



# Expectations and Realities of International Students in a South African Capital City

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## Abstract

Since the demolition of apartheid in 1994, South Africa has become an educational hub for many students from the African continent. Due to a variety of factors that are pushing students to seek qualitative education outside their home countries, countries such as South Africa have realised the potential of this lucrative market but still needs a better understanding of this niche and must develop the initiatives to attract these students as a means of increasing revenue. Although this pull-push model is well documented in the tourism literature, it is not acknowledged from international students in Africa. More so, studies on international students have somewhat overlooked international students service experiences at their ultimate learning destination. This study examines international students' perceptions of service expectations and experiences and compares both and then reports upon the variation. Results show that the overall quality of service delivery to international students at Tshwane University of Technology (TUT) is not encouraging as it stands at 28.60%, consequently implying an overall poor service delivery. The major areas that the respondents recommend for improved development are educational support, infrastructure for leisure activities, accommodation and especially the quality of the education. The purpose of this article is to examine the service expectations and real service experienced by international students at a University of Technology in the City of Tshwane (Pretoria, South Africa). A quantitative research method was employed and from a population N=1505 international student respondents that were sent an online questionnaire, 325 usable responses were received.

**Keywords:** Educational visitors, International students, Service expectation, Quality of service

## Introduction

The South African tourism industry is experiencing significant growth regarding international visitor arrivals. This has translated into huge revenue generation and employment opportunities for the economy. In 2012 South African tourism recorded 9.18 million international visitors' arrivals



as reported by STATS SA, (2013) and 9.6 million in 2013 (Adams, 2014). It also created more than 1.2 million jobs in 2011 (WTTC, 2012), and over R80 billion annual revenue was recorded a few years before (Snyman, 2007). The above analysis represents tourism arrivals from the various reasons motivating human mobility to South Africa, including a visit by international students. Accordingly, the number of international students arriving South Africa has been increasing steadily from 12 600 to 60, 600 in 2009, 72 875 in 2012 and it is currently at 72 388 in 2016 (Statistics South Africa, 2017) consequently an indication for a better future if this tourism niche is well managed.

While acknowledging that there are many reasons motivating people to travel, the focus of this study is on international students as a component of foreign visitors to South Africa and the City of Tshwane (COT). The journey embarked on from home country to host country for the study is crucial to the development of tourism. Thus, the host country, host city and host university require proper administration for improving outcomes for international students as evidenced in countries such as the United States of America, the United Kingdom, Australia and Canada where educational export is considered a source of revenue, and, a tool for nation building. International students as a component of international arrivals are important visitors with many economic benefits for their host countries (Huang, 2008). International students' presence is characterised by huge expenditure (Vickers & Bekhradnia, 2007) which arises from increase patronage of some tourism and non-tourism services which are usually prevalent in the host community (Pawlak, 2013). There is usually an increase of activity within communities that host international students. This makes the international student market an essential contributor to tourism and non-tourism revenue; especially when one takes into consideration some mandatory expenditure about visas/permits application for a temporary stay, medical aid subscription and renewal, accommodation, local travel, entertainment, food and other living expenses. All the above listed are service-oriented expenditures that are patronised by international students at the destination.

To make the most of the benefits from visitors' attendance at a destination, especially the economic benefits in it; a periodic assessment of visitors' perceptions of the quality of service delivered is vital so as to mitigate poor service quality delivery. This view on the importance of assessing the quality of service offered to visitors is supported by van Riper and White (2007), and these authors advocate that destination managers should conduct an assessment of visitors' needs and investigate if these needs are met. Doing this concerning the current study would help improve on service delivery to the present cohort of international students and would improve the attraction of potential students' who will be relying on word-of-mouth recommendations from the current visitors' experiences. More so that today's consumers are yearning that service delivery should at least address consumers' expectations, and if at all it cannot be surpassed and taken to new heights. Given that service quality is described as a consumer's judgment about a service's overall excellence or superiority (Parasuraman, Zeithaml & Barry, 1988) an appraisal is needed to determine whether there is a positive or negative difference between service received and expectations of consumers. Assessment of the quality of service offering should be more particular in the tourism and hospitality businesses, given that most service providers may be offering the same types of services, but, not providing the same service by the quality of service offered.

Still on the assessment of service quality and the evaluation of consumers' perceptions about the level of satisfaction, Minh, Ha, Anh and Matsui (2015) highlighted the effort of academics and a plethora of studies within the tourism and hospitality domain. The authors mentioned a view service framework within the tourism and hospitality domain as follows: LODGSERV - lodging services by Knutson et al., (1990); LQI – Lodging Quality Index by Getty and Getty (2003), and HOLSERV – hotel services by Mei, Dean and White (1999). The above service quality frameworks



have been adopted by service scholars such as Wilkins, Merrilees and Herington (2007), Ladhari, (2009), Al Khattab and Aldehayyat (2011), Boonitt and Rompho (2012), Karunaratne and Jayawardena (2010), Hossain (2012), Markovic and Raspor (2010), Juwaheer (2004), Juwaheer and Ross (2003) in several service quality studies within tourism and the hospitality industry. The aforementioned are studies within the hospitality and tourism sectors, but they are not on the perception of international students (as visitors) on service quality as intended by the present study.

