Improving Service Quality in Student Housing in North Cyprus: E.M.U as a Case Study

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Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Master of Arts
in
Marketing Management

Eastern Mediterranean University
February 2016
Gazimağusa, North Cyprus

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ABSTRACT

The aim of this thesis is to determine how service quality in student housing can be improved in North Cyprus. Owing to the fact that there is a progressive surge in the number of students coming to the island and North Cyprus becoming a renowned force in international education, there is a distinct need to improve and know the most important factors that influence students' decision in regard to students' housing. Student housing is a major element which influence students' overall academic success. Solving for the most salient attributes in selecting student housing is an important research topic.

This study proposes using Multiple Criteria Decision Making (MCDM) method, Analytical Hierarchy Process (AHP) using the pairwise comparison between criteria, to create an evaluation structure with criteria and related weights for improving service quality in student housing. A four level model is constructed and tested. Sixteen alternatives in level four were compared and finding reveal that the first attributes preferred are ventilation and peace which are preferred equally, followed by room arrangement, rules and regulation, empathy, internet access, communication, privacy, reading section, bathroom/shower, refrigerator, kitchen, hot water, maintenance, proximity and cost.

Keywords: Service quality, Student Housing, Analytical Hierarchy Process (AHP).

ÖZ

Bu tezin amacı Kuzey Kıbrıs'taki öğrenci evlerindeki servis kalitesinin nasıl iyileştirilebileceğini incelemektir. Adaya gelen öğrenci sayısındaki artış ve Kuzey Kıbrıs'ın uluslararası eğitimde meşhur bir etkiye sahip olması dolayısıyla öğrencilerin öğrenci evlerine yönelik kararlarını etkileyen en önemli faktörlerin bilinmesini ve iyileştirilmesini zorunlu kılmıştır. Öğrenci evleri öğrencilerin tüm akademik başarısını etkileyen önemli bir faktördür. Öğrenci evlerini seçerken en göze çarpan özelliklerini anlamak önemli bir araştırma konusudur.

Bu araştırma çok kriterli karar verme yöntemleri methodunu, kriterler arasındaki ikili karşılaştırmayı kullanan Analitik hiyerarşi sürecini böylece kriterler ile değerlendirme yapısını ve öğrenci evlerindeki servis kalitesini düzeltecek ilgiiağırlıkların oluşturulmasını önermektedi. Dört seviyeli bir model hazırlanıp test edilecektir.Dördüncü seviyede onaltı alternatif kıyaslanılmış ve bulgular ortaya çıkmıştır ki, birinci tercih edilen özelliklerde açığa çıkan eşit bir şekilde tercihin yapılması ve bunu oda düzenlemesi, kurallar ve düzenleme, empati, internete erişim, iletişim, gizlilik, okuma bölümü, banyo/ duş,buzluk, mutfak, sıcak su, bakım, yakınlık ve maliyet gibi özelliklerin takip edilmesidir.

Anahtar kelimeler: Servis kalitesi, öğrenci evleri, Analitik Hiyerarşi Süreci.

DEDICATION

…… to the sisterhood, friendship and memory of my sister,

Kehinde Opeyemi

ACKNOWLEDGEMENT

I would like appreciate Prof. Dr. Mustafa Tumer, Chairman of the Department of Business Administration for his immense guidance and support in the preparation of this study. Without his priceless supervision, all my efforts could have been short-sighted.

I must also appreciate and acknowledge the colossal help of Assoc. Prof. Mehmet Islamoglu, who helped me a lot during my thesis. Mr Iman Aghaei, a research assistant in the department was also of immense help throughout the period of this study and I say a very big thank you to him.

I owe quit a lot to my father and mother, Mr. and Mrs. Lasisi, who inculcated in me that the best form of knowledge one should possess is that which is learned for its own sake and that even the most difficult and enormous task can be achieved if it is done a step at a time. To my husband and son (Kayode and Donald Eluwole), who taught me that I strive to be the best and that I can achieve anything through perseverance. Am also indebted to my siblings (Damilola Lasisi, Damilare Lasisi, Wunmi Fasesin, Kunle Eluwole, Bukky Eluwole, Femi and Mindi Eluwole for their immense support.

To Mr. Huseyin Yetiner, Mrs. Hatice Capkiner, Mrs. Elcin Erdem, Mrs. Serife Zeki, Miss Ceylan Avci, Mrs. Bugu Sumen Cohar and all staff of the Registration office, E.M.U. A big thanks to you all for making my stay on the island hitch free!

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Chapter 1

INTRODUCTION

1.1 Overview

Academic efficiency is one of the most important constituents of success in higher level institutions such as the university. It creates a clear distinction not just in terms of impacting distinctive knowledge but attracting more students which ensures sustainable competitive advantage. Price et al., 2003 observed that students' social and interactive growth is positively related to sufficient facilities obtainable in the universities. Also, according to Adewunmi et al., 2011 "facilities available to students" and "support services" are indicators that highly affect academic productivity. Therefore, the physical environs of the university should be highly put into consideration. Many researchers are of the opinion that expedition of good environments in the student houses or dormitories helps improve the intellectual abilities of students which was noted by Najib et al. (2011). Also, Hassanain (2008) observed that mutual interest among students and educational outcomes can be promoted through effectively planned residential facilities. He further observed in his research that suitable and proper dormitory facilities can offer intellectual stimulation, security, inspiration and cooperation, therefore to achieve the goal of improving student performances, the influence of housing facilities should not be underrated.

At present, in North Cyprus, the total number of universities is 13; of which 8 are private, 3 are national, 1 is state and the last one is state run. Also on the island are 5

foreign university campuses (Wikipedia, 2015). Most of these university provides housing facilities for both their indigenous and international students which strongly indicates that a potential student might expect the reliance of "North Cyprus universities education standards" on "service quality of student housing"

1.2 Motivation for Research

As at 2013, the estimate population in North Cyprus 2013 was 301,988 while in the same year, the number of university students was estimated at 63,765 which increased by 9.78% to 70,004 (15,210 Turkish Cypriots; 36,148 from Turkey; 18,646 international students) in 2014 (Wikipedia, 2015). In spite of the growing increase in the number of students coming to the island for education purpose, there has not been any qualitative or quantitative research to evaluate the current housing situation for students.

Hence, the need for this study which will help to evaluate the current situation of housing for student, ensure necessary feedback and help project into the future. This will also provide the bedrock for decision makers about how to improve the current housing situation in terms of the design, location etc., and how to make changes for future houses.

1.3 Aim and Objectives

1.3.1 Aim

The purpose of this research is to determine the housing situation of students in North Cyprus using Eastern Mediterranean University as a case study by identifying the attributes that influence students' housing decision factors in which students use to rent their apartment or dormitories and ultimately discover how service quality can be improved by prioritizing the attributes.

1.3.2 Objectives

The objectives of this research are:

a) To review the literature on service quality.

b) To review the literature on student housing.

c) To review the literature on student satisfaction with housing facility.

d) To compare and contrast the findings of the study against the literature review.

e) To conduct interviews with students to determine the most important criteria for choosing a housing facility.

f) To create model based on the interviews carried out.

g) To create a model in lieu of the analysis carried out on the data collected.

1.4 Research Question

a) What are the housing attributes that shapes students' decision for housing?

b) What are the most important housing attributes?

c) Is there any difference between university-provided housing and off-campus housing?

1.5 Definition of Terms

For the purpose of this research, university housing will be divided in three categories: university-owned on-campus dormitories, private-owned on-campus dormitories and off-campus housing.

a) University-owned On-campus dormitories: these are accommodation facilities built by the university for student housing and these includes DAU1, DAU 2, DAU 3, DAU 4, Sabanci and Akdeniz dormitories

b) Private-owned On-campus dormitories: these are housing facilities built by private owners but are located inside the school campus such as Alfam, Ugursal, Longson, Marmara, Home Dorm and Ramen dormitories.

c) Off-campus housing: these are apartments or flats owned by either citizens of the island or foreign investors that are rented to students and are outside the university.

1.6 Organization of Remainder of Thesis

The next chapter, Chapter Two, presents the review of previous and related literature, Chapter Three will show the Research design and methodology while the final chapter, chapter four will present the summary of this research and make recommendation.

Chapter 2

LITERATURE REVIEW

2.1 The Service Concept

According to Jumat et al. (2012), service is a pecuniary activity that involves effectuating values and providing benefits to the customers at definite times and places via creating anticipated change in either the recipient of the service or on their behalf. In Johnston & Clark (2005) opinion, service is a synthesis of effects and skills conveyed to the customer, they further elucidated that customers consequently evaluate the value of service rendered on the outcome as well as their experience. As products and services are rather becoming similar, it has become easy for organizations to duplicate others and compete over things that well surpass their service capacity.

Mascio (2007) opines that target market services and the concept of service shows interrelated features. He also describe service concept as a blend of goods and services sold to customers. In accordance to Johnston & Clark (2005), the prevailing perspective is that service concept can be viewed as a package that constitutes a combination of real, substantial and impalpable factors. Thus, service is often defined with regards to its core parts and the all-inclusive method of categorizing the concept of service as it relates to the extent of customization of the factors. The evolving of service concept includes two significant scopes; customization and commoditization as clearly shown in Figure 1 below. Customization is producing or rendering goods and services in response to individual customers' desires; it handles unique individual

customer's request. Organizations needs to adapt their offerings to satisfy custom user need such that their customer's expectation can be delivered within acceptable market price. Commoditization is the regulation process of service which prescribes and advocates if the service delivery was implemented to the need of every individual customer. It also indicates the description of a service and defines the steps that should be followed for service to be delivered (Gilmore and Pine, 2011). There are five stages of service concept with service evolution and these levels shows how service concept has evolved from service task to service excellence. This can also be clearly seen in the Figure 1 below:

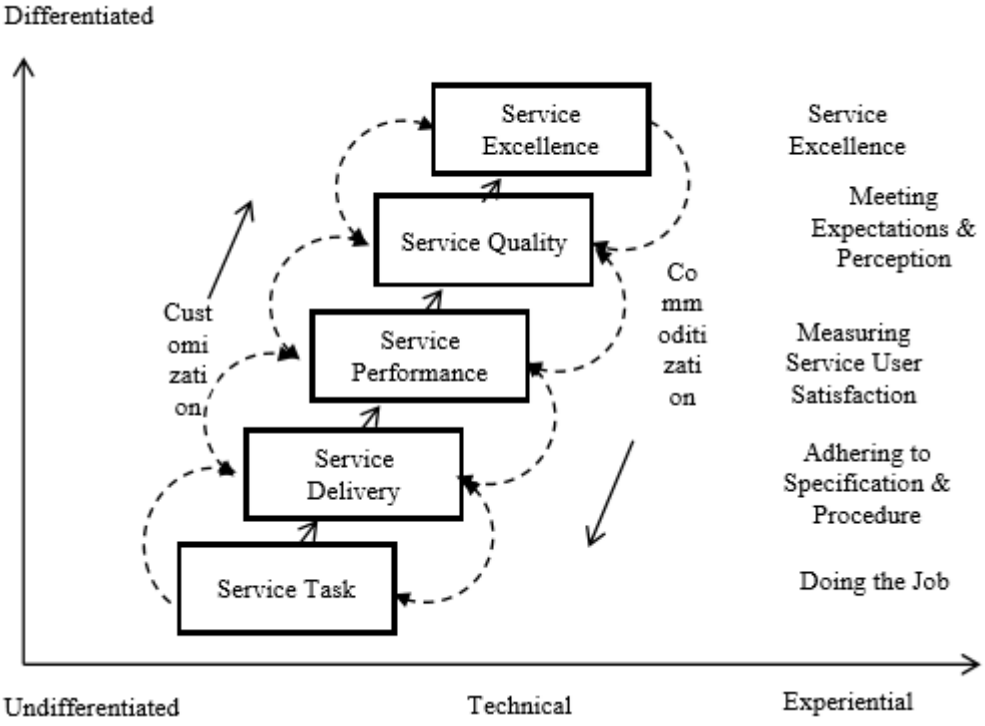

Figure 1. Evolution of Service Concept (Gilmore, J. & Pine, J., 1999)

As explicitly shown in the Figure 1 above, the higher the service concept goes up, the more the service becomes customized. An explanation of the service concept is below:

a) Service Task Level: this is the first phase in the evolution of service concept and the most technical of the five stages. This is where routine tasks are carried out and completed based on the supervisor's directives. Example is cleaning the office twice a day.

b) Service Delivery Level: this second level is where services are delivered in accordance to set procedures and specification. This includes the input-based tasks to supervise the job order and outcome. Example is setting specifications for cleaning and the method of will be the input task in this level.

c) Service Performance Level: this level has its focus on the service performance evaluation. Service Level Agreement (SLA), service specification and Key Performance Indicators (KPI) are developed here.

d) Service Quality Level: this represents robust tools for service quality and performance measurement by using tools such as SERVQUAL which helps by analyzing the user expectation gap.

e) Service Excellence Stage: this last stage is the least technical stage. Service users come to this level with the knowledge that they will experience a very pleasant service. At the service excellence level, the organization's economic offering is not the materials, product, processes, nor the encounters, but the individual user (Gilmore, J. & Pine, J., 1999).

