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Revisiting perceived service quality in higher education: uncovering service quality dimensions for postgraduate students

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ABSTRACT

Perceived service quality in higher education and its antecedents have been one of the significant issues worldwide. Despite being studied over decades, service quality (SQ) remains a crucial area of research due to its dynamic and contextual nature, among other reasons. The main research objective is to uncover the dimensions constituting SQ from the perspectives of postgraduate students and university staff to provide a better understanding of key elements of the SQ. The current research incorporated relevant theories and concepts from both marketing and higher education literature and employed in-depth interviews with students and staff for data collection. Interviewees' insights were analyzed using content analysis. A conceptual model is developed to explain the suggested relationship among study variables. Based on qualitative data analysis, four dimensions of SQ emerged, namely academic services, academic facilities, administrative services, and students' service role. Additionally, performance and employee orientation are found to affect SQ. Research findings can guide education managers and academicians to consider students' service role as an integral dimension of SQ and find new ways to improve it.

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Service quality; higher education; service role; postgraduates; United Arab Emirates

1. Introduction

Several scholars define service quality (SQ) as being a byproduct of perceived service performance and service expectations (e.g. Cronin & Taylor, 1992; Parasuraman, Zeithaml, & Berry, 1985; Srikanthan & Dalrymple, 2005; Zeithaml, Parasuraman, & Berry, 1990). Such conceptualization is based on expectation confirmation theory, developed by Oliver (1977, 1980) which views satisfaction as a function of a person's expectations and perceived performance. Other studies focus on perception only rather than an expectation-perception gap (e.g. Abdullah, 2006; Johnson & Winchell, 1988; Sultan & Wong, 2010). The current research is in accord with Sultan and Yin Wong (2013) definition of SQ as the extent by which specific service attributes, as determined by students, are met. Students' and staff service evaluation would be based on their experience on particular service attributes that they define as service recipients.

The extensive research on SQ can be partly attributed to the importance of SQ to the sustainability of the organizations, including HEIs. Empirical evidence show significant SQ outcomes such as students' satisfaction, trust and organization image (Sultan & Yin Wong, 2012); student loyalty (Fares, Achour, & Kachkar, 2013); students' satisfaction and retention (Negricea, Edu, & Avram, 2012); students' intentions (Twaissi & Al-Kilani, 2015); students' learning outcomes (Asgari & Borzooei, 2014) students' satisfaction, loyalty and motivation (Annamdevula & Bellamkonda, 2016) among other SQ outcomes.

The majority of empirical studies on SQ are conducted within commercial enterprises context. Importing and testing concepts and models directly to educational institutions, overlook potential differences between business organizations and higher education institutions in terms of their mission, objectives, strategy, processes, and other key strategic issues (Akonkwa, 2013; Hau, Evangelista, & Thuy, 2013). Additionally, three key points are apparent when examining SQ research. The dominance of quantitative approaches in studying SQ, the lack of agreement on SQ dimensions, and the dynamic nature of SQ construct are highlighted.

According to Gupta and Kaushik (2018), quantitative approach dominates a large percentage of research papers in recent years with an emphasis on SQ scale testing. To further verify such dominance, the authors reviewed 17 core papers on SQ published between 2010 and 2016. It is found that 15 out of 17 research papers utilized quantitative methods (e.g. Ansary, Jayashree, & Malarvizhi, 2014; Bayraktaroglu & Atrek, 2010; Cheruiyot & Maru, 2013; Hazilah Abd Manaf, Ahmad, & Ahmed, 2013; Min & Khoon, 2013; Senthil Kumar & Arulraj, 2010) while the remaining two research papers used qualitative approach (e.g. Anis, Abdullah, & Islam, 2014; Sultan & Yin Wong, 2013). Quantitative research dominance in SQ research indicates that the contextual nature of SQ is given limited attention.

Secondly, there is a lack of agreement on dimensions of SQ in higher education institutions (HEIs) in accordance to several scholars highlighting the issue in terms of SQ definition and measurement (e.g. Agarwal & Kumar, 2016; Angell, Heffernan, & Megicks, 2008; Chong & Ahmed, 2012; Gupta & Kaushik, 2018; Harvey & Green, 1993; Wicks & Roethlislein, 2009). Other scholars such as Oldfield and Baron (2000) and Voss, Gruber, and Szmigin (2007) point out that the methods used by HEIs to develop instruments for measuring SQ may lack validity and reliability.