Since educational motivated travel has been certified as an appendage of the tourism journey (Hall, 2008), on the one hand, an assessment of service expectation and realities of international students (consumers of services offered by educational tourism niche) is very important like other tourism niches. Therefore, an understanding of educational visitors' profiles, their needs regarding having a broad knowledge of what they consume would serve to improve the quality of service rendered by the destination managers. On the other hand, the majority of what international students consume is service oriented; therefore, they would naturally have service expectations; which should be met as advised by van Riper and White (2007).

Another rationale for this study is that the primary objective for which most international students travel out is to acquire education as proposed by Fernandes (2006). The author described the totality of academic experience as the most important aspect of students' trips to a foreign country for education purpose. In addition to the abovementioned, there is a scarcity of studies that examine international students' service expectations versus their actual experience, especially, from an African destination viewpoint. All the above explain the need for this current study. In light of the above, the purpose of this study is to examine the service expectation and the actual service received by international students at Tshwane University of Technology (TUT) through the following objectives:

- To investigate factors influencing the decision of international students' to select South Africa as their destination and TUT as a place of study.
- To determine if international students' service expectation is addressed with a concurrent service experience at TUT.
- To obtain international students' suggestion on areas to improve their living and learning experience.

## Literature Review

### Educational visitors

Having international students as visitors is not only about recruiting them to a destination and institutions of higher learning; it also involves making sure the amenities that will address their needs, fulfil their expectations and enhance their overall experience are available. Moreover, to achieve this, the host destination and university seeking to attract, retain and consolidate on the opportunities in this needs to understand international students market (Mpingajira, 2009), and have adequate knowledge of what this unique visitor expect requires for a quality experience amongst other requirements. Consequently, this means ensuring the quality of service to be provided meets their expectations. While discussing educational visitors Ritchie, Carr and Cooper (2003) classify educational visitors as (i) tourism first visitors, and, (ii) education first visitors. The tourism first is visitors whose primary motivation is tourism; however, purposeful learning comes in as a component of what will be done during the journey. On the other hand, the education first



relates to visitors whose primary motivation for travelling is learning. Even though, this category of visitors is still involved in tourism activities as either part of a lifestyle or as part of what they must undertake during their selected course of study.

Although, respondents in this study are best described under the educational first category, most of the studies on educational visitors were conducted on service expectations and experience on the tourism first category (Packer & Ballantyne, 2002; Sheng & Chen, 2012; Dragicevic, Letunic & Pisarovic, 2013), especially the range of activities happening around inter alia museums and cultural tourism centres. There is a dearth of academic studies that compare the service expectation and experience of the education first category, especially in a South African university, thus limiting the availability of literature in this direction. This may further make it difficult, if not impossible for people managing international students affairs in South Africa and the host universities (as service providers) to make the necessary improvement that is supposed to be addressing the disparity between service expectations and the experience/perceptions on service consumed by this category of visitors.

### **Educational service expectations and experience of international students**

There is a dearth of studies examining international students' perception of services received at the host destinations. Search conducted shows that most of the issues that have generally received academic attention focused on difficulties faced by international students on adjustment and behaviour, emotional well-being, socio-cultural adaptation and language challenges especially for those coming from non-English speaking countries (Chen & Chen, 2009; Li, Wang & Xiao, 2014; Telbis, Helgeson & Kingsbury, 2014; Hegarty, 2014; Kuo, 2011; Lin & Scherz, 2014) have been well discussed. Also included are studies on factors pushing international students away from home or destination as well as those pulling them to the host destinations.

However, as the demand for quality education continues to grow, our knowledge on factors driving international students out of home countries as well tactics used by destination to pull them inward has been broadened (Mazzarol & Soutar, 2002; Nghia, 2015). Premised on the theoretical ideology that factors influencing visitors to destinations can be linked to their expectations on service and amenities therein (Wong, 2013), this study conceptualises the same and puts forward that international students would naturally place some degree of expectations on the quality of education they are likely to receive and related issues surrounding service expected at countries and institutions selected. As for international students' service experience, Barron (2004) acknowledges that they have a range of learning problems and issues that affect their overall educational activities. In another study, Biggs (1996) discussed that international students must be ready to adapt to unfamiliar teaching and learning styles, and must adopt approaches such as working harder and/or undertaking extra reading to be able to cope. Another study by Barron, Baum and Conway (2009) observes international students' challenges such as language adjustment problem, acculturation, homesickness, difficulties in fitting into life in the host country - as mentioned in the previous paragraph do affect their overall experience as well as performance.

To better comprehend international students' service expectations from an educational point of view, the push (demand) and pull (supply) factors is very important in discussing what international students service expectations would be. For instance, Nghia (2015) has proposed that the scarcity or total absence of quality education in the home country is responsible for international students' decisions to



leave their home countries. Mazzarol and Soutar (2002) support this claim; the authors stated that a lack of access to higher education is largely responsible for the migration of many international students. Given that the lack of quality education is a major motivation for travelling, therefore, ample supply of quality educational services from destinations aiming to attract international students is required. For this reason, the role of educational support services such as stress management, adequate handling of students complaints on educational and non-educational matters, quality of teaching staff, improved library facilities, provision for scholarship/financial aid and placement for industrial training in the attainment of quality education cannot be undermined. Destination managers also need to understand that as soon as international students make up their mind on the decision to travel, the next thing is the selection of country and universities of interest (Mazzarol & Soutar, 2002). This explains the importance of having ample facilities that would answer the various reasons these students are leaving their countries.