2.2 Dimensions of Service Quality

To determine the service provider's level of success, it is expedient to first appraise the perception level of service quality by the customer. According to (Bashir S., Sarki H. I, Samidi J., 2012) , the question that arises is: how to evaluate the customer's perception level on service quality. Service quality cannot be perceived by a customer

in a shallow or one-dimensional approach but must judge it based on several factors relevant and related to the context (Zeithaml et al., 2009).

Their research which included Parasuraman identified service assurance, reliability, tangibles, responsiveness and empathy as the dimensions of service quality in the SERVQUAL model.

i. Service Assurance: representatives' learning, affability and capacity to motivate trust and certainty. confidence
ii. Reliability: capability to execute the promised service consistently and accurately.
iii. Tangibles: appearance of physical equipment, written materials, facilities and personnel.
iv. Responsiveness: readiness and promptness to render service.
v. Empathy: understanding, involvement and customized attention given to customers.

2.2.1 Service Quality in the Context of Students' Accommodation

There has been distinctive endeavors in the course of the most recent two decades by a few researchers to recognize, assess and comprehend the major features affecting housing value in diverse context like motel and hostel housing. An evaluation of previous studies indicates that there are different scopes for service quality in different housing research context (Lockyer (2005); Clemes et al., 2011; Bitner (1992); Choi et al., 2001 and Tzeng et al., 2002). Several studies by the aforementioned authors conducted in motel and hotel housing sector and critical factors such as customer service, physical facilities, ambient factors, physical environment, etc. were identified.

2.2.2 Dimensions of Student accommodation Quality

Different students in service quality especially in the housing sectors have been founded on the famous SERVQUAL model proposed by Parasuraman et al. (1988). Despite the fact that SERVQUAL has remained valuable, its generalizability and applicability has been criticized in many research perspective. Norman (1991) categorized service product to core service and supplemental service components. He believe that the "core service" is the main purpose why an organization is in the service sector which depicts the company's fundamental ability to create worth for and with their customers. This represents a multifaceted set of benefits that can be either emotional, physical or psychological. In order to meet the rudimental aim of creating and delivering service, core services will be the integral segment of the total service.

Core service, in student housing context, can be inferred to be the most crucial motive why students rent their accommodation for a time period. Therefore, facilities like the restroom and bedroom are the basic things students probably consider first when seeking to rent their accommodation where core service is concerned as related to student housing. Norman (1991) variously described complementary services as auxiliary services. They drew a distinct difference between 'marketing service' which is the main service or core product and 'marketing via service' which is the supplementary service such as installation, logistic service, upgrades and advice. This relates to added benefits the customers obtain from the service. Complementary service was further subcategorized into enhancing (supporting) and enabling (facilitating) services. Supporting services create added value rather than expediting the delivery of the core service for the client while facilitating services are services crucial for the implementation of core service. In student housing context, supporting

services include reading room, library, parking garage, entertainment facilities etc. Supporting services are not the most vital factors in renting student housing and are only desired if there are readily available On the other hand, facilitating service in student housing are necessary services for wholesome and healthy accommodation and this include security, utility amenities (electricity, water, etc.), rules and regulations.

Aside the core and complimentary aspect of student housing quality, the overall quality and cost of housing are more important factors in evaluating the of student housing quality. Nimako (2012), Gera (2011) and Cronin et al. (2000) are of the opinion that in service delivery context, the price paid by customers to acquire the service and service provided are said to be important quality factors in service/product evaluation. In choosing and evaluating the quality of housing, the search and financial cost of the houses, among other costs may affect students' choice. Students are likely not to anticipate high service quality in their houses if the pay less but reverse is for those who pay more.

2.3 Service User Experience

Experiences are often considered to be a standard group of services such as hotel, music, culture theatre, travel, and restaurants. These services at its core is concerned with hedonistic consumption (Gilburt et al., 2010). In Teixeira et al. (2012)'s view, user experience is an all-inclusive concept that encompasses all aspect of organization's service. Meyer and Schwager (2007) describes service user experience as intuitive and instinctive response to users' engagement with any contact with the organization. Johnston and Clark (2005) further explained that user's memory of any organization is a direct function of the user's experience.

2.3.1 Factors Affecting Service User Experience

Factors that can affect the service user experience may include age, quality, technology, choice, speed of service and choice but even though most firms may share factors, not all factors may apply to all firms (Chin and Sri, 2011). Physical attributes of a residential location such as ventilation and lighting, placement/positioning of windows and common areas in the dormitories also contribute to the overall housing satisfaction (Mohit and Azim, 2012). Varieties of factors may impact students' experience in their chosen residence ranging from physical to demographic attributes (Foubert et al., 1998).

2.3.1.1 Physical Attributes

Najib et al. (2012) were of the view that physical attributes of student residence such as the room size, density, architectural design and floor level influence students' experience in their student housing. Foubert *et al.* (1998) also agreed by saying that factors such as location, architectural design, space, and support services have influence students' experience and he further added that noise, temperature, air quality and light also have a significant influence. Persistent and excessive noise has been rated to be a detractor for students and can also cause mental stress, hearing loss and irritation during sleep.

Based on (Hassanain, 2008) research, quiet is the most important requirement for any student housing while Najib et al., (2011) are of the opinion that quality housing experience emanates from quiet study area, good relationship with room-mate and high quality facilities in their housing. Students evaluate their housing experience based on level of crowding in the rooms and privacy (Amole, 2008) but Hassanain (2008) opined that students' housing experience depends on some physical qualities such as

wider and brighter rooms with less stress and noise. Najib et al. (2012) said that an ideal student residence will provide security and privacy, stimulate a silent study area, encourage friendship among its users and help dormitory administrators to fulfil/satisfy the needs of the residents and aspire to improve the student residential life. With positive experience in quality facilities and services, students tend to perform best in their education (Najib and Yusof, 2010).

2.3.1.2 Demographic Attributes

According to Najib et al., (2011), demographic attributes of individuals such as ethnicity, gender, duration of stay, sense of sharing, socio-economic status and individual experience are also important and should not be disregarded because they obviously influence students' experience generally. Three of the demographic qualities that impacts service users' experience will be discussed as follows:

a) Sense of sharing: according to Hassanain (2008), female students are embraced sharing than their male counterparts and will favor shared facilities over private facilities unlike their male counterparts. Researchers like Ilias et al (2008) predicted that ethnicity has both negative and positive effect on students housing experience and race discrimination will also cause dissatisfaction among students.
b) Gender: Male students are more likely to use their rooms for relaxation and sleeping space while females tend to use their rooms in entertaining friends because of their nature of talking and making friends. Female students are also likely to have higher satisfaction experiences in comparison to the male students (Amole, 2008).
c) Socio-economic status: income level of students or their guardians plays a major role in determining student housing experience because with good and decent

economic background, students aspire to live in more comfortable houses (Najib et al., 2012).

2.4 Concept of Service Excellence

Service providers now understands that key to achieving competitive advantage in their niche of market is more dependent on customer perceived value than anything else and as such focus on delivering value via establishment of long term relationships with client through consistent delivery of beyond expectation services (Gouthier et al., 2012). It was also noted that surpassing expectation of customers is the key indicator of service excellence. According to Jones (2004), zero error, prompt and efficient service delivery within a cultured business environment and acceptable cost as perceived by consumer can be referred to as service excellence. The benefits and challenges of service excellence are highlighted as previous studies reveals that expectations of both students and other stakeholders are increasingly growing and demand (Khan and Matlay, 2009). In lieu of that fact, service excellence is forming a crucial part of higher institutions which are endeavoring to achieve and maintaining feasible competitive advantage.

2.5 Housing Satisfaction

Few researches explore both the social and physical factors that influence satisfaction with student housing, examples of such researches are Khozaeiet al.(2010) in Malaysia and Foubert *et al.* (1998) in America. Kaya and Erkip (2001) also focused on the perception of crowding and room size in Turkey to evaluate student satisfaction. In 2008, the level of satisfaction was studied by Hassanain in relations to functional performance (furniture quality and room layout) and technical performance (thermal comfort) that will help in sustaining student housing facilities. A model was created for the Post-Occupancy Evaluation based on his discoveries.

However, the qualities of the residence hall was researched by Amole (2009) which corresponds with the high level of satisfaction among students' residence in Nigeria. Although the research by Hassanain (2008) and Kaya et al. (2001) were carried out in developing countries, location were distinct in relation to the climate and culture in the countries like South-East Asia. A report by Dahlan et al. (2009) on South-East Asia published investigated the impact of temperate environment in on-campus rooms in Malaysia. An analysis was done between students' perception of being attached to a specific housing and their satisfaction. In order to cater for students' housing needs, modern facilities are considered necessary (Hassanain, 2008; Susilawati, 2001; Najib and Yusof, 2010). Past researches recognized different physiognomies that impact students' residential contentment.

Research carried out by Olujimi and Bello (2009) specified that personal restrooms, kitchen, social spaces and study areas should be the elementary facilities that should be available. Internet access, which could be in term of Wi-Fi or network connection was also highlighted by Schenke (2008) as features students placed value on. Important communal facilities like kitchen, laundry rooms, television rooms and study rooms where cited by Torres-Antonini and Park (2008). Abramson (2009) nevertheless discovered extra amenities like Parking lots, ATM Machines, mini markets and cafeterias should be provided. Including these urbane facilities were found to increase the level of satisfaction in student housing (Khozaei et al., 2010; Abramson, 2009 and Torres-Antonini et al., 2008).

Equipping the student housing with all these urbane facilities in developing countries will be exorbitantly expensive and those students will be perceived as being too demanding. This challenge of perceiving students as being demanding made some

scholars in the developing nations to examine the tangible necessities of students. Study by Dahlan et al. (2009) shows that in $50m^3$ room, one ceiling fan will cool the room space sufficiently in terms of temperate environment of room without air-conditioner with humid weathers. They also established that providing a projected balcony adjacent or opposite the window will allow ventilation which will create a suitable indoor temperature. A similar study was done by Hassanain (2008) for the desert weather in Saudi Arabia and found that the room temperature of the summer is well preferred above winter. Based on Amole (2009)'s findings, to evaluate the quality of student living environment, studying their satisfaction with student housing is crucial. Sapri et al. (2009) and Sohail et al. (2003) also studied about higher institutions but focused on factors that influence student enrolment in Malaysia.

2.6 Concept and Role of Housing Environment on Student

Student housing represents a good and unique opportunity for administrators of the university to provide support and contribute to the social and education experience of their students. Aside contributing to their social/educational experience, student housing plays a crucial role providing shelter. Review by Muhammad et al (2012) shows trends in the student life and that in spite of how the different ways in which studies are conducted, student housing plays a crucial role in the overall success if the university students. A study was conducted to verify if there is any significant variation between academic success of students residing on-campus and those residing off-campus as measured by their Grade Point Average (GPA) but discovered no statistical significance difference in the grade point averages of students.