Thirdly, SQ is a dynamic construct in which dimensions constituting SQ are likely to change over time. According to Seth, Deshmukh, and Vrat (2005), customers' service expectations change over time due to the competition among institutions. Scholars illustrate the increasingly dynamic and competitive landscape of higher education (e.g. Dehghan, Dugger, Dobrzykowski, & Balazs, 2014; Hemsley-Brown & Oplatka, 2006; Robertson & Kedzierski, 2016; Teeroovengadum, Kamalanabhan, & Seebaluck, 2016) calling for continuous measurement and improvement of services (Adinegara & Putra, 2016; Clemes, Cohen, & Wang, 2013; Gupta & Kaushik, 2018; Jain, Sinha, & De, 2010).

The changes in higher education (HE) in the United Arab Emirates (UAE) is a manifestation of the increasingly dynamic and competitive global landscape highlighted by scholars. Higher education in the UAE has witnessed a growing demand. According to Ashour and Fatima (2016), the growth of the higher education sector in the UAE has been remarkable since 1997. Enrollment growth in UAE-based universities has grown at a compound annual rate of 8–10% in which the overall student base reached 162,000 students for local and international universities. The market Revenue base of HEIs in UAE reached \$ 1 billion

(*Gulf News*, 2017). Based on the global competitiveness report for 2017–2018, UAE is ranked 36th out of 137 countries in the world in higher education and training pillar with the score of 5 on a 7-point scale (Schwab, 2017). The HE and training rating of the U.A.E reflect a relatively high quality of education, yet a room for improvement still exists.

According to Wilkins (2010), the HE market in the UAE has developed into a highly competitive sector with supply exceeding demand in the private sector. Dubai alone includes 62 local and international universities from 12 different jurisdictions including the United Kingdom (UK), United States of America (USA), Australia, India, Austria, and Russia (Knowledge and Human Development Authority, 2017). Such diversity of a relatively large number of universities is mandated to meet high-quality standards set by Commission for Academic Accreditation which further intensifies competition among universities.

In addition to fierce competition, the students market is heterogeneous as illustrated by several scholars (e.g. Bonnema & van der Weldt, 2008; Hemsley-Brown & Oplatka, 2015) and UAE student market is no exception. Therefore, the need for uncovering different students' perceptions of SQ while focusing on a specific segment of students becomes evident. The current research is an in-depth qualitative work that concentrates on postgraduate masters and doctorate students from all faculties of a leading university in UAE.

Based on the previous discussion, the current research is driven by several factors. Firstly, the limited number of qualitative research on SQ as compared to quantitative research. Secondly, the direct importation of SQ models from business contexts to higher education. Thirdly, the dynamic landscape of HE. Fourthly, the contextual nature of perceived SQ constructs and the need to focus on postgraduate students to uncover potential needs for an enhanced perceived SQ. Hesketh and Knight (1999), suggest that the number of studies that have used post graduate samples is a minority. However, several recent studies explore SQ among postgraduate students (e.g. Chaguluka, Beharry-Ramraj, & Amolo, 2018; Icli & Anil, 2014; Mwiya et al., 2019).

Therefore, the objectives of this paper are to explore perceptions of SQ; and identify determinants of perceived SQ from postgraduate students' and staff perspectives in the HEI under study. These objectives would be achieved by addressing the following research questions (RQs):

RQ1: What are the dimensions of SQ from postgraduate students and staff perspectives at the university under study?

RQ2: What are the determinants of perceived SQ at the university under study from postgraduate students and staff perspectives?

2. Literature review

The following section presents key studies on SQ and its antecedents in higher education.

2.1. Service quality in higher education

Service quality research can be classified into three key streams of research. One stream addresses SQ dimensions and measurement; a second stream looks into SQ antecedents and outcomes, and a third stream examines quality processes and systems. The first is a stream of research that relates to SQ dimensions and scale development (e.g. Abdullah,

2005; Agarwal & Kumar, 2016; Dado, Taborecka-Petrovičova, Riznić, & Rajić, 2011; Sultan & Yin Wong, 2013; Sunder & Sunder, 2016; Teeroovengadum et al., 2016; Wong, Tunku, & Rahman, 2012). The second research stream encompasses SQ antecedents and outcomes (e.g. Duzevic & Ceh Casni, 2015; Jelena, 2010; Lam, Lee, Ooi, & Phusavat, 2012; Mestrovic, 2017). The third is a stream that addresses quality process, systems, and assurance; this focuses mainly on the supply side of services and is not within the scope of this study (e.g. Beerkens & Udam, 2017; Blanco-Ramírez & Berger, 2014; Kanji, Tambi, & Wallace, 1999; Reda, 2017; Ryan, 2015; Yeo & Li, 2014).