### **The Host University and service delivery**

Tshwane University of Technology was established on 1 January 2004, by the merging of the Technikon North-West, Technikon Pretoria and Technikon Northern Gauteng (Wessels, 2006). TUT is the largest residential higher education institution in South Africa (Van der Walt, 2007). TUT has more than 50 000 registered students and campuses in Pretoria West, Arcadia, Soshanguve, eMalahleni, Nelspruit and Polokwane. TUT offers more than 150 accredited courses across numerous disciplines and has more than 1 505 registered international students as at February 2017. Given all these attributes, international students' service experience at the most populated university in the COT must be tailored towards addressing international students' expectations.

It is significant to note that, universities hosting international students have important roles to play in the educational tourism niche. According to Adediran (2017) the following are part of what a host university must be providing for international students; quality education via availability of vibrant programmes leading to international students', quality degrees upon completion, providing bursaries to cushion the financial burden/to reward exceptional students, conducting short term courses to promote language proficiency for students from non-English speaking countries, supports for students to carry out internships programmes, accommodation/assisting in securing reliable apartment. Support for international students to settle down and cope with socio-cultural-related challenges, guaranteeing their safety, special support for smooth integration into their new environment, creating a platform for uniting students from the same countries, and partnerships with local and foreign institutions and companies for improved learning and research experiences amongst other things.

### **Methodology**

This study employed a quantitative approach to collect data through a structured questionnaire that was mailed to participants. The study area is the COT and it comprises for universities namely Tshwane University of Technology TUT, University of Pretoria UP, University of South Africa UNISA and Sefako Makgatho Health Sciences University, Ga-Rankuwa. Of these four universities, TUT was purposefully selected and international students at the COT based TUT campuses (Pretoria West, Arcadia, Art campus, Business school, Ga Rankuwa and Soshanguve) took part in this survey. Some of the reasons for selecting TUT out of the universities that are inside the COT is due to convenience in obtaining relevant permission such as having easy access to the database containing international students e-mail addresses, ethical clearances and willingness to allow this study to mention the name of the institution used. The population and sample size is discussed below.



## Research approach

This study adopted a quantitative approach. A structured questionnaire was conceived after an extensive review of literature which provides an in-depth understanding of international students' characteristics. This approach was considered given that it is concerned with the collection and analysis of data in numeric form and usually of structured research instrument from a structured interview (Jennings, 2010).

## Population, sample size and sample technique

On the population for this study, the entire 1 505 registered international students at the COT campuses of TUT at the time of conducting the field exercise were adopted. The figure for the population was collected from the international students' office of TUT, Pretoria west campus along with the e-mail addresses of 1 505 international students (being those duly registered for the academic session 2017 at the time this fieldwork took place). From a population (1505), the required sample size on a 95% level of confidence is 320 (Jennings, 2010). Therefore, this study targeted at least 320 respondents via a random sampling technique. The 320 respondents were from thirty countries of which the majority emanates from African countries. However, international students from America, Europe and Asia were among those who took the survey. In order avert having to harass local students via intercept survey technique, multiple participation and possible misplacement of research instrument amongst other challenges, an online survey technique was adopted. The use of an online medium to administer questionnaire gave all the *bona fide* participants an equal opportunity to participate and averted possible biases in respondent selection.

## Data collection

Since the data collection exercise for a quantitative study requires that a research instrument is designed, an online respondent-completed questionnaire comprising a five-point Likert scale and open-ended queries was prepared, validity performed and a pilot study conducted. The questions contained in the questionnaire were modified from past studies on factors attracting international students to a destination as well as factors used by destination to pull international students' inwards as gathered from the literature. Additionally, queries on the respondents' expectations and experience of educational service were developed.

## Ethical considerations

Ethical issues are usually associated with data collection. It comprises the procedure to be followed by the researcher in seeking for permission and the issuance of the permission by the appropriate authorities. An ethical issue addresses matters such as confidentiality regarding the information supplied by the respondents/participants and the protection of participants from all forms of injuries as well as loses of jobs, benefits or other possessions. The above aligns with Israel and Hay (2008) that ethical issues ensure that the rights of respondents are communicated and the assurance is given on their protection during and after a study. Given that TUT is the location of the field work and, international students across all the Pretoria based campuses are the respondents of this study, an application for permission to conduct study at TUT Pretoria based campuses and to use the international students was filed. Some of the documents included in the application for ethical certificate are the questionnaire and a copy of letter of invitation to the respondents. The letter of invitation to the respondents for their participation informed them that participation is voluntary, even when respondents are participating, respondents are at liberty to stop participation at any time they so wish and, assurance of confidentiality on information they



provided that it will be solely for this study. The researchers submitted all the required documents to the Directorate of Research and Innovation at Tshwane University of Technology in February 2016. After an extensive review of the documents submitted, TUT Research Ethics Committee's gave an approval by issuing an ethical clearance certificate with Ref #:REC/2016/10/003 in October, 2016. The ethical clearance certificate was later submitted to the Registrar for the final authorization to carry out this research at TUT campuses across the COT.

With regard to this study, the under-listed ethical considerations were addressed:

- The rights of the participants were duly communicated to them as respondents were informed that participation is voluntary.
- Respondents identity were protected and their perceptions cannot be linked to them and
- The information received were solely for this study as communicated to the respondents in the invitation for participation.