However, Thompson et al (1993) claimed retention and progress were more evident among on-campus resident irrespective of their age, race or gender. A survey was

carried out by Hendershott et al (1992) in respect to on-campus living environment to calculate the quality of life within the campus and they discovered that students were more dissatisfied with their university housing than their academic or social lives. This dissatisfaction was associated with some factors such as lack of freedom, privacy, space limitation and poor maintenance. The quality of life or experience of students living on the campus will determine whether or not the students will remain in the environment. However, if students have good and quality experience, they share the experiences with others and encourage them to get involved in the opportunities.

2.6.1 Living On-Campus Experience

Research has it that there is a relationship between the living and learning experience of students on campus and their development. Students who have good experiences will most likely complete their program and have high overall satisfaction with their university experience. Some studies show that while living on-campus may feel and look the same in different places, the way the program is experienced and viewed by the students are not the same. As cited by Thomsen (2008), independence, convenience, privacy and security were seen as advantages but negative elements such as noise visitation restriction and rules are also observed with living on-campus.

Li and Kaye (1998) after conducting a research to investigate student satisfaction on their current living experience with on-campus dormitories and if they plan to continue living on-campus or go off-campus, they discovered that six factors as crucial and indicators of returning on-campus:

a) Choosing where to live
b) Available academic support
c) Being on a meal plan

d) High speed internet connection service

e) Leadership opportunities/openings

f) Location close to the university

While items that were less significant are:

a) Studying in the room

b) Proximity to friends' houses.

c) Duration of lease/contract

d) Cooking meals

e) Private bathroom/toilet.

f) Parking areas

They also found in their research that the most important factors that predicts returning to on-campus housing were also generally significant negative indicators of living off-campus.

2.6.2 Living Off-Campus Experience

According to Li et al. (1998) demographic characteristics significantly plays a role in who stays on or off-campus and based on their research, they discovered that make gender have the higher possibility of living off-campus. Indicative or significant reasons for students intending to live off-campus were the less significant factors for on-campus (cooking meals, parking space, etc.) while less important factors are the significant predictors in on-campus (available academic support, meal plan, etc.)

Academic performance of off-campus students are not inveigled by their environment although living off-campus was found to be more challenging than staying on-campus (Dasimah et al., 2011).

2.7 Student Housing in Famagusta

2.7.1 University provided Student Housing

As statistical studies shows that students who reside within the campus have higher success rate than those who do not, Eastern Mediterranean University has made it a tradition to make students' accommodation her responsibility. The university has several dormitories within the campus of which five of them are university owned, seven of the dormitories are build-operate-transfer (BOT). The university owned dormitories are cheaper than the BOT in that the costs of the dormitories are in the local currency (Turkish Lira) while BOT dormitories are in Dollars. Figure 1 shows the cost and facilities of university owned dormitories while figure 2 shows that of the BOT dormitories.

Dormitory name & room type	Room area	TV		WC-shower			Kitchenette		Refrigerator	Internet		Air-con	Central		Room Tel.	Generator	Cafeteria	Laundry	Bed		Prices / Room	
		In room	In hall	In room	Common	Flats	In room	Flats		Cable	Wireless		Heating	Cooling					Bunk	Normal	Cash	Installment
Eastern Mediterranean University Dormitories on Campus Residence																						
EMU 1 (for male students)																					**Per semester (£)**	
Triple room	15 m²	■			■		■		■	■		■			■	■	■	■	■		£1.700	£1.830
Quadruple room	28 m²	■		■			■		■	■		■			■	■	■	■	■		£2.040	£2.200
EMU Sabancı (for female students)																						
Triple room	15 m²	■			■		■		■	■		■			■	■	■		■		£1.700	£1.830
EMU 2 (for male students)																						
Triple room	27 m²	■		■			■		■	■	■	■			■	■		■	■		£1.750	£1.890
Special double room	20 m²	■		■			■		■	■	■	■			■	■		■	■		£2.440	£2.630
EMU 3 (for female and male students)																						
Normal double room	12 m²	■		■			■		■	■		■			■	■			■		£2.100	£2.260
Double corner room	10 m²	■		■			■		■	■		■			■	■			■		£1.950	£2.100
EMU 4 (for female students)																						
Quadruple room	30 m²	■		■			■		■	■		■			■	■		■	■		£1.550	£1.670

Figure 2. Cost and Facilities of the University BOT Dormitories

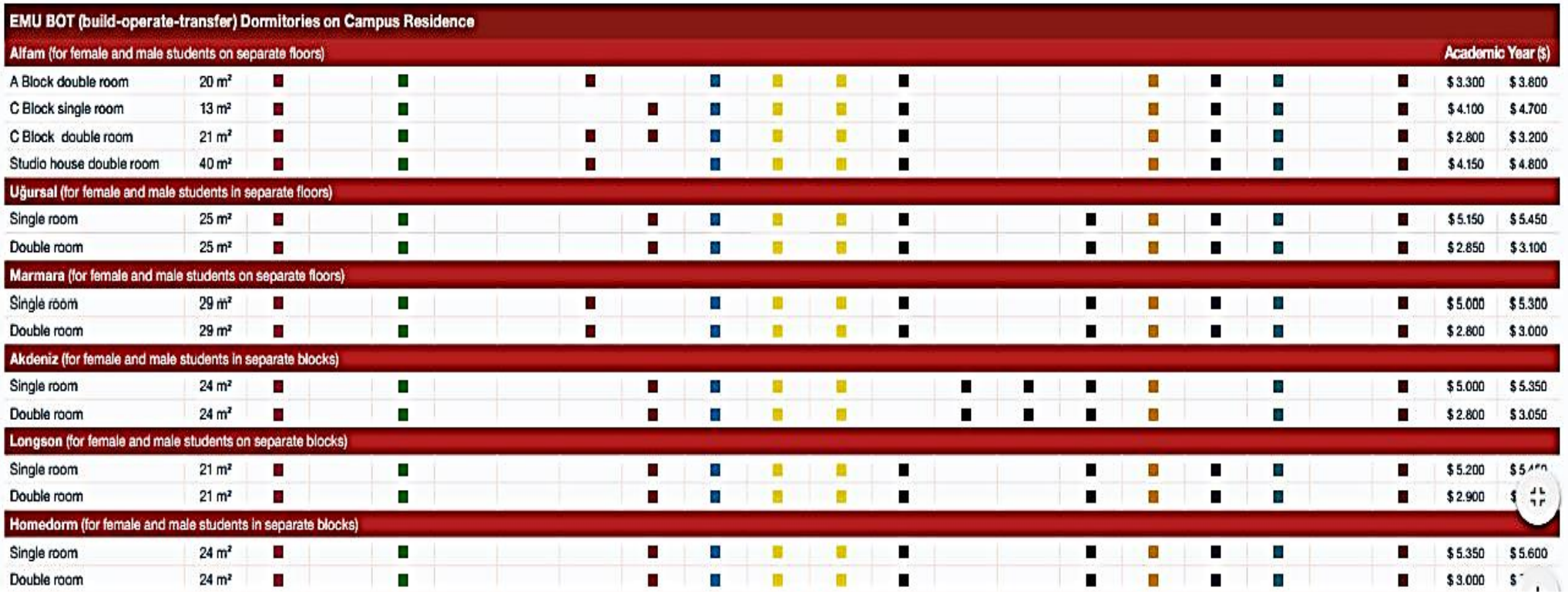

Figure 3. Cost and Facilities of the University Owned Dormitories

The university owned dormitories and BOT dormitories have features in common:

a) Cost-effective Benefits: Comparing them to other alternatives, the university dormitories provide cost benefits in terms of fees covering expenses such as electricity, water, internet access and all other facilities at no extra cost.

b) Security: The dormitories have security cameras within the surroundings and under 24 hour surveillance by the security team.

c) Communication: There are telephones with both local and international lines in each room while payphones are available in the lobby area. In most of the dormitories, each of the room has TV or TV antenna connection.

d) Basic Needs: All through the year, the dormitories provide ideal studying and living conditions with water purification systems, uninterrupted power supply and central heating/cooling systems.

e) Internet Facilities: Students are provided with internet access in their which is available at all times.

f) Healthy Eating: Students have kitchen facilities either in their rooms or a common area to be able to cook for themselves. In addition, there are inspected cafeterias in the dormitories and on campus.

2.7.2 Private Housing

Private housing includes accommodation that is owned by individuals and are rented privately either through the owners or through estate agents. High rent, lack of available housing, doubtful contract terms, low housing standards, and housing far from the campus are the major problems associated with student private housing market (Judith et al, 2010).

2.7.2.1 Housing Types

There are different types of private housing units in Famagusta and according to Kubi (2009), housing units can be categorized based on the number of stories, residential density, type and inhabitants which are:

a) Apartment Flats: are single unit flats which are assembled on one another to form a multi-story buildings. These flats varies in design and size and this includes studio apartments, or different numbers of bedrooms.

b) Detached: this is also known as independent residential villa and according to Myers (2010), it is an individual, separate housing unit, freestanding usually built with surrounding yard.

c) Semi-detached: is one that partly stands alone because it only shares a common wall with another house.

d) Sky Scraper: according to Hurnaus (2012), a sky scraper is building with exceptional height that is totally supported by a framework of beams from which the walls are suspended unlike a building supported by load bearing walls.

e) Clusters: A division method where detached housing units are grouped relatively close only living open spaces such as common areas (Rouge et al, 2009).

2.7.2.2 Housing Location

The location for housing can be categorized as ‘low and high demand market’ based on its proximity to the school, house qualities and cost. ‘High demand market’ location is characterized by its proximity or distance to the university which is between 1 and 19 kilometers from the school, high rental prices and better house qualities while the ‘low demand market’ location is 20 kilometers and above away from the school , and reasonable/low rental cost. Examples of ‘high demand market’ locations are

Gulserene, Karakol and Sakaraya while examples of ‘low demand market’ locations are Tuzla, Maraş and Yeni Boğaziçi.

Chapter Three

METHODOLOGY

3.1 Introduction

This chapter explains the concept of improving service quality in the student housing, it also describes the setting and sampling, the variables and instrument used in this study.

3.2 Conceptualizing Improving Service Quality in Student Housing

This study conceptualized improving service quality in student housing as influenced by tangible and intangible factors as shown in Figure 4. In order to create the four level model, interview was carried out with 60 respondents. The result of interview is shown in Appendix A. Improving service quality was construed as the goal of the study which is the first level, tangible and intangible service in the second level as the criteria, level three shows social qualities and interaction under tangible service while facilities and place qualities under tangible service. The fourth and final level shows the alternatives.

3.3 Variables used in the Study

3.3.1 Intangible Service

This includes services rendered that can be physically touched or felt and this was further categorized to social qualities and interactions. Social qualities alternatives include privacy, internet access, ventilation and peace while interaction consist of communication, empathy, rules/regulations and room arrangement.

3.3.2 Tangible Service

This is defined as services rendered that are imaginary and cannot be felt. Tangible service was also categorized into facilities and place qualities. Facility alternatives includes kitchen, refrigerator, reading section and bathroom/shower while place qualities includes proximity, cost, maintenance and hot water.

Table 1. Definition of variables used

Place Quality	Quality or characteristics possessed in relation to
Facility	Amenities provided
Interaction	Action that occurs that has effects two or more parties
Social Quality	Qualities possessed that help in relating with others
Proximity	Near or close to the university
Cost	The amount charged for room or apartment
Maintenance	Scheduled and unscheduled repairs and renovation
Hot water	Supply of water that has relatively high temperature
Kitchen	A room equipped with cooking facilities
Refrigerator	Kitchen appliance where you can store your perishable
Reading section	An area set aside for studying
Bathroom/shower	A room equipped for taking a bath or shower.
Communication	Easy conveyance of information
Empathy	Understanding and sharing other's feelings
Rules and regulation	Principle governing the tenants
Room arrangement	Flexibility that allows tenants to be able to rearrange
Privacy	Freedom from interference or being disturbed
Internet access	Services that connect objects and people
Ventilation	Proper circulation of air in the house
Peace	Tranquility

3.4 The Setting and Sampling

This study is part of a larger study that evaluated criteria for improving service quality in student housing in North Cyprus. The approach to this study was both qualitative and quantitative method. The qualitative method involved unstructured interview to determine the most important alternatives in the level 4 of the model while the quantitative research includes the demographics of the respondents and the questionnaire. Student housing in Famagusta was selected for the study because they

best represent the student housing in North Cyprus. It is therefore likely that the result of this study will be generalized for all students housing on the island.

The respondents were selected using random sampling method which ensured that all categories of students (by level of education, sex, marital status, on-campus and off-campus students) have equal chance of being selected. A sample size of 100 was selected for the survey. Questionnaires were distributed to all of the respondents and all were useful.

3.5 Instrument Used

An unstructured interview was conducted with 60 respondents to capture all the alternatives and a close ended questionnaire was generated from the model. The questionnaire included the demographics of the respondents and a nine-point intensity of relative important scale which is in lieu of the Analytical Hierarchy Process (AHP).

3.5.1 Analytical Hierarchy Process

The AHP approach was developed by Satty (1980) and is one the most extensively used multi-criteria decision-making (MCDM) methods. In Lee et al (2001) opinion, AHP has been applied to a wide variety of decision and human judgement process. This methodology is utilized to build up an assessment model which incorporates diverse measures into a single overall score for positioning choice options. Keeping in mind the end goal to apply it, there must be rearrangements of a different model issue by decomposing into a multi-level hierarchy structure. Acquiring solutions in the AHP is not a statistical method, because it can be employed by individual decision maker or group to analyze and proffer solution to MCDM problem. AHP methodology's application includes three fundamental steps:

a) Hierarchy development or decomposition;

b) Comparative judgements, or characterizing and executing information gathering to get pairwise examination information on components of the hierarchy structure progressive structure; and
c) Building a need rating or synthesizing of needs (Harker, 19787).

Once a chain of importance is produced, then data collection accumulation which results in pairwise correlations that is expected to decide the significance of the components in every level in relation one another. This relative significance of component therefore becomes the first priority of the decision maker.

The criteria and sub-criteria are not each similarly imperative to the choice at every level of hierarchy, and every option rates diversely on every criteria. According to Crouch et al (1998), AHP can give analytical procedure that can join and solidify the assessments of the choices and criteria by either an individual or group included in the task of decision making.it should be noted that the two elements that are compared at a particular time largely reduces the conceptual complexity of the analysis. Given a pairwise correlation, the analysis includes three undertakings:

a) Building up a correlation matrix at every level of the hierarchy from the second level and working down,
b) Processing the relative weights for every component of hierarchy, and
c) Valuing the consistency ratio to check the consistency of the judgment.

Elements in every level are contrasted in sets with deference with their significance to the element in the next higher level. Beginning at the highest point of the hierarchy

and working down, the pairwise correlations at a given level can be decreased to a number of square matrices

$A = [a_{ij}]_{nxn}$ as in the following:

$$\begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ . & . & . & . \\ a_{n1} & a_{n2} & \dots & a_{nn} \end{pmatrix}$$

The matrix has reciprocal properties, which are:

$$a_{ji} = \frac{1}{a_{ij}}$$

Satty (1980) recommended that in AHP, a scale of relative importance from1 to 9 should be used for making subjective pairwise and this can be seen in figure 4 below.

Intensity of Relative Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to objective 1.
3	Moderate importance of one over another	Experience and judgment slightly favor one activity over another.
5	Essential or strong importance	Experience and judgment strongly favor one activity over another.
7	Demonstrated importance	An activity is strongly favored, and its dominance is demonstrated in practice.
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation.
2, 4, 6, 8	Intermediate values between the two adjacent judgments	When a compromise is needed.
Reciprocals of the above nonzero numbers	Reciprocal for inverse comparison	

Figure 4. A 9-Point Intensity of Relative Importance Scale (Satty and Kearns, 1985)

In the case where all pairwise matrices has been formed, the weight vectors, $w = [w_1, w_2, \dots, w_n]$ should be computed based on Satty's eigenvector procedure. This weight computation comprises of two basic steps:

a) Foremost, pairwise comparison matrix, $A = [a_{ij}]_{nxn}$, is regularized using equation (1), and

b) The weights are computed by equation (2).

Normalization

$$a_{ji}^{*} = \frac{a_{ij}}{\sum_{i=1}^{n} a_{ij}} \qquad (1)$$

for all j = 1, 2, . . . , n.

Weight Calculation

$$a_{ji}^{*} = \sum_{i=1}^{n} a_{ij} \,/n \qquad (2)$$

for all i = 1, 2, . . . , n.

It was showed by Satty that there is a relationship between the weight vector, w, and the pairwise comparism matrix, A as shown in

$$Aw = \lambda_{max} w \qquad (3)$$

The λ_{max} value is a very important validating factor in AHP which can be used as a reference index to screen information via calculating the consistency ratio CR). The consistency index (CI) for each of the matric can be obtained in equation (4) and this will help in calculating the CR

$$CI = \frac{\lambda_{\min} - n}{n-1} \qquad (4)$$

Then, CR can be calculated using equation (5)

$$C.R = \frac{C.I}{R.I} \qquad (5)$$

Where RI is the random consistency index and table… shows the RI value from matrices from 1 to 10 as recommended by Satty. If, however, CR$\gamma \geq 0.1$, then the values of the consistency ratio indicates inconsistency judgement. In the case where such

occurs, it is necessary to reevaluate and review the main values in the pairwise comparison matrix. Sally (1989) opined that the geometric mean of the individual assessment can be obtained using equation (6) which will help to acquire the entire measure of the pairwise comparisons of all individuals involved in the decision problem.

$$a_{ij}^{hp} = \sqrt[Q]{\prod_{q=1}^{Q} a_{ij}^{q}} \qquad (6)$$

where a^{q}_{ij} is an element of matrix A of an individual q (q = 1, 2, . . . , Q), and a^{hp}_{ij} is the geometric mean of all individuals a^{q}_{ij}. The group CR can be calculated using equations (4) and (5).

Chapter 4

RESULTS AND DISCUSSION

4.1 Creating the Model (Exploratory Research)

Sixty respondents were initially interviewed to know how the quality of service can be improved. This enabled the author to prioritize the sub-criteria and alternative options. Appendix A shows the responses from the interviews while tables below shows the responses based on the categories and frequency. From table 2; privacy, internet access, ventilation and peace ranked the first four, hence the alternatives for social quality.

Table 2. Frequency of alternatives for social quality

	Alternatives	**Frequency**
Social Quality	Privacy	15
	Internet access	13
	Ventilation	9
	Peace	2
	Receiver	1

Based on the frequency of the alternatives in the table 3, communication, empathy, rules/regulations and room arrangement was selected for the alternatives in interaction.

Table 3. Frequency of alternatives for interaction

	Alternatives	Frequency
Interaction	Communication	11
	Empathy	8
	Rules and regulation	7
	Room arrangement	4
	Bill	4

From the table 4; Proximity, cost, maintenance and hot water rank the first four in place quality.

Table 4. Frequency of alternatives for place quality

	Alternatives	Frequency
Place Quality	Proximity	25
	Cost	19
	Maintenance	11
	Hot water	2
	Walkway	1

For sub-criteria, facility; kitchen, refrigerator, reading section and bathroom/shower are the first four alternatives

Table 5. Frequency of alternatives for facility

	Alternatives	Frequency
Facility	Kitchen	18
	Refridgerator	12
	Reading section	11
	Bathroom/shower	9
	Good bed	8
	Air Conditioner	7
	TV	7
	Washing machine	6
	Oven	6
	Toilet	5
	Microwave	5
	Carpet/rug	4
	Bookshelf	4
	Carpark	2
	Cupboard	1

After all the attributes have been ranked, the research model as shown in figure 5 was created

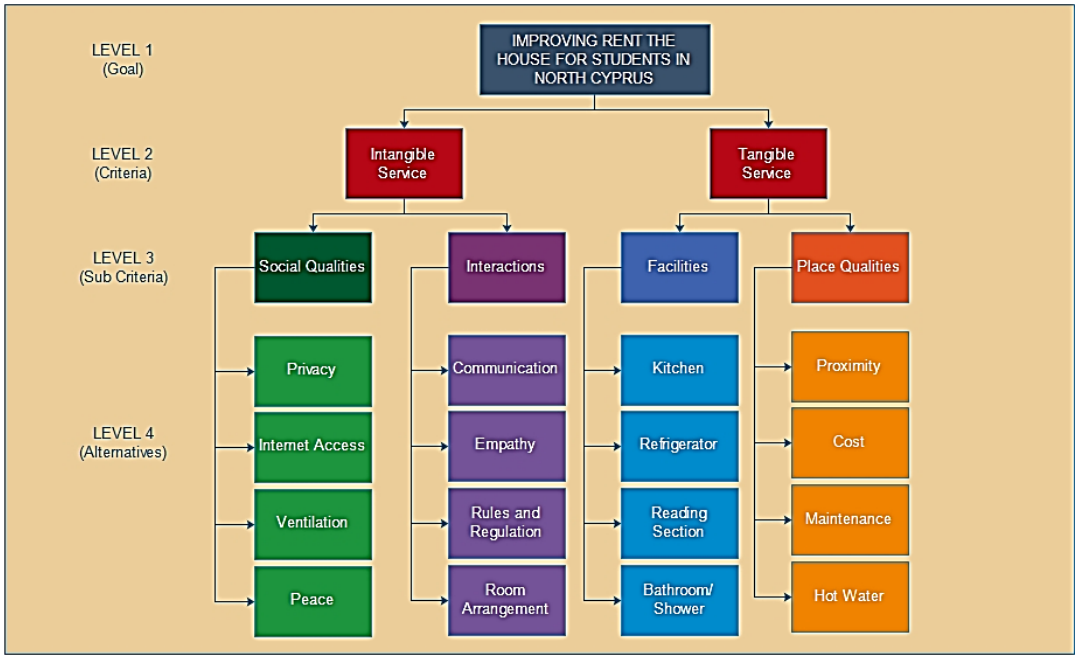

Figure 5. Research Model

4.2 Demographic Profile of Respondents

The profile of the respondents can be seen in table 5 which shows that 56% of the respondents were male while 44% were female. Also, 15% of the respondents is between the ages 31-35, 21% is for age group 26-30, 25% for age group 21-25 and age between 16-20 has a larger percentage of 39% as shown in Figure 6.

Table 6. Demographics of respondents

CATEGORY	FREQUENCY
GENDER	
Male	56
Female	44
AGE	
16-20	39
21-25	25
26-30	21
31-35	15
MARITAL STATUS	
Single	79
Married	21
EDUCATION	
Undergraduate	56
Masters	29
PhD	15
NATIONALITY	
Iranian	18
Zimbabwean	5
British	1
Mauritan	3
Pakistan	4
Cameroonian	6
Azerbaijani	3
TRNC	1
Palestine	8
Iraqi	6
Russian	3
Libyan	10
Saudi Arabian	2
Turkish	1
Kazakhstan	5
Nigerian	24
LOCATION OF HOSTEL/APARTMENT	
On- campus	58
Off Campus	42
COST OF HOSTEL/APARTMENT (TL)	
1.000-2000	5
2.000-3.000	12
3.000-4.000	16
4.000-5.000	18
Others	49
NUMBER OF ROOM MATES	
0	20
1	26
2	19
3	30
Others	5
HOW DID YU KNOW ABOUT YOUR DORM/	
Friend	62
Family	9
Agent	10
Advert	5
Self	14

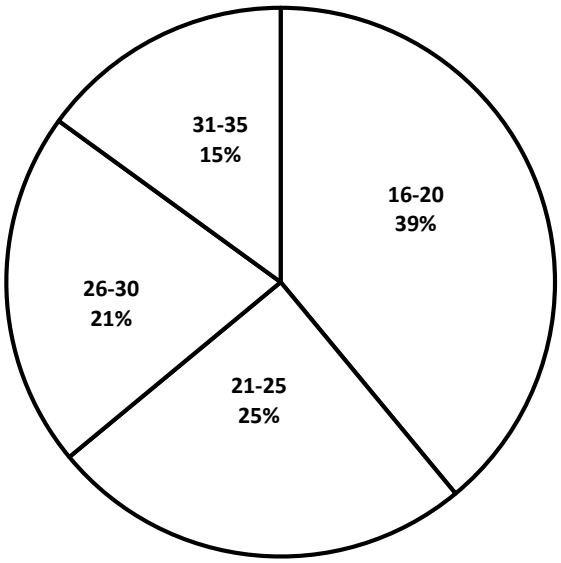

Figure 6. Percentage Distribution of the Age of the Respondents

The profile shows that about 44% were postgraduates and about 56% were undergraduates as shown in the chart below while

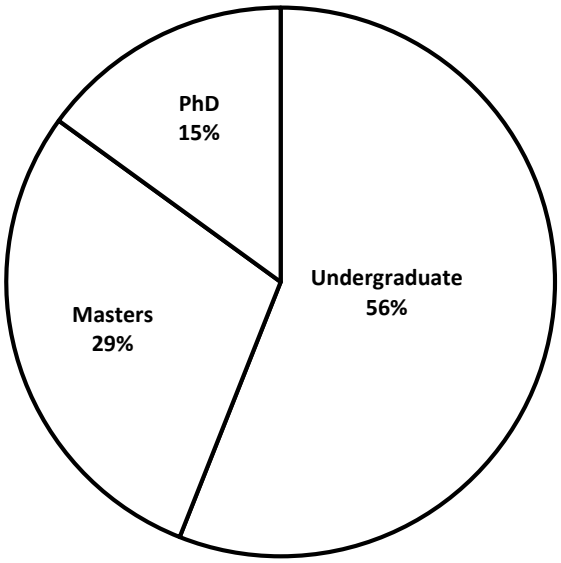

Figure 7. Level of Education of the Respondents

79% are single and 21% married. Figure 8 shows the nationality of the respondents

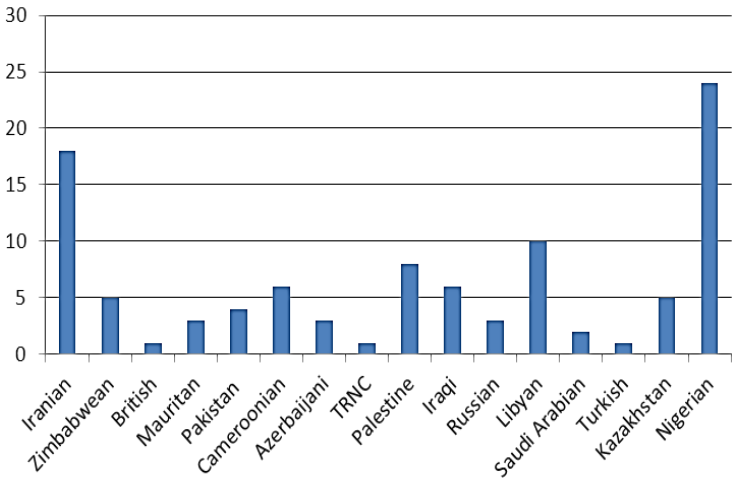

Figure 8. Nationality of the Respondents

The figure 10 shows the student housing in Famagusta while the pie chart shows that

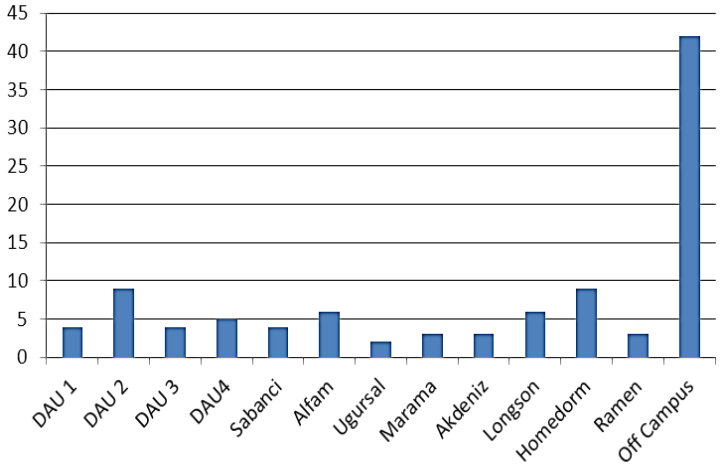

Figure 9. Student Housing in Famagusta

42% of the respondent live off-campus and 58% live on-campus

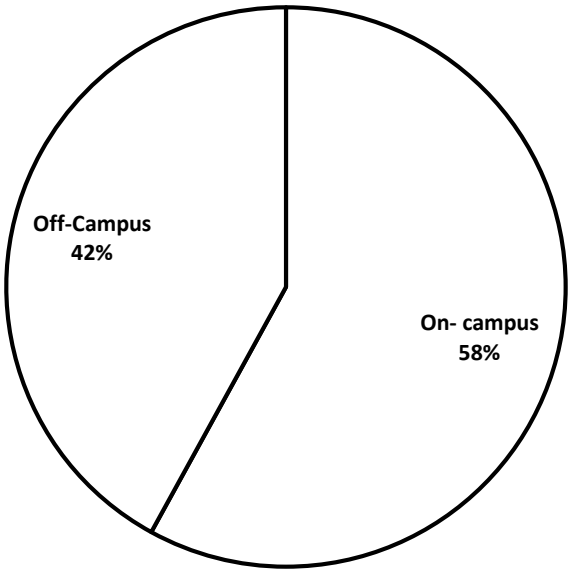

Figure 10. Percentage of On-campus and Off-campus of the Respondents

Figure 11 shows the price or cost of student housing (on-campus and off-campus) and the pie chart shows that the percentage of rent cost between 1,000-2,000 Turkish lira per year is 5%, between 2,000-3,000 Turkish Lira is 12%, 3,000-4,000 Turkish Lira is 16% while 4,000-5,000 Turkish Lira 18% and others which includes prices ranging from above 5,000 Turkish Lira to foreign currencies equivalent to more than 5,000 Turkish Lira. This shows that 51% of the respondents pay between 1,000 and 5,000 Turkish Lira for their dormitories/apartment while 49% pay more than 5,000 Turkish Lira

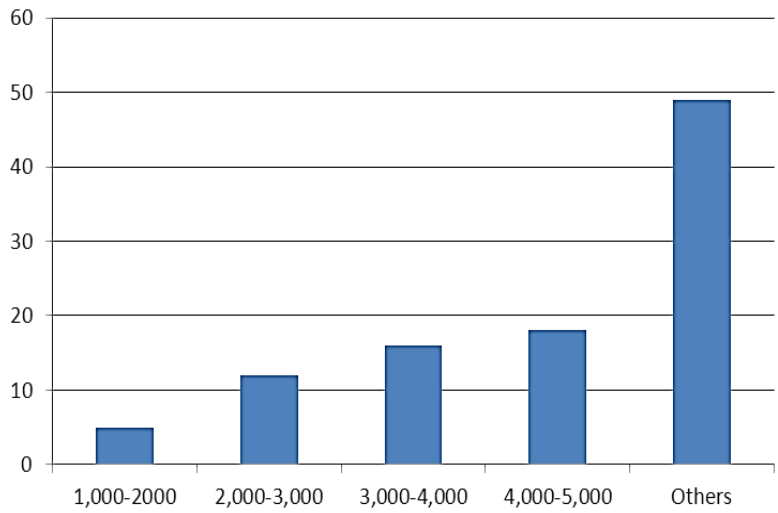

Figure 11. Cost of Housing (On-campus and Off-campus)

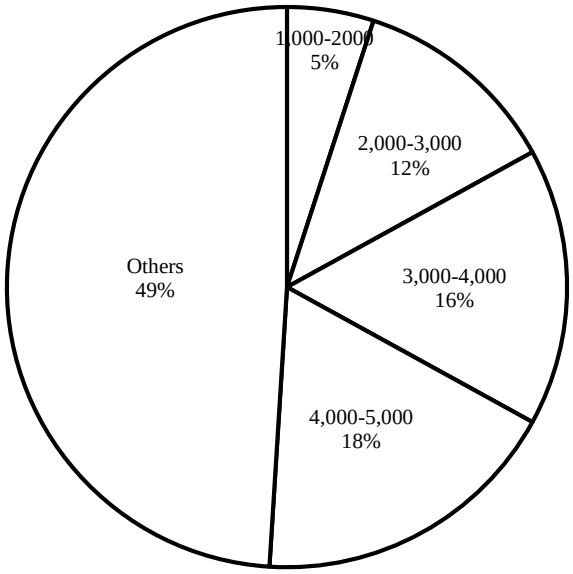

Figure 12. Percentage of Housing Cost

Figure 13 shows the number of room-mates respondents have and 20% of the `respondents have no room-mate, 26% have one room-mate, 19% have two room-mates, 30% have three room-mates and 5% have more than three room-mates which were married couples with family/children.

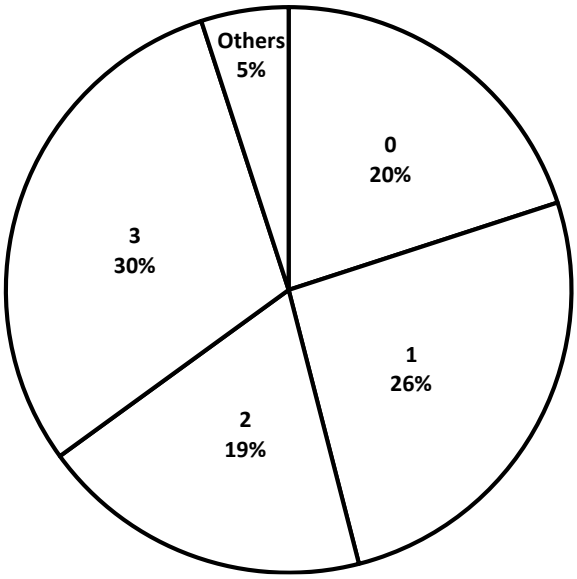

Figure 13. Number of Roommates

Finally, it was discovered that students often gets to know about their accommodation through this order: friends, self, agent, family and advert in 62%, 14%, 10%, 9% and 5% respectively.

4.3 Results using Manual Calculation

Table 7. Initial pair-wise comparison matrix components of place quality

	I1	**I2**	**I3**	**I4**
I1	1	0.83	0.82	0.94
I2	1.20	1	0.57	0.56
I3	1.23	1.75	1	0.70
I4	1.07	1.78	1.44	1
SUM	**4.50**	**5.36**	**3.83**	**3.20**

Where I1: Proximity

I2: Cost

I3: Maintenance

I4: Hot water

Using the equation below, we normalize the table

$$a_{ji}^{*} = \frac{a_{ij}}{\sum_{i=1}^{n} a_{ij}}$$

Table 8. Normalizing the initial pair-wise comparison matrix components of place quality

	I1	**I2**	**I3**	**I4**	**Average of rows**
I1	0.22	0.15	0.21	0.29	0.218
I2	0.27	0.19	0.15	0.18	0.198
I3	0.27	0.33	0.26	0.22	0.270
I4	0.24	0.33	0.38	0.31	0.315

Table 8. The Final Matrix Prioritization Criteria using AHP Method

Indexes	**Weight Criteria (Average Rows)**
I4	0.315
I3	0.270
I1	0.218
I2	0.198

So based on AHP method to prioritize the criteria by this method are as follows:

I4: Hot water

I3: Maintenance

I1: Proximity

I2: Cost

Weighted Sum Vector:

$$\begin{pmatrix} 1 & 0.83 & 0.82 & 0.94 \\ 1.20 & 1 & 0.57 & 0.56 \\ 1.23 & 1.75 & 1 & 0.70 \\ 1.07 & 1.78 & 1.44 & 1 \end{pmatrix} \begin{pmatrix} 0.315 \\ 0.270 \\ 0.215 \\ 0.198 \end{pmatrix}$$

WSV = [0.902 0.881 1.214 1.325]

Consistency Vector:

I1: 0.881/0.198= 4.449

I2: 0.9020.215= 4.195

I3: 1.214/0.270= 4.496

I4: 1.325/0.315= 4.206

C.V = [4.449 4.195 4.496 4.206]

Consistency Index:

$$CI = \frac{\lambda_{\min} - n}{n-1} = \frac{4.195-4}{3} = 0.065$$

Consistency Rate:

$$C.R = \frac{C.I}{R.I}$$

$$C.R = \frac{C.I}{R.I} = \frac{0.065}{0.9} = 0.072$$

Table 10. Random Index

N	1	2	3	4	5	6	7	8	9	10
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.51

Since consistency index is calculated from the value much lower 0.1, so we can say good consistency and paired comparisons of the models is quite significant.