The majority of quality research conducted in UAE is concerned with quality at the macro-level is focused on studying the higher education system in UAE (e.g. Ashour & Fatima, 2016; Hijazi, Zoubaidi, Abdalla, Al-Waqfi, & Harb, 2008; Jose & Chacko, 2017; Mahani & Molki, 2011; Soomro & Ahmad, 2012). Less number of articles studied quality in UAE at the institutional level in higher education (e.g. Badri, Abdulla, & Al-Madani, 2005; Fernandes, Ross, & Meraj, 2013; Wilkins, Stephens Balakrishnan, & Huisman, 2012). The current research relates to dimensions and antecedents of SQ streams at the institutional level since it explores dimensions of SQ in higher education and its determinants at one of the universities in UAE.

There is a high tendency for using SERVQUAL in an educational setting (e.g. Gupta & Kaushik, 2018; Law, 2013; Silva, Moraes, Makiya, & Cesar, 2017). One of the reasons for the extensive use of SERVQUAL might be attributed to being tested on several service industries including higher education institutions, healthcare, tourism and banking (Bayraktaroglu & Atrek, 2010; Carman, 1990; Hamzah, Lee, & Moghavvemi, 2017; Kassim & Bojei, 2002; Kitapci, Akdogan, & Dortyol, 2014; Kwan & Ng, 1999; Oldfield & Baron, 2000; Witkowski & Wolfinbarger, 2002; Yilmaz, Ari, & Gürbüz, 2018). According to Bayraktaroglu and Atrek (2010), SERVQUAL has a proven record of reliability and validity across different industries, including higher education, which explains its extensive use. Parasuraman et al. (1985) demonstrate that SERVQUAL is comprised of the following five dimensions that measure SQ: reliability, assurance, tangibles, empathy, and responsiveness.

The same five dimensions of SERVQUAL were used to develop SERVPERF by Cronin and Taylor (1992). While SERVQUAL employs expectation confirmation theory in which both expectation and perception of SQ are measured, SERVPERF measures only perceptions of service (Bayraktaroglu & Atrek, 2010). Both SERVQUAL and later SERVPERF have been employed for measuring SQ in HEIs (Brochado, 2009; Galeeva, 2016; Trivellas & Dargenidou, 2009). SERVQUAL and SERVPERF are well-grounded models imported to higher education using the same constructs, which reflect limited, if any, adaptation to education institutions nature and context. Brown and Koenig (1993) highlight the need for developing and testing industry-specific SQ models.

In response to the need for developing SQ models in HE, several SQ models have been developed; for example, HEdPERF developed by Abdullah (2005) and HiEdQUAL developed by Annamdevula and Bellamkonda (2012). Abdullah (2006) found that HEdPERF has higher validity and reliability scores when compared to SERVPERF. Brochado (2009) conducted research that examines five SQ scales in higher education. The five scales in the study are SERVQUAL, weighted SERVQUAL, SERVPERF, weighted SERVPERF, and HEdPERF. Measurement capabilities of the five scales were found to be high. However, SERVPERF including reliability, assurance, tangibles, empathy and responsiveness, and HEdPERF, including academic aspects, non-academic aspects, reputation, access,

program issues obtained the highest scores (Abdullah, 2006). When investigating the dimensions of both scales, it is found that HEdPERF encompasses elements of higher relevance and applicability to higher education institutions when compared to SERVPERF. Building on HEdPERF, HiEdQUAL scale is developed and tested within the HE context by Annamdevula and Bellamkonda (2012).

The five dimensions that constitute HiEdQUAL scale are administrative aspects, academic aspects, support services, campus infrastructure, and academic facilities. Subsequent studies employed context specific constructs in higher education. Sultan and Yin Wong (2013) posits three dimensions of SQ, namely, academic, administrative, and facilities. The authors found that marketing communication to students is an important antecedent of perceived SQ. Hazilah Abd Manaf et al. (2013) measured a HEI SQ in Malaysia using seven dimensions: administrative service, tangibles, academic programs, academic staff, and delivery of teaching, assurance, and empathy of academic staff.

Icli and Anil (2014) developed and validated HEDQUAL scale to measure service quality among MBA students in higher education. The model comprises five dimensions which are Academic quality- administrative services quality- Library services quality- Supportive services quality- Quality of providing career opportunities Teeroovengadam et al. (2016) developed and tested a model of SQ in Mauritius and incorporated five different dimensions: administrative quality, physical environment quality, core educational quality, support facilities quality, and transformative quality. There is no consensus on SQ dimensions in higher education. However, numerous research shows that SQ has gained substantial attention.

With the proliferation of SQ models discussed, it can be argued that HiEdQUAL holds several strengths as a model for measuring SQ in higher education institutions for various reasons: (1) the five dimensions that build up HiEdQUAL represent the different services that students experience within a higher education institution. Therefore, it is found descriptive of received services and industry-specific; (2) HiEdQUