter the university.

According to the IPA analysis attributes that require concentration of resources are modernization and redesign of buildings and class rooms. The management of the university should work on creating facilities inside the campus, such as accommodation, food and recreation facilities. Also the majority of respondents don't think that "money they spent on education reflect quality of education service provided". Management of EMU should find a balance here: either improve the quality of service provided, or reduce the tuition fees. And, finally foreign students don't feel that their specific needs are understood, and there is not enough effort done in provision of various support services to foreign students. The following inference can be drawn: the management of university should allocate funds for the development of various support services to foreign students, i. e., support in studying Turkish as language of communication out of campus.

The results of IPA analysis found that attributes such as "good library facilities", "faculty and other staff are of professional character", "interesting and easy to understand learning materials", "sincere intention in resolving students problems and concerns", "provision of accurate information for educational services", "willingness to provide academic assistance to students", "provision of professional skills required for good academic performance and future employment", "academics being knowledgeable on students' subject of study" and "provision of emergency services to foreign students" were all placed by respondents to "keep up the good work" quadrant. So, the management of the university should continue to provide the same

level of service and keep up the good work as these attributes are all important for students and the university is performing well here.

According to IPA analysis the attributes that fall into low priority quadrant were “use of advanced and modern teaching and IT facilities”, “fulfilling students’ requirements at the right time”, “promotion of error-free records and documentations”, “provision of prompt response and feedback to students”, “willingness of non-academic staff to provide necessary assistance”, “employees of institution being polite”, “staff who understands the range of specific challenges facing foreign students”, “university opening hours being convenient and well-publicized” and “provision of tailored advice to foreign students upon arrival on matters inside and outside university life”. The management of the university should not spend its scarce resources on these attributes because these attributes were perceived to be less important by the respondents. Even though the performance of these attributes is low, the importance is also low on respondents’ point of view therefore EMU should not concentrate on improving the performance of these attributes at least for the present time.

In the possible overkill quadrant of the IPA analysis attributes with high perceived performance and low importance are displayed. This finding indicates that the management of the EMU can relocate the resources spent on these attributes to other components of service quality that require immediate improvement. These attributes include “fair and consistent assessment of students work”, “scheduled lectures being rarely postponed or cancelled”, “class sizes being kept to minimum to allow personal attention”, “fulfilling previous commitments and promises to students” and “employees being approachable and easy to contact”.

Conducting Importance – Performance Analysis, the differences based on gender were revealed for half of the all of higher education attributes. These fourteen attributes perceived differently by male and female respondents are: “use of advanced and modern teaching and IT facilities”, “appealing physical appearance of buildings and class rooms”, “good library facilities”, “fair and consistent assessment of students work”, “sincere intention in resolving students problems and concerns”, “scheduled lectures being rarely postponed or cancelled”, “fulfilling previous commitments to students”, “promoting error-free records and documentations”, “provision of prompt response to students”, “employees of the institution being polite”, “staff understand the range of specific challenges facing foreign students”, “university opening hours being convenient and well publicized”, “provision of emergency services to foreign students” and, finally, “good understanding of foreign students’ specific needs”.

It is worth noting that based on gender, respondents perceive two of the attributes completely differently. So, female respondents place attributes “staff understand the range of specific challenges facing foreign students” and “good understanding of foreign students’ specific needs” in concentrate here quadrant, while male respondents place the same attributes to possible overkill quadrant.

Differences based on the level of study according IPA were revealed almost for all of the higher education quality attributes. Only eight attributes are perceived as the same by undergraduate and graduate students. These attributes include “interesting and easy to understand learning materials”, “sincere intention in resolving students problems and concerns”, “fulfilling students’ requirements at the right time”, “willingness of non-academic staff to provide necessary assistance”, “money spent

on the degree should reflect quality of education service offered”, “wide provision of various support services to foreign students” and, finally, “academics being knowledgeable on students’ subject of study”.

## Chapter 6

### RECOMMENDATIONANDCONCLUSION

#### 6.1 Conclusions.

The importance of measuring satisfaction for a provider of service in the service industry cannot be overemphasized. Knowing the current level of performance in relation to what is expected by the customers is equally important. It is important that the service provider knows what the customers expect, and the services delivered should be based on the demands of the customers. Failure to design the service provided based on the needs of the customers can lead to dissatisfied customers, and a loss in business and resources. The need to prioritize the available resources is also of importance as no business has an infinite stock of resources at its disposal.

The study indicates the existence of a service gap in EMU. The service gap exists because the importance attached to the attributes is greater than the respondents' perceived performance. This gap if left unabridged will result to overall dissatisfaction. Dissatisfaction could lead to an increase in switching tendencies. Small increases in switching tendencies could have monumental negative effects on the profit line of the institution. Dissatisfaction will also negatively impact word-of-mouth communication, which in itself is a priceless and valuable marketing tool in recruitment purposes. Also dissatisfaction with the experience students have in EMU will negatively affect the intention to continue further studies in the university.