4.4 Result by Expert Choice Software

Expert Choice 11.0 was used in the analysis of the result. Weights were allocated to the criteria factors (tangible and intangible) by imputing the geometric mean value of each if lesser than one and imputing the inverse of the geometric mean if greater than one ‘

4.4.1 Comparing Factors in Criteria (Level 2)

Tangible service and intangible service were compared to know which is more important to the students. From the result, Tangible service has a 0.718 weight which is higher than intangible (0.282) as shown in figure 14. This reveals that students give priority to the tangible services in the student housing.

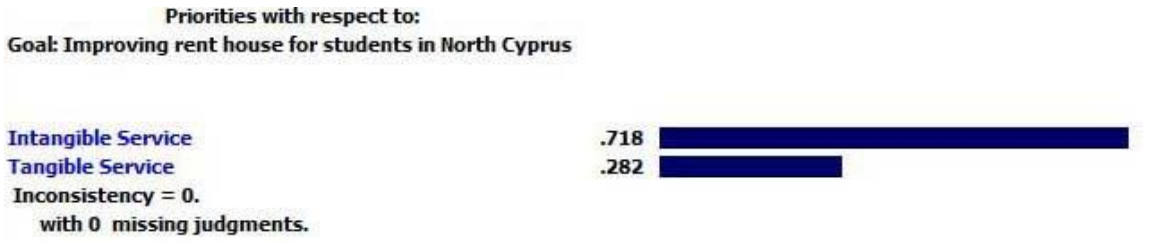

Figure 14. Software Result of Comparing Tangible and Intangible Service

4.4.2 Comparing Factors in Sub-Criteria (Level 3)

4.4.2.1 Facilities and Place Quality

In figure 15, results comparing place quality and facilities which are sub-criteria for tangible services is shown. Place quality was prioritized over facilities having a weight of 0.600 and 0.400 respectively.

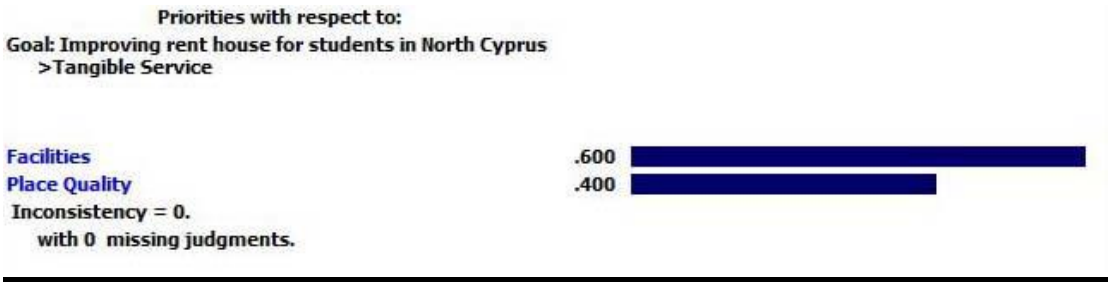

Figure 15. Software Result of Comparing Place Quality and Facilities

4.4.2.2 Social Quality and Interactions

Likewise, social quality and interactions were compared and as figure 16 shows, social quality was given preference by having a weigh of 0.507 while interaction, 0.493.

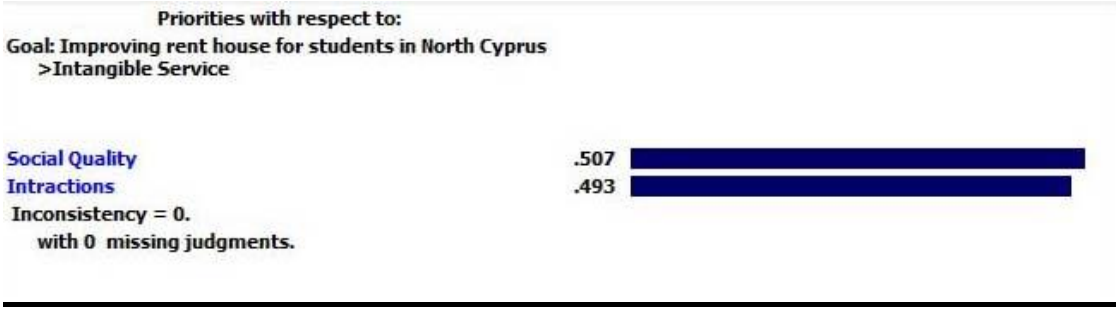

Figure 16. Software Result of Comparing Social Quality and Interactions

4.4.2.3 Comparing Factors in Alternatives (Level 4)

4.4.2.3.1 Comparing Factors in Place Quality

All alternatives under place quality was compared and an overall inconsistency of 0.03 was arrived at which lower 0.1, so we can say good consistency and paired comparisons of the models is quite significant. Hot water had a weight of 0.358 while maintenance, proximity and cost have weight of 0.270, 0.207 and 0.164 respectively as shown in figure 17. This shows that hot water was prioritized, followed by maintenance, proximity and cost respectively.

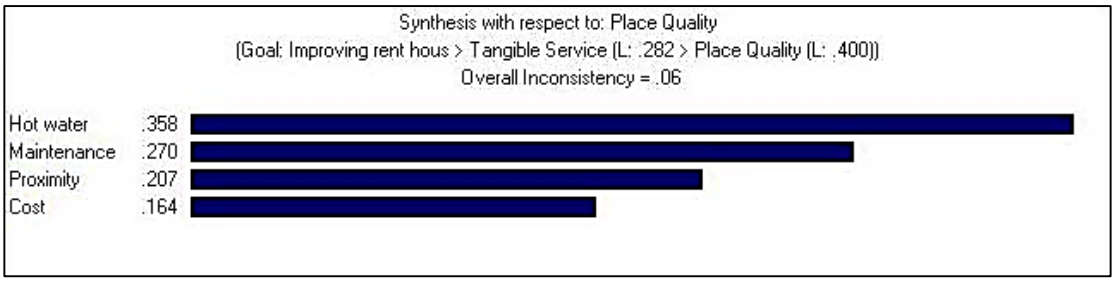

Figure 17. Software Result of Comparing all Alternatives in Place Quality

4.4.2.3.2 Comparing Factors in Facilities

Comparing all alternatives in facilities, a 0.07 overall consistency was gotten which makes the paired comparison of the alternatives significant. A weigh of 0.271, 0.270, 0.252 and 0.207 was allocated as shown in figure 18 after the geometric mean imputed. This reveals that respondents favored reading section facilities over other alternatives.

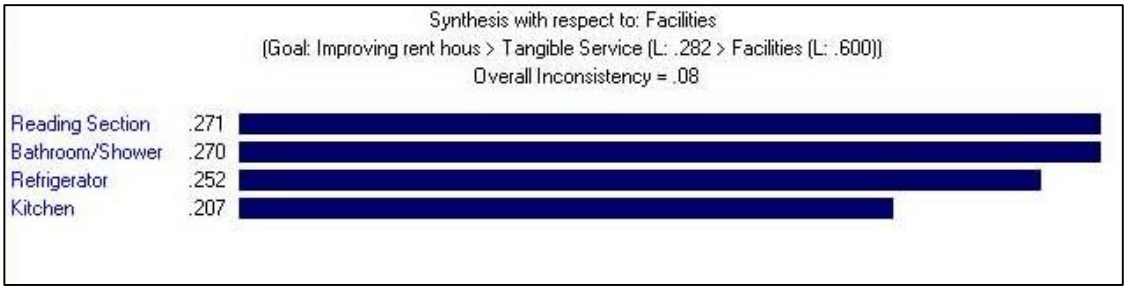

Figure 18. Software Results of Comparing all Alternatives in Facilities

4.4.2.3.3 Comparing Factors in Interactions

An overall inconsistency of 0.02 was obtained which also makes the paired comparison of these alternatives significant. Also, a weight of 0.308, 0.260, 0.221 and 0.211 was allotted to room arrangement, rules and regulations, empathy and communication respectively as shown in figure 19.

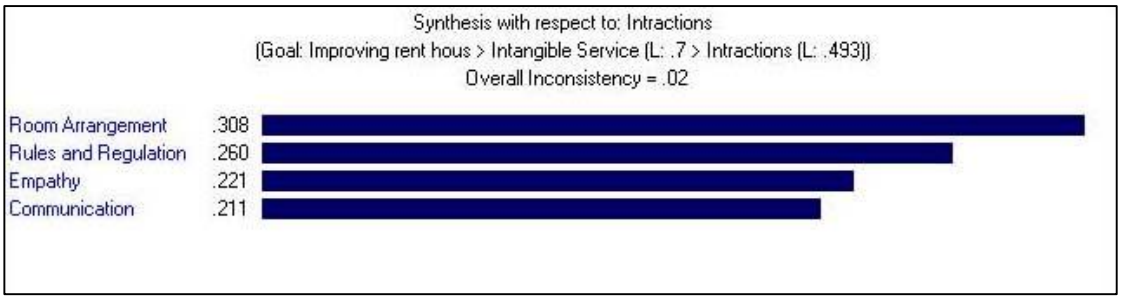

Figure 19. Software Result of Comparing all Alternatives in Interactions

4.4.2.3.4 Comparing Factors in Social Quality

Having compared all alternatives in social quality, figure 20 shows an overall inconsistency of 0.04 which makes the pairwise comparison valid and consistent. Weights of 0.299, 0.297, 0.209 and 0.195 were allotted to peace, ventilation, internet access and privacy respectively which make peace more prioritized.

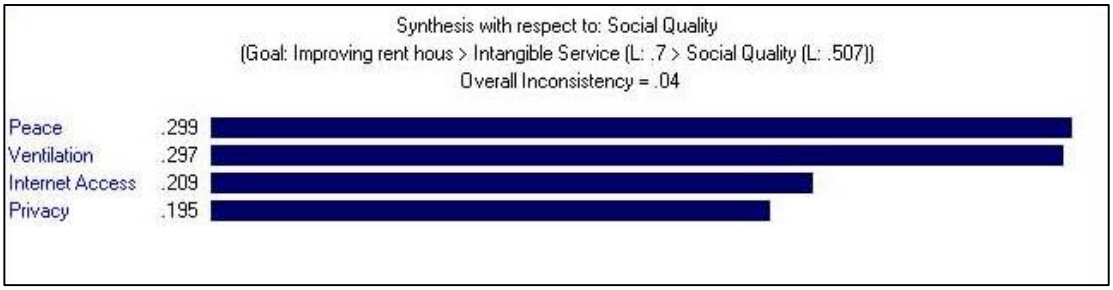

Figure 20. Software Result of Comparing all Alternatives in Social Quality

4.4.3 Comparing All Alternatives in Tangible Service

In order to know which the degree of preference for tangible services, all alternatives under level 3 were compared and figure 21 shows the weight allocated. Reading section ranked the first having a weight of 0.180, followed by bathroom/shower, refrigerator, kitchen, hot water, maintenance, proximity and cost with weight of 0.180, 0.168, 0.138, 0.120, 0.090, 0.069 and 0.55 respectively. An overall inconsistency of 0.05 was obtained which makes the comparison significant.