### **Validation of questionnaire and pilot study**

Prior to the actual data collection exercise, and in view of the fact that a questionnaire should be able to measure what is designed to measure (Daramola, 2006; Cohen, Manion & Morrison, 2012), the questionnaire was subjected to content and reliability tests for establishing whether the questionnaire could measure what it was designed for. The content analysis (validation of questionnaire) was done by few tourism lecturers and a statistician who acknowledges that the questionnaire is appropriate and the suggested statistical tools can be deployed for analysis. A pilot study was then conducted and analysed using a split-half reliability test which yielded 0.67.

### **Questionnaire administration**

After certifying the appropriateness of the questionnaire, the administration of the questionnaire to the respondents started from the 15<sup>th</sup> of January 2017. This was done by sending the questionnaire to the e-mail addresses of all the registered international students. This gave everybody an equal opportunity to participate if they so wished. After eight (8) weeks of questionnaire administration – which is the scheduled time for data collection, 325 responses were received and data collection was discontinued. This marks the beginning of data analyses which was done with Statistical Package for Social Sciences SPSS and presented via descriptive statistics. Below are the findings and discussions.

### **Findings and discussion**

The knowledge of respondents' demographic characteristics is very important in tourism development as it supplies information on respondents' needs and behavioural patterns needed for future planning amongst other things (Hassan & Shanewaz, 2014). This study includes respondents' demographic information for similar purposes. Table 1, shows respondents demographic characteristics.

**Table 1: Demographic profile of the Respondents**

Variable	Frequency	Valid Percentage
Male	177	54.60
Female	147	45.40
<b>Age group</b>		
Younger than or equal to 20	41	12.8



21 – 25	135	42.1
26 – 30	73	22.7
31 – 35	37	11.5
36 above	35	10.9
<b>Marital status</b>		
Single	245	75.4
Married	63	19.4
Engaged	13	4.0
Widowed	1	0.3
Live together	3	0.9
<b>Qualification studying for</b>		
National Diploma	151	47.19
B-Tech	102	31.88
M-Tech/MBA	38	11.87
D-Tech	29	9.06
<b>Countries of origin</b>		
Southern Africa (SADC)	204	63.4
Non African	9	2.8
Rest of African	109	33.8

Table 1 illustrates that 54.60% of the valid responses received were male while 45.40% were female. Also, 42.1% of the respondents were between the ages of 21 – 25, followed by 22.7% respondents for the age group 26-30 years of age. The age group younger than or equal to 20 comprised 12.80%; between 31 and 35 made up 11.5%, and finally, the 36 and above group comprised were 10.9%. These results show that 54.90% (42.1% + 12.8) of the respondents were 25 years or younger. This concurs with Cross (2006), wherein international student's average age was 24 years. The marital status section indicates that the majority of respondents were single (75.4%), married (19.40%), engaged (4.00%), live together (0.9%) and widowed (0.30%). Clearly, most of the respondents are single; this can be linked to their relative youthfulness. Regarding the qualification respondents are studying for, 320 respondents responded to this question as follows: National Diploma at 47.19%, B Tech at 31.88%, M Tech at 11.87% and D Tech at 9.06%. This means that the majority (79.07%) of respondents are undergraduates whilst 20.93% are postgraduate students. As for their countries of origin, a total of thirty countries where represented and this covers students from Southern African region (63.4%), the rest of Africa (33.8%) and non-African (2.8%).

#### **Descriptive analysis on aggregate mean and ranking of factors influencing respondents' decision to come to South Africa and TUT**

In order for the host destination and the university to be able to make life worthwhile for international students who are pushed out of their countries for different reasons, it is important to understand how influential some of the factors pulling them to both the destination country and the host university are. For instance, factors such as immigration opportunity (Yang, 2007), academic standards (Chen L-H, 2007) - which can be linked with quality of universities and learning infrastructure, cultural factors (Mazzarol and Soutar, 2002; Singh, Schapper & Jack, 2014), safety and host country's hospitality to visitors (Bhati & Anderson, 2012) are important in pulling them to host country. On the other hand, factors influencing their selection of host university including but not limited to availability of desired programme and educational support services cost on tuition and on living around the host community (Nghia, 2015) and many more.



**Table 2: factors influential to respondents' decision to come to South Africa and their selection of TUT**

Factors influential to their decision to come to South Africa	Aggregate Mean	Standard deviation	Rank
Internationally recognised universities	3.90	1.204	1 <sup>st</sup>
Availability of adequate infrastructure for leisure	3.74	1.281	2 <sup>nd</sup>
Opportunity to migrate to choice destination	3.20	1.294	3 <sup>rd</sup>
Weather conditions	2.99	1.255	4 <sup>th</sup>
Proximity to my country of origin/residence	2.97	1.362	5 <sup>th</sup>
Cultural diversity	2.93	1.191	6 <sup>th</sup>
South Africans are peace-loving people	2.76	1.237	7 <sup>th</sup>
Safety/security of lives and properties	2.34	1.315	8 <sup>th</sup>
Factors influential to their selection of TUT	Aggregate Mean	Standard deviation	Rank
Quality of education offered by TUT	3.92	1.132	1 <sup>st</sup>
Availability of my intended course/qualification of study	3.84	1.339	2 <sup>nd</sup>
Good educational support in place for international students at TUT	3.42	1.318	3 <sup>rd</sup>
Low tuition fees	3.41	1.323	4 <sup>th</sup>
TUT is the only university that accepted my application	3.12	1.446	5 <sup>th</sup>
Affordable cost of living in the COT	2.73	1.249	6 <sup>th</sup>
Scholarship offered by TUT	2.31	1.367	7 <sup>th</sup>
Quality of sporting facilities	2.44	1.276	8 <sup>th</sup>
Bursary was given to me by my country/employer to study only at TUT	1.97	1.247	9 <sup>th</sup>