This study revealed that efforts to improve service provided by EMU should be concentrated on the tangibility dimension. Students are not satisfied with the physical appearance of building and class rooms as well as with campus in general. More facilities for accommodation, food and recreation should be created. Reliability of service provided is also not performing well. Students are not confident that money they spent on the degree reflect quality of education service offered. And, finally, empathy is the dimension that requires further attention. Foreign students are not satisfied with provided support services.

However, it is also very important that the level of student satisfaction in the institution is measured periodically so that necessary actions can be implemented. The logic is that satisfaction is not a static concept and since it evolves over time, frequent measurements could be proven useful.

## **6.2 Recommendations for Further Research**

This study sought to measure student satisfaction in EMU based on a list of attributes, which were deemed most important to this study. However, further research could be conducted with a view of analysing which attributes are most relevant to the current study with regards to EMU. While these attributes may appear most important at the moment, there is no guarantee that the same level of importance will be attributed to the same attribute over time. The attributes identified in this study, are not exhaustive and as such other attributes could be added to get a more detailed picture.

The present study, studies the overall satisfaction for all students in EMU. However, a future study could be conducted to specifically measure the level of satisfaction for



international students. Such a study, could examine areas identified by international students as most important in accounting for satisfaction.

One limitation of the study is that the majority of respondents were from Faculty of business and economics (21%), so the results of the research probably reflect the perceptions of this cohort of students. For further research more balanced division of students regarding faculty or school maybe done.

A potential shortfall of this technique lies in the relativity of the gridlines. The placement of gridlines determines in which quadrant the attributes will appear (Wade and Eagles, 2003). For example, with gridlines set at importance ratings of 3.64 and performance 2.93, a variable with an importance rating of 3.8 and a performance with a rating of 2.94 will fall into the “Keep up the good work” quadrant. However, the same variable with a performance rating of 3.8 and a performance rating of 2.92 will fall in the “Concentrate here” quadrant. However, the performance difference between 2.94 and 2.92 may not be sensitive enough to warrant an entirely opposite managerial interpretation.

To solve the above potential shortfall, statistical tests could be conducted to determine whether a mean value such as 2.92 would be significantly different from the gridline value of 2.94. While this is possible, it may add to the complexity of the method.

Another limitation of the current study lies in the fact that, while it is useful in highlighting the strong and weak points of an object in terms of salient attributes, it overlooks the relative performance of an object in relation to competitors.

Consumers certainly do not evaluate a service provider in a competitive vacuum. Some researchers have suggested the use of a modified importance-performance analysis that incorporates relative performance as a weighted index (Yavas and Shemwell, 2001). With this method, the respondent's index score for a given attribute is equal to his/her evaluation of the importance of an attribute times the difference between his/her assessments of the performances of the focal and competitor's object.

Another limitation of the current study is that it uses only perceived service quality in measuring satisfaction. However, satisfaction is a broader concept that encompasses service quality, product quality, price, personal factors and situational factors (Zeithaml *et al.*, 2006). Thus, these factors could be included when future studies are conducted.

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## **APPENDIX**

## Appendix 1: Questionnaire.

### STUDENT SATISFACTION QUESTIONNAIRE

This questionnaire is part of a Master Thesis in partial fulfillment of Master program. This survey is conducted to identify important attributes of higher education and measure performance of EMU for each attribute. Please answer all the questions. The survey will take approximately 15 minutes to complete.

#### Section 1.

This section covers certain aspects of the higher education institution that you might have considered **BEFORE CHOOSING** your university. Using the following scale, please indicate how important it is to you the following attributes of the educational institution when you are choosing the university to attend.

Please rate how **IMPORTANT** each attribute is to you.

Very Unimportant	Unimportant	Not Applicable	Important	Very Important
1	2	3	4	5

	Higher Education Attributes	Please rate how <b>IMPORTANT</b> each attribute is to you!				
1	Use of advanced and modern teaching and IT facilities	1	2	3	4	5
2	Appealing physical appearance of buildings and class rooms	1	2	3	4	5
3	Good library facilities: sufficient number of available seats and the availability of learning	1	2	3	4	5

	and research materials					
4	Faculty and other staff are of professional character	1	2	3	4	5
5	Interesting and easy to understand learning materials	1	2	3	4	5
6	Convenient campus with accommodation, food and recreation facilities	1	2	3	4	5
7	Fair and consistent assessment of students work	1	2	3	4	5
8	Sincere intention in resolving students problems and concerns	1	2	3	4	5
9	Fulfilling students' requirements at the right time	1	2	3	4	5
10	Scheduled lectures being rarely postponed or cancelled	1	2	3	4	5
11	Class sizes being kept to minimum to allow personal attention	1	2	3	4	5
12	Fulfilling previous commitments/promises to students	1	2	3	4	5
13	Promoting error-free records and documentations	1	2	3	4	5
14	Provision of accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.	1	2	3	4	5
15	Provision of prompt response/feedback to students	1	2	3	4	5