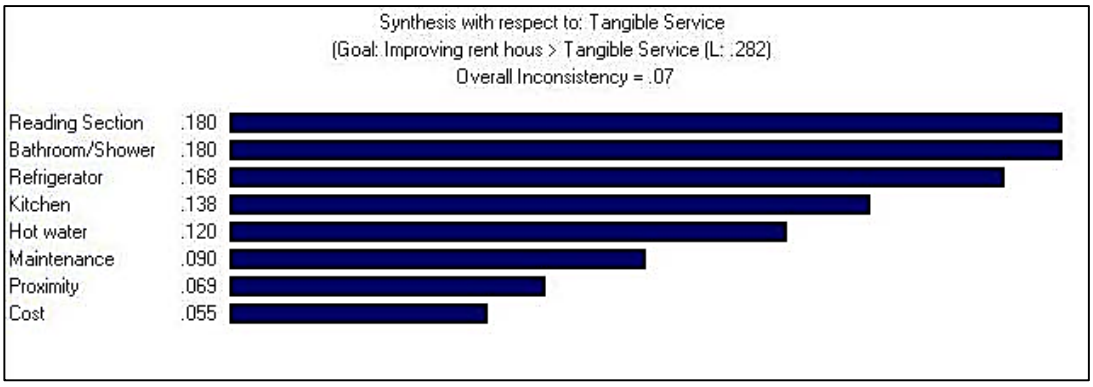

Figure 21. Software Result of Comparing all Alternatives in Tangible Services

4.4.4 Comparing All Alternatives in Intangible Service

All alternatives for intangible services was compared and result is shown in Figure 22. Peace is ranked first with a weight of 0.154 with ventilation, room arrangement, rules and regulation, internet access, empathy, communication, privacy following having weights of 0.153, 0.149, 0.126, 0.108, 0.107, 0.102 and 0.101 respectively.

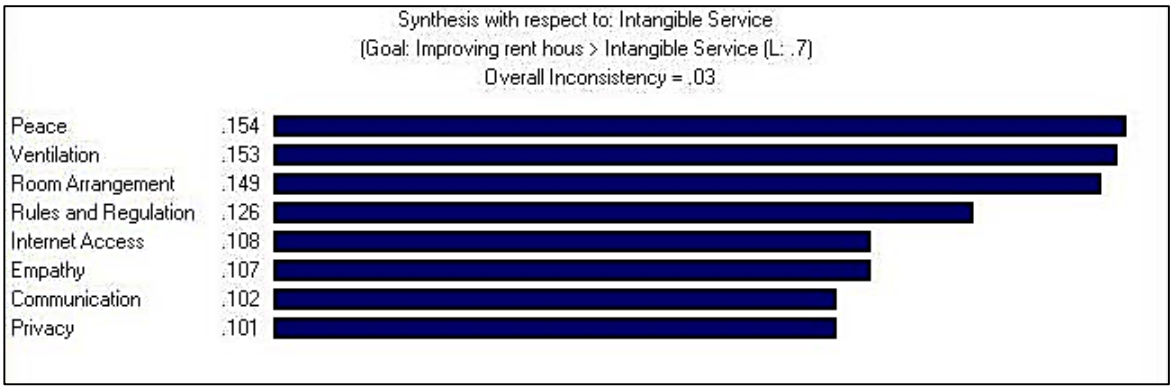

Figure 22. Software Result of Comparing all Alternatives in Intangible Services

4.4.5 Comparing All Alternatives

All alternatives for improving service quality in student housing was compared. An overall inconsistency of 0.04 was obtained which make the comparison of the whole model significant. A weight of 0.110 was apportioned to ventilation and peace while room arrangement, rules and regulation, empathy, internet access, communication,

privacy, reading section, bathroom/shower, refrigerator, kitchen, hot water, maintenance, proximity and cost have weight of 0.107, 0.090, 0.077, 0.077, 0.073, 0.72, 0.051, 0.051, 0.048, 0.039, 0.034, 0.026, 0.020 and 0.016

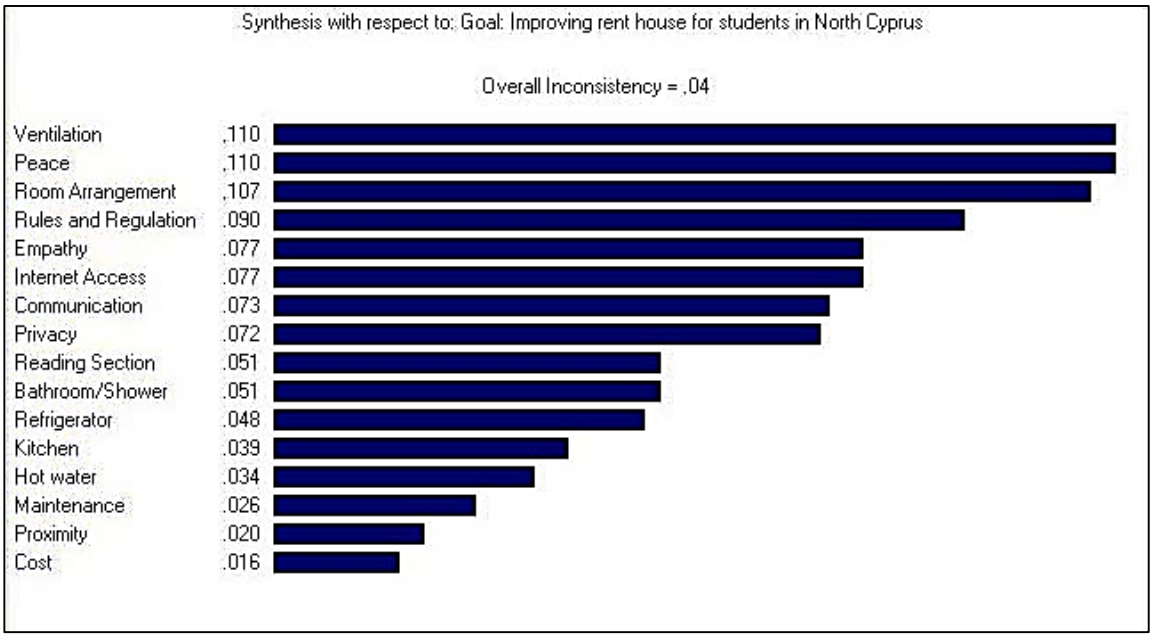

Figure 23. Software Result of Comparing all Alternatives in the Research Model

4.4.6 Dynamic Sensitivity for Tangible Service

The result as shown in figure 24 which is the dynamic sensitivity for tangible service. Place quality has a percentage of 40 while facilities has 60 % and the ratio has an influence on the alternatives percentage. Reading section and bathroom/shower has equal importance to the students which shows an equal percentage of 18 while refrigerator, kitchen, hot water, maintenance, proximity and cost follow suit with 16.8%, 13.8%, 12.0%, 9.0%, 6.9% and 5.5%.

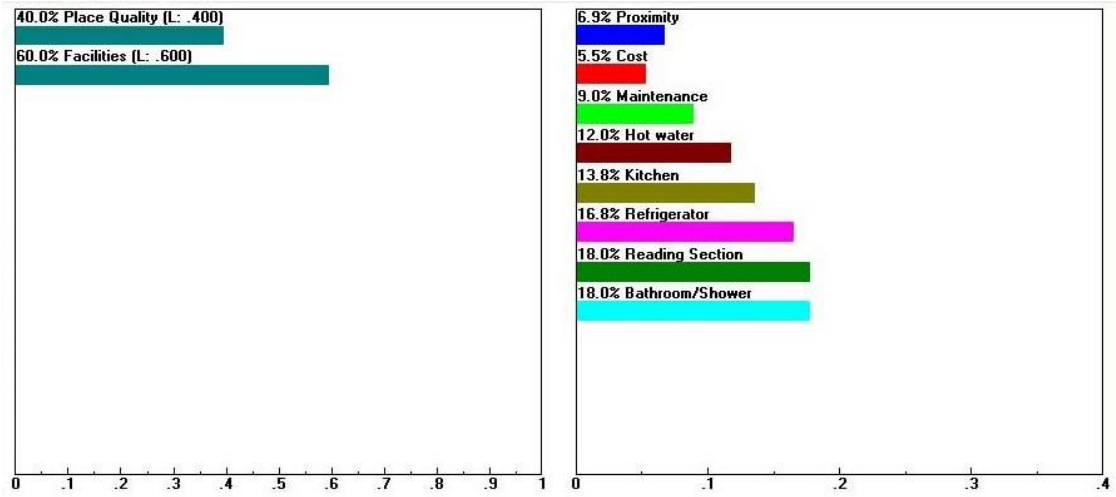

Figure 24. Dynamic Sensitivity for Tangible Service

4.4.7 Dynamic Sensitivity for Intangible Service

Also the dynamic sensitivity for intangible services in figure 25 shows that social quality is more important by having a percentage of 50.7 over interaction that has 49.3%. Comparing the alternatives for intangible, peace has 16.3% while ventilation, room arrangement, rules and regulation, internet access, empathy, communication and privacy has 15.3%, 14.9%, 12.6%, 10.8%, 10.7%, 10.2% and 10.1 % respectively.

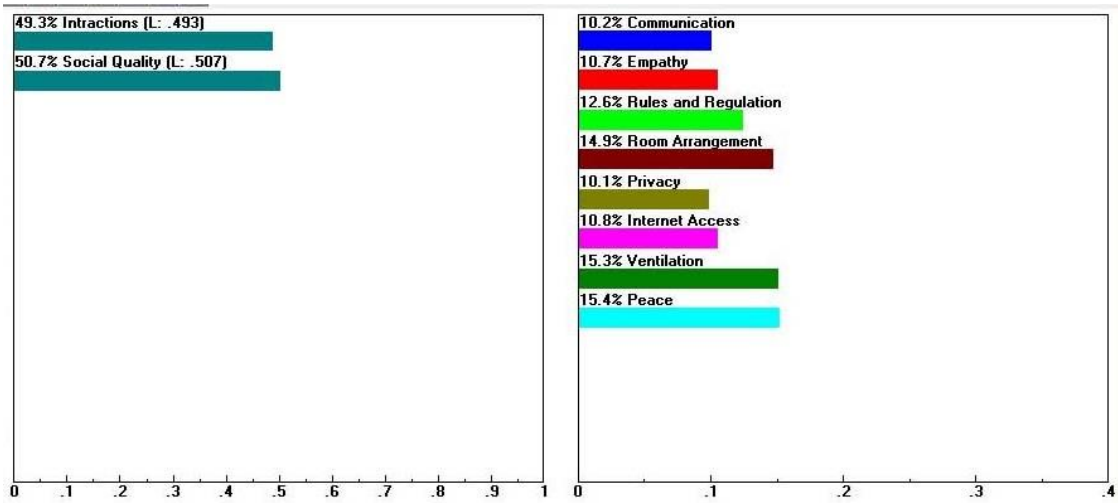

Figure 25. Dynamic Sensitivity for Intangible Service

4.4.8 Dynamic Sensitivity for all Alternatives

Finally, comparing all alternatives, intangible service which is service that is not physical in nature i.e. cannot be felt has a 71.8% and tangible service has 28.2% as shown in figure 26. The influence of both tangible and intangible service which are the dependent variables on the independent variables (all alternatives) shows that peace and ventilation prioritized by both having a percentage of 11 each. Room arrangement, rules and regulation, empathy, internet access, communication, privacy, bathroom/shower, reading section, refrigerator, kitchen, hot water, maintenance, proximity and cost of percentage of 10.7%, 9.0%, 7.7%, 7.7%, 7.3%, 7.2%, 5.1%, 5.1%, 4.8%, 3.9%, 3.4%, 2.5%, 2.0% and 1.6%

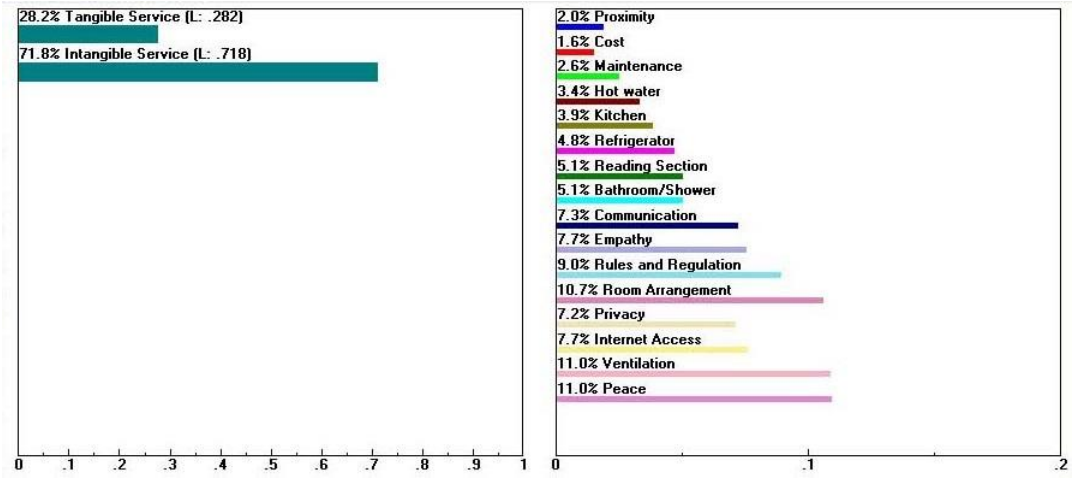

Figure 26. Dynamic Sensitivity for all Alternatives

4.5 Model Proposed to Improve Service Quality in Student Housing

In lieu of the result obtained from the analysis of the questionnaire and based on the priorities of the alternatives by the respondents, figure 27 shows the model proposed based on the alternatives used in this study:

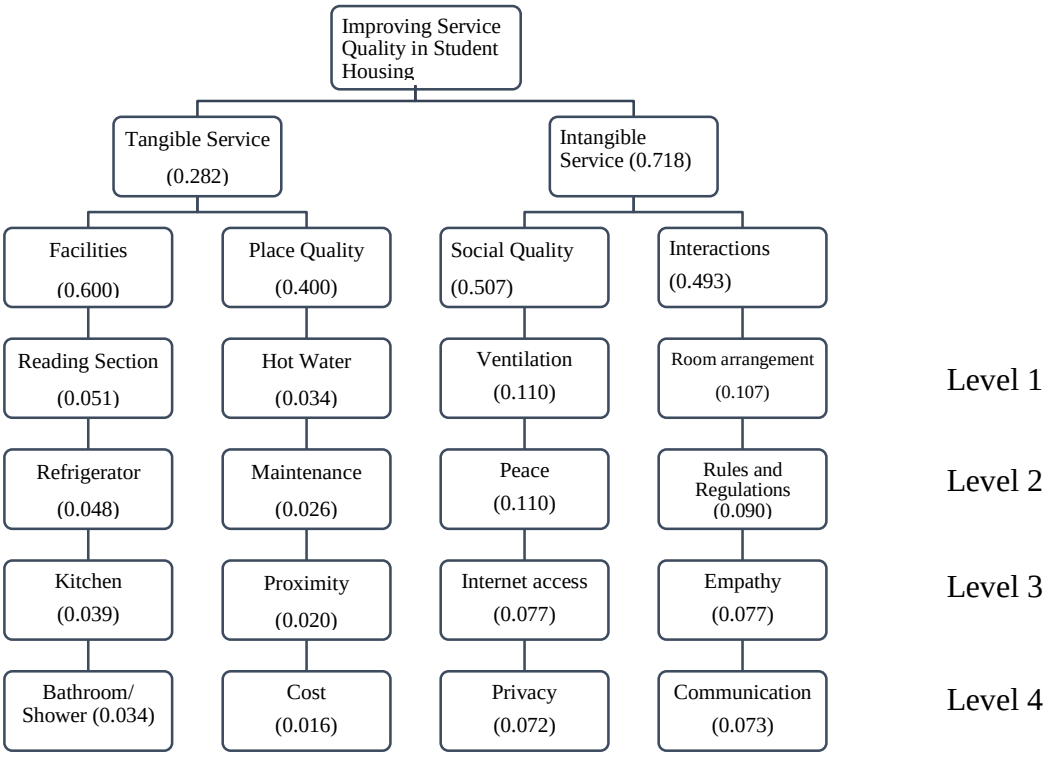

Figure 27. Proposed Model based on Analysis

Chapter 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This study examined how service quality can be improved in student housing in North Cyprus using Eastern Mediterranean University as a case study. First it was interested in understanding service quality and service user experience in relation to student housing to know the dimensions of student accommodation quality and to identify factors affecting service user experience as an evaluation in context of listing and ranking the attributes that students prefer when searching to rent accommodation. Identifying the important attributes to student in selecting their housing is essential to improving the overall service quality in relation to student housing for institution administrators and private landlord. This study has been able to identify sixteen attributes and the relative importance of these attributes. Perceiving the improving of the service quality in student housing as a Multiple Criteria Decision Making (MCDM) problem, the comparative importance of each of the attributes were effectively obtained using one of the MCDM methods (AHP). This research examined the important factors affecting students' decision in renting their accommodation and further proposed an AHP model for the decision makers. A 4-level AHP model was tested using data generated from questionnaires given to students (respondents) who reside within and outside the campus. Contrasting the traditional five dimensions of

service quality, four quality dimensions emerged from the research carried out: social quality, interactions, facility and place quality.

Data analysis shows that the first four attributes important in student housing include ventilation, peace, room arrangement and rules/regulation (ventilation and peace have equal importance). Ventilation is an important factor to students because of the fact that during winter, the humidity in the air is high and the apartments usually develop mold especially in off-campus houses. Peace is also significant because once there is peace, there is security and students can be able to live and student without fear. Room arrangement ranks third because students want there to be flexibility to be able to rearrange their room to suite their taste while rule and regulation is also crucial so that evil vices such as stealing can be minimal and there can be orderliness.

5.2 Recommendation

The implication of this to the institution's housing administrators and private landlord is that this research will aid the designing of innovative housing facilities. In order to input all sub-criteria (facilities, place quality, social quality and interaction), the first alternatives to consider are those in level in figure 27 in the order of ventilation, room arrangement, reading section and hot water. Another important thing that should be put into consideration is creating university owned on-campus or off-campus housing for married couples because from interviews carried out, all married couples pointed this out.

Several future research is recommended to examine if the AHP instrument is valid in other North Cyprus universities and in universities abroad and validate the four level

model for student housing. Further study on how ethnicity and course of study can affect service quality of student housing can be carried out

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APPENDIX

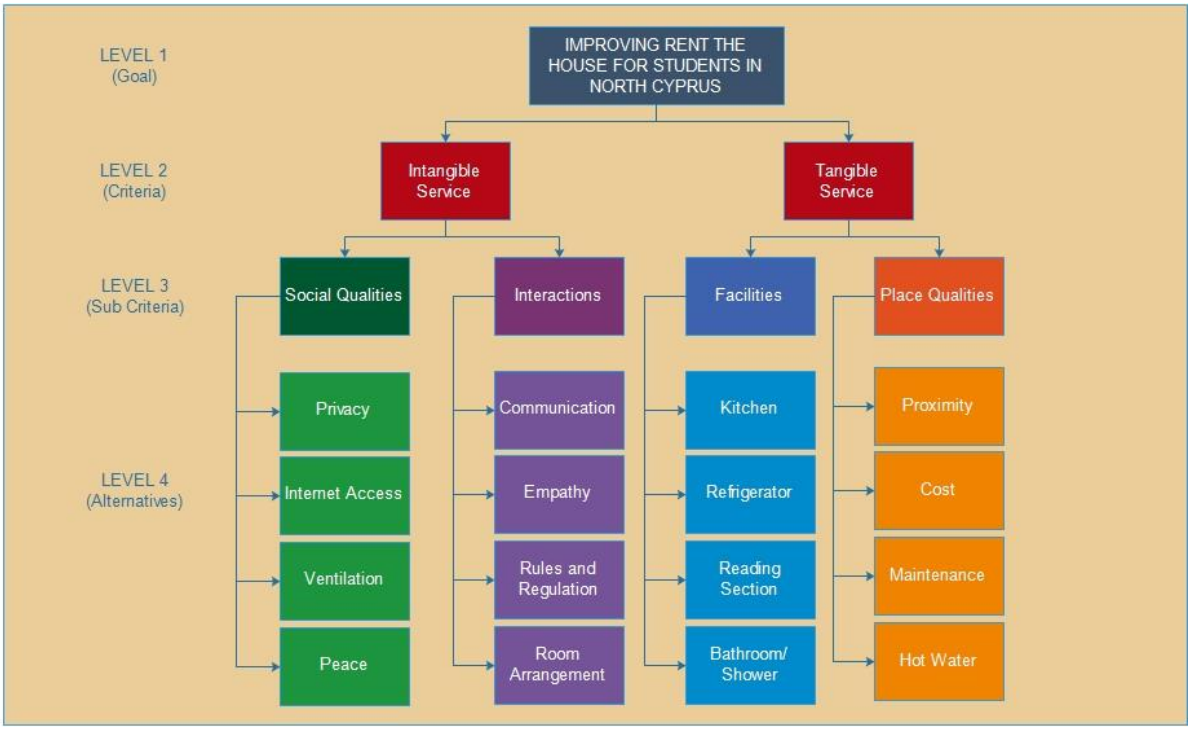
Appendix A: Questionnaire

Dear respondent;

In light of the Analytical Hierarchy Process (AHP), this questionnaire is designed by pairwise comparison for factors and decision options in 9-point intensity of relative importance scale as follow:

9-POINT INTENSITY OF RELATIVE IMPORTANCE SCALE

Intensity of Relative Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to objective 1.
3	Moderate importance of one over another	Experience and judgment slightly favor one activity over another.
5	Essential or strong importance	Experience and judgment strongly favor one activity over another.
7	Demonstrated importance	An activity is strongly favored, and its dominance is demonstrated in practice.
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation.
2, 4, 6, 8	Intermediate values between the two adjacent judgments	When a compromise is needed.
Reciprocals of the above nonzero numbers	Reciprocal for inverse comparison	



Definition of Terms:

Place Quality	Quality or characteristics possessed in relation to location
Facility	Amenities provided
Interaction	Action that occurs that has effects two or more parties
Social Quality	Qualities possessed that help in relating with others
Proximity	Near or close to the university
Cost	The amount charged for room or apartment
Maintenance	Scheduled and unscheduled repairs and renovation
Hot water	Supply of water that has relatively high temperature
Kitchen	A room equipped with cooking facilities
Refrigerator	Kitchen appliance where you can store your perishable
Reading section	An area set aside for studying
Bathroom/shower	A room equipped for taking a bath or shower.
Communication	Easy conveyance of information
Empathy	Understanding and sharing other's feelings
Rules and regulation	Principle governing the tenants
Room arrangement	Flexibility that allows tenants to be able to rearrange the
Privacy	Freedom from interference or being disturbed
Internet access	Services that connect objects and people
Ventilation	Proper circulation of air in the house
Peace	Tranquillity

Personal Information

Gender:
Male ☐
Female ☐

Age:
16-20 ☐
21-25 ☐
26-30 ☐
31-35 ☐
Otherwise, state……

Marital Status:
Single ☐
Married ☐

Location of Housing
On-campus ☐
Off-campus ☐

Education:
Undergraduate ☐
Master ☐
PHD ☐

Cost of Room (TL)
1,000- 2,000
2,000- 3,000
3,000- 4,000
4,000- 5,000
Specify if more……

No of Room mates
0 ☐
1 ☐
2 ☐
3 ☐
Other: ……

How did you know about your apartment
Friend
Family
Agent
Self

Nationality:
……..

Criteria	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Criteria
Tangible																		Intangible

Sub Criteria for tangible	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Sub Criteria for tangible
Place Quality																		Facility

Sub Criteria for intangible	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Sub Criteria for intangible
Interaction																		Social Quality

Alternatives for Place Quality	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Alternatives for Place Quality
Proximity																		Cost
Proximity																		Maintenance
Proximity																		Hot water
Cost																		Maintenance
Cost																		Hot water
Maintenance																		Hot water

Alternatives for Facility	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Alternatives for Facility
Kitchen																		Refrigerator
Kitchen																		Reading Section
Kitchen																		Bathroom/Shower
Refrigerator																		Reading Section
Refrigerator																		Bathroom/Shower

Alternatives for Facility	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Alternatives for Facility**
Reading Section																		Bathroom/Shower
Alternatives for Interaction	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Alternatives for Interaction**
Communication																		Empathy
Communication																		Rules and Regulation
Communication																		Room Arrangement
Empathy																		Rules and Regulation
Empathy																		Room Arrangement
Rules and Regulation																		Room Arrangement

Alternatives for Social Quality	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Alternatives for Social Quality**
Privacy																		Internet access
Privacy																		Ventilation
Privacy																		Peace
Internet access																		Ventilation
Internet access																		Peace
Ventilation																		Peace