Table 2 shows factors influential to international students' decision to come to South Africa. This section used a five-point Likert scale (making the cut off 3.00) to test some factors considered influential to 'international students' choice of a study destination from previous studies. From the results, three items can be considered topmost influential since their mean scores are comfortably above 3.0; these are the availability of internationally recognised universities with 3.90, availability of adequate infrastructure for leisure at 3.74, and, opportunity to migrate to elsewhere at 3.20. This outcome confirms the significance of these three highly rated items in terms of pulling international students to a destination as already affirmed by the previous study such as immigration opportunity - Yang (2007), Nghia (2015) - cultural and institutional reputations do influence international students to country and institution of study.

Also on a five-point Likert scale, Table 2 presents the result on factors influential to international students' decision to select TUT. The three topmost influential factors based on their high mean scores are quality of education offered by TUT at 3.92, availability of respondents' intended courses/qualifications at 3.84 and good educational support provided by TUT at 3.42. This outcome proves that international students attach a great deal of importance to the quality of education and related services when selecting a university. This finding concurs with (Chen, L-H (2007) who found that academic standard at the host institution influences international students' selection. The items that came fourth and fifth also surpass the 3.0 acceptance mean score; these are: lower tuition fees at 3.41, and TUT is the only institution that accepted respondents' applications at 3.12. These also corroborate Chew, Ismail and Eam (2010) - lower tuition fees and Nghia (2015) – conditions of admission. This result implies that respondents are likely expecting quality facilities in these five areas mentioned, and therefore, TUT management must be conscious of constantly doing well in areas such as these and many more. After all, it is a requirement for management to investigate how well it is meeting visitors' expectation as indicated by Van Riper and White (2007).



## Comparison of mean scores on respondents perception on service received and service expectation on facilities and services in the COT and TUT.

The main reason for comparing respondents' aggregate mean scores on actual service received (realities) and service expectation is to evaluate the quality of the service enjoyed and be able to ascertain whether the service quality is positive or negative. According to Melisidou and Theocharis (2007), service quality is the difference (either a plus or minus) between customers' expectations and perceptions of service received. Meaning, how well service delivery meets respondents' expectation (if service experienced is higher than expectation, service quality is positive; but, if service experienced is lesser than expectation, service quality is negative). Melisidou and Theocharis cite Grönroos (1984), Parasuraman, Zeithaml and Berry (1988) who note that "the degree of fit between customers' expectations and their perceptions of service received is regarded as service quality". Given that the relationship between visiting experience and visitors' post-memory is usually related to pre-expectations (Loomis, 1993). Below, is Table 3 depicting the results of aggregate mean scores on service received versus expectation on selected service consumed by international students at TUT.

Of the fourteen services related items examined in Table 3, only four - the quality of sporting facilities, health services, and approachable/helpful lecturers and, affordable cost of living in the COT recorded positive service. The remaining items recorded negative service quality. When one considers the percentage of four items that recorded positive service quality out of the fourteen items examined ( $4/14 * 100 = 28.60\%$ ), it suffices to say that the quality of services TUT provided to the respondents is 28.60%. In view of the outcome above, this study examines whether there are differences in respondents service expectation and perception of service received by gender and qualification. This was intended to establish if the respondents differ in views on service expectation and service received by gender and qualification (i.e., undergraduate and postgraduate degrees). In light of this, the following assumptions were made:

- i. **H<sub>01</sub>:** There is no significant statistical difference in international students' service expectation by gender and qualification being pursued.
- ii. **H<sub>02</sub>:** There is no significant difference in international students' perception of service delivery by gender and qualification.

**Table 3: Aggregate mean of international students perception on service expectation and service received at TUT (n = 325)**

Features	Expected service	Service received	GAP Value	Remarks
Quality of sporting facilities at TUT	2.44	3.46	1.02	Positive
Approachable/helpful lecturers at TUT	3.10	3.97	0.87	Positive
Quality of health (clinic) services at TUT	2.57	3.20	0.63	Positive
Affordable cost of living	2.73	3.27	0.54	Positive
Scholarship/financial aid offered by TUT	2.31	0.19	-2.12	Negative
Wi-Fi (wireless networks) services at TUT	4.05	3.13	-0.92	Negative
Accommodation facilities offered at TUT	3.91	3.21	-0.7	Negative
Transport facilities at TUT	4.15	3.56	-0.59	Negative
Educational support services at TUT	3.42	2.96	-0.46	Negative
Clean surroundings and landscape at TUT	3.79	3.34	-0.45	Negative
Infrastructure for leisure activities at TUT	3.74	3.47	-0.27	Negative
Safety	2.74	2.52	-0.22	Negative
Quality of education offered at TUT	3.92	3.77	-0.15	Negative
Library facilities	3.90	3.89	-0.01	Negative