16	Willingness to provide academic assistance/help to students	1	2	3	4	5
17	Willingness of non-academic staff to provide necessary assistance	1	2	3	4	5
18	Employees being approachable and easy to contact	1	2	3	4	5
19	Employees of the institution being polite	1	2	3	4	5
20	Provision of professional skills required for good academic performance and for future employment	1	2	3	4	5
21	Money spent on the degree should reflect quality of education service offered	1	2	3	4	5
22	Wide provision of various support services to foreign students	1	2	3	4	5
23	Academics being knowledgeable on students' subject of study	1	2	3	4	5
24	Staff understand the range of specific challenges facing foreign students	1	2	3	4	5
25	University opening hours being convenient and well publicized	1	2	3	4	5
26	Provision of emergency services to foreign students	1	2	3	4	5
27	Provision of tailored advice to foreign students upon arrival on matters inside and outside university life	1	2	3	4	5
28	Good understanding of foreign students'	1	2	3	4	5

	specific needs					
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**Section 2.**

This section is related to certain aspects of the service that you have been experiencing at EMU. Using the following scale, please indicate the extent to which you agree with each of the statements.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

	EMU Attributes	<b>Please indicate the extent to which you agree with each statement!</b>				
1	EMU has advanced and modern teaching and IT facilities	1	2	3	4	5
2	EMU has appealing physical appearance of buildings and class rooms	1	2	3	4	5
3	EMU has good library facilities: sufficient number of available seats and the availability of learning and research materials	1	2	3	4	5
4	Faculty and other staff at my university are of professional character	1	2	3	4	5
5	My university provides interesting and easy to understand learning materials	1	2	3	4	5



6	EMU has convenient campus with accommodation, food and recreation facilities	1	2	3	4	5
7	Academics provide fair and consistent assessment to students work	1	2	3	4	5
8	My university shows sincere intention in resolving students' problems and concerns	1	2	3	4	5
9	EMU fulfils students' requirements at the right time	1	2	3	4	5
10	Scheduled lectures at EMU are rarely postponed or cancelled	1	2	3	4	5
11	Class sizes at EMU are kept to minimum to allow personal attention	1	2	3	4	5
12	My university fulfils its commitments/promises to students	1	2	3	4	5
13	My university promotes error-free records and documentations	1	2	3	4	5
14	My university provides accurate information for educational services e.g., timetable, meetings and events, assignment/exam result, etc.	1	2	3	4	5
15	My university provides prompt response/feedback to students	1	2	3	4	5
16	Staff at my university are willing to provide academic assistance to students when needed	1	2	3	4	5
17	Non-academic staff at EMU are willing to provide necessary assistance to students when needed	1	2	3	4	5

18	Employees of EMU are approachable and easy to contact	1	2	3	4	5
19	Employees of my institution are polite	1	2	3	4	5
20	Students are given the professional skills they require for good academic performance and for future employment	1	2	3	4	5
21	I am confident that the money I spent on the degree worth the quality of education service offered	1	2	3	4	5
22	EMU offers various support services to foreign students	1	2	3	4	5
23	Academics at EMU are knowledgeable on students' subject of study	1	2	3	4	5
24	Staff at my university understand the range of specific challenges facing foreign students	1	2	3	4	5
25	EMU has convenient opening hours which are well publicized	1	2	3	4	5
26	EMU provides emergency services to foreign students	1	2	3	4	5
27	EMU gives tailored advice to foreign students upon arrival on matters inside and outside university life	1	2	3	4	5
28	Staff at my university understand the specific needs of foreign students	1	2	3	4	5

**Section 3.**

Using the scale below, please indicate the extent to which you agree with the statements about EMU.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

	Statements about EMU	Please indicate the extent to which you agree with each statement!				
1	My overall opinion of the services provided by EMU is very good	1	2	3	4	5
2	Overall, I am satisfied with EMU experience	1	2	3	4	5
3	If I'm going to continue my graduate education I will study at EMU	1	2	3	4	5
4	I am willing to encourage my friends to study in EMU	1	2	3	4	5

5. I would praise the university for \_\_\_\_\_

6 I would criticize the university for \_\_\_\_\_

7If I were to change something, it would be \_\_\_\_\_

#### Section 4.

The following personal information is necessary for validation of questionnaire. All responses will be kept confidential. Your co-operation in providing this information will be greatly appreciated.

1 Gender:  Female  Male

2 Age

- 17 years old and below
- 18 – 21
- 22 – 25
- 26- 29
- 30 years old and older

3 Nationality: \_\_\_\_\_

4 Status:  Full-time  Part-time

5 Department and Faculty: \_\_\_\_\_

6 Level of study

- Bachelor degree
- Master degree
- Ph.D.

7 Current year of study

- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- Other: Year .....

***Thank you for participation!***