A two-way analysis of variance (ANOVA) was used to classify whether there is a significant difference in the two hypotheses raised above. Reason for using ANOVA is due to it being a significant statistical technique suitable for comparing more than two means of a group or population. According to Kothari (2006), ANOVA is a procedure for testing the difference between different groups of data for homogeneity. In this context, two-way ANOVA is used when the data are classified on the bases of two factors; for example, gender and educational qualification as shown in the stated hypothesis. The appropriate statistical test to address this question is known as a 2 \* 5 factorial ANOVA, where the number 2 and 5 refer to the number of levels in the two respective independent variables. The method shows a repeated measurement where "interaction effect or variation" was also computed between respondents' gender and educational qualification in order to determine the inter-relationship that exists among the two different classifications. According to Huck (2004), a two-way ANOVA is carried out in preference to multiple one-way ANOVAs to avoid any increased risk in committing a Type I error and to enable both main and interaction effects to be tested.

**H0<sub>1</sub>:** There is no significant statistical difference in respondents' service expectation from TUT by gender and qualification being pursued.

**Table 4: 2-way ANOVA presenting differences in respondents' service expectation from TUT by gender and qualification being pursued.**

Source	Type II Sum of Squares	Df	Mean Square	Cal. F	Crit. F	Sig.
Gender	22.297	1	22.297	.484	1.245	.487
Qualification	164.928	3	54.976	1.194	2.60	.312
Gender * qualification	288.041	3	96.014	2.086	2.60	.102

a. R Squared = .034 (Adjusted R Squared = .012)

Table 4 presents the two-way ANOVA results of respondents' service expectation from TUT based on gender and qualification. The table indicates gender and qualification with calculated F-values of 0.484 and 1.245 against the critical F-values of 1.194 and 2.60, at the degree of freedom 1/317 and 3/317 respectively. The table also shows the corresponding p-value of 0.487 and 0.312 for gender and qualification respectively, which are higher than the significance level of 0.05. This means that no statistically significant differences in respondents' service expectation from TUT by gender and qualification being pursued. The interaction effects of the two independent variables (gender and qualification) also show that there was no statistically significant effect between gender and qualification (Cal. F = 2.086; Crit. F = 2.60) with a p-value of 0.102 which is higher than the 0.05 level of significance; hence, the hypothesis is not rejected. It can, therefore, be deduced that there was no significant statistical difference in international students' service expectation from TUT on the basis of gender and their qualification.

**Table 5: 2-way ANOVA presenting differences in international students' perception on service delivery by TUT by gender and qualification**

Source	Type II Sum of Squares	Df	Mean Square	Cal. F	Crit. F	Sig.
Gender	437.111	1	437.111	14.345*	3.84	.000
Qualification	366.601	3	122.200	4.010*	2.60	.008
Gender * qualification	426.745	3	142.248	4.668*	2.60	.003

a. R Squared = .075 (Adjusted R Squared = .053)



Table 5 presents the two-way ANOVA results of respondents' perception of service delivery at TUT by gender and qualification. The table reveals gender and qualification with calculated F-values of 14.345 and 4.010 against the critical F-values of 3.84 and 2.60, at the degree of freedom 1/301 and 3/301 respectively. The table also shows the corresponding p-value of 0.000 and 0.008 for gender and qualification respectively, which are lesser than the significance level of 0.05. This means that there were no significant differences in the respondents' perception of service delivery at TUT by gender and qualification. However, the interaction effects of the two independent variables (gender and qualification) indicates that there was a significant effect between gender and qualification (Cal.  $F = 4.668$ ; Crit.  $F = 2.60$ ) with a p-value of 0.003 which is lesser than the 0.05 level of significance; hence, the hypothesis is not retained. It can be deduced, therefore, that there was a significant difference in respondents' perception of service delivery at TUT by gender and qualification. In order to determine which of the qualification sub-variable (i.e., undergraduate and postgraduate students) contributed to the difference found in the hypothesis, Scheffe Post-Hoc was carried out. The result is shown in Table 6.

**Table 6: Scheffe post-hoc showing where the significant difference lies based on qualification**

Qualification	N	Sub-set for Alpha = 0.05
		1
M-Tech	36	34.81
D-Tech	26	34.19
National Diploma	145	32.89
B-Tech	94	32.33
Sig.		.189
		.189

Table 6 shows that respondents studying for M-Tech and D-Tech had mean scores of 34.81 and 34.19 (in subset 1) respectively. Respondents enrolled for the National Diploma and B-Tech had mean scores of 32.89 and 32.33 (in subset 2) respectively. The sub-sets were grouped together because their mean difference is less than 1. However, the table shows that the mean scores of sub-set 1 are significantly higher (with a mean difference of 2 and higher) than sub-set 2. This implies that postgraduate students (respondents pursuing both M-Tech and D-Tech qualifications) differ in their perception of service received at TUT compared to undergraduate students (respondents pursuing National Diploma and B-Tech). Therefore, postgraduate students contributed to the difference observed in Table 5. This may be due to postgraduate students' prior exposure to service delivery at TUT or elsewhere, leading to greater appreciation of facilities at TUT.

On the other hand, undergraduates are likely interacting with facilities at the university level for the first time, and thus they do not have a basis of comparison based on prior experiences consequently leading to unrealistic service expectations. According to Ojasalo (2001), customer expectations may include fuzzy, precise, implicit, explicit, realistic, and unrealistic elements which may likely affect their perceptions. In view of the findings regarding the comparison of service expectation and the actual service consumed, this study considers it very important to examine respondents' willingness to recommend TUT based on their experience. The importance of this exercise is to ascertain to what extent the quality of services offered at TUT will influence respondents to recommend TUT. Given that when visitors are satisfied with the service experienced, there is a possibility of them returning and also recommending the service provider to potential visitors (Crompton & Lamb 1986).

On international students willingness to recommend TUT to family and friends, Table 7 shows that 35.4% of respondents said unconditionally yes, 39.02% said yes, but on condition and a



number of factors improved, 20% were in two minds about recommending TUT, and only 5.5% said that they will not recommend TUT. This means that 74.43% of the respondents would recommend TUT to family and friends as a university (conditionally or unconditionally). This finding is impressive and indicates that more effort is required to get outstanding recommendations from the current international students, especially due to the not too impressive outcome from the overall quality of service as recorded in Table 3. In order to position TUT as a leading university that meets international students/service expectations, a query to sought respondents' recommendation on how and what areas to improve on service delivery was asked. The response is presented in Table 8.

**Table 8: willingness to recommend the COT and TUT to family and friends**

	Will you recommend TUT to family and friends as a university to study at?	Frequency (N)	Valid Percentage (%)	Cumulative Frequency (N)	Cumulative percentage (%)
	Yes, unconditionally	108	35.41	108	35.41
	Yes, on conditions that a number of social amenities are improved upon	119	39.02	227	74.43
	I won't say yes and, I won't say no	61	20.00	288	94.43
	Not at all	17	5.57	305	100.00
	Missing	20	-	-	-
	<b>Total</b>	<b>325</b>	<b>100.00</b>	<b>305</b>	<b>100.00</b>

Table 8 shows respondents' recommendations on areas to improve upon for quality service delivery at TUT. This became necessary in view of being able to fulfill international students' service expectation and to unveil areas not mentioned in the questionnaire that may be of concern.

**Table 7: international students recommendations on areas to improve upon for quality service delivery at TUT (n = 325)**

Recommendations on areas to improve upon for quality service delivery at TUT	Frequency (n)	Percent of responses (%)	Rank
Improved service on educational support (including stress management, handling of students complaints on educational and non-educational matters) at TUT	232	31.52	1 <sup>st</sup>
Improved support for bursary/funding	204	27.71	2 <sup>nd</sup>
Improved infrastructure for leisure and related activities at TUT	161	21.88	3 <sup>rd</sup>
Improved health services/providing clinics in all the campuses	160	21.74	4 <sup>th</sup>
Improved service on accommodation facilities at TUT	159	21.60	5 <sup>th</sup>
Improved service quality of education offered at TUT	107	14.54	6 <sup>th</sup>
Improved service on library facilities in terms of books and learning materials	76	10.33	7 <sup>th</sup>
Improved service on transport facilities at TUT	1	0.14	8 <sup>th</sup>
<b>Total</b>	<b>-</b>	<b>100.00</b>	<b>-</b>

Out of 325 total participants, 297 answered this query and this produces 736 total responses given that respondents were allowed to submit multiple responses. Recommendations made for TUT from top to bottom are: first - improved service on educational support with 232 responses, representing 31.52%. Second - improved support for bursary/funding had 204 representing 27.71%. Third - improved services on infrastructure for leisure and related activities had a



frequency of 161, representing 21.88% of responses. Fourth - improved health services/providing clinics in all the campuses with frequency 160 and 21.74%. Fifth - improved service on accommodation facilities offered at TUT scored 159 representing 21.60% of responses. Sixth - improved services on quality of education offered had 107 responses representing 14.54%. Seventh - improved service on library facilities recorded 76 responses representing 10.33% and, eight - improved service on transport facilities at TUT with the lowest at 1 response representing 0.14%. From the above analysis, one can ascertain that the respondents suggestions for improvement of service delivery in those key areas (improved service on educational support, improved infrastructure for leisure and related activities, improved service on accommodation facilities, improved service quality of education offered and improved service on library facilities) matched most of the areas where the quality of service was poor (see Table 3). This outcome is not a coincidence and TUT should consider acting on these recommendations.

## Conclusion and recommendations

Fourteen relevant pull factors on educational service delivery were modified from past studies and used to investigate service expectations and experience of international students at TUT. Analysis of the empirical data reveals that the overall quality of service delivery to international students at TUT is not encouraging as it stands at 28.60%, consequently implying an overall poor service delivery. There was no significant difference in respondents' service expectations from TUT based on gender and qualification, whereas, there was a significant statistical difference between respondents perceptions of service delivery at TUT by qualification. Notwithstanding the poor outcome on findings on service quality, the majority of international students that took the survey would recommend TUT to family/friends as a place in which to study. These are important findings which could assist the destination management in understanding areas to focus on regarding improving service delivery quality. Cumulatively, it is concluded that the overall perceptions of the current respondents indicate that TUT is doing fairly well in the area of service delivery – which is a reality of service received against international students' expectations. Especially as the suggestions made by international students on areas to improve on for quality service delivery deal with most of the aspects that respondents' service expectations were higher than the actual service experienced.

In view of the above conclusion, the recommendations made below buttress those made in the discussion supporting each data analysis section:

- ✓ TUT should not over-promise anything to international students as over promising would lead to poor service quality and subsequently poor loyalty and willingness to recommend TUT.
- ✓ An information desk should be introduced to supply information and awareness about infrastructure and services, and where and how these can be accessed. This might bridge the gaps observed in undergraduate and postgraduate students' perception of service received.
- ✓ TUT must improve on the maintenance of old infrastructure and the development of new ones in order to attract improved ratings and better perceptions of infrastructure and service delivery.
- ✓ Equip the international office to be able to appropriately deal with international students' complaints, and offer excellent educational support services such as information dissemination, orientation, a help desk, the platform to interact with fellow international students, and numerous services that will be of support to respondents' educational endeavours.

- ✓ TUT should be conducting research of this nature on an ongoing basis in order to be in tune with international students' expectations that may likely be changing in line with the global changes affecting international visitors' tastes, needs and wants.
- ✓ Finally, Figure 1 encapsulates how factors' pushing international students creates expectation and pull factors create the experience. This figure highlights the significance of word-of-mouth communication and previous experience in shaping international students service expectation from the host country, host city and the host university needs to be acknowledged. Also, a corresponding relationship between international students' experiences and their perception of service is equally depicted.

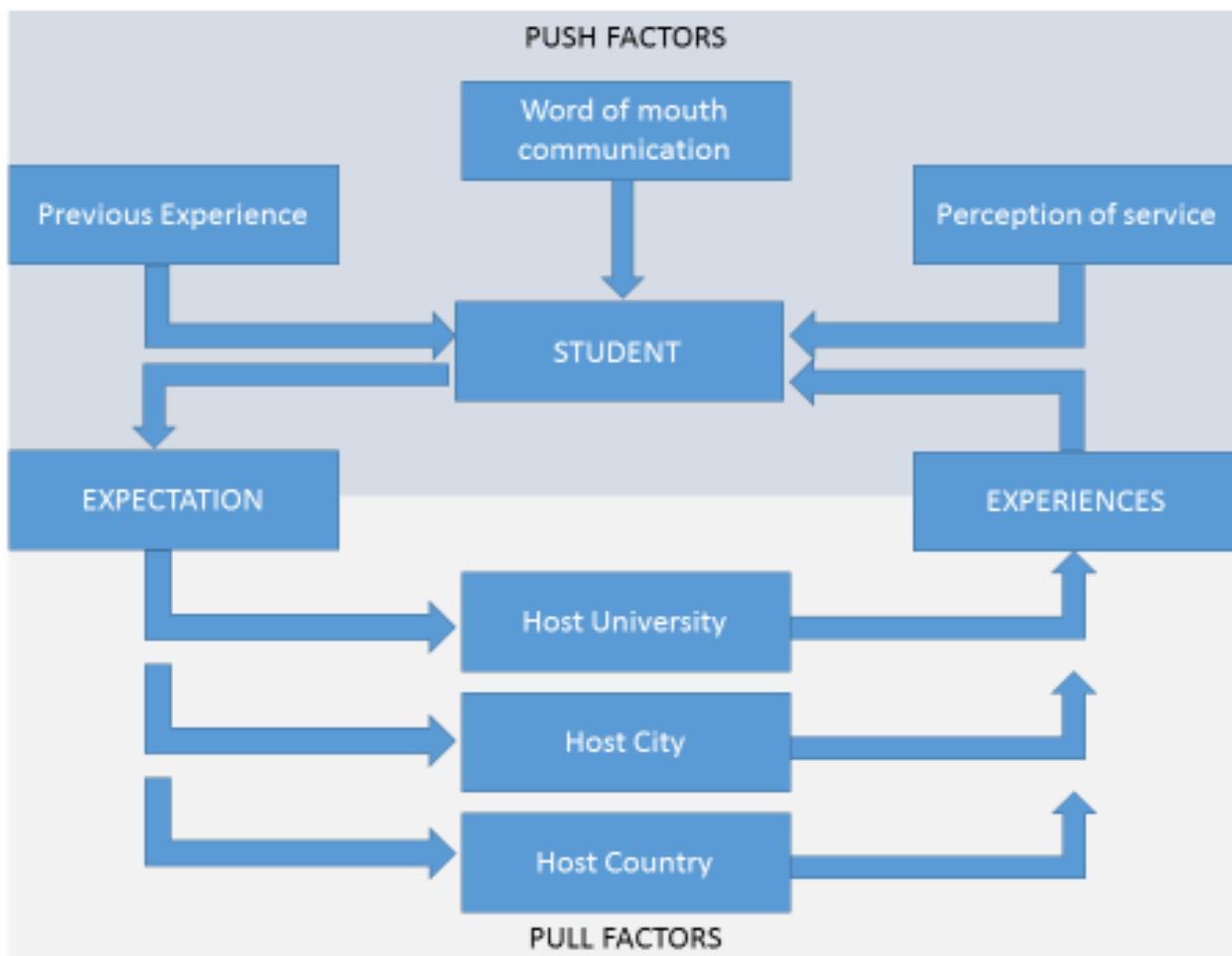


Figure 1: Push factors creating expectations and pull factors creating experiences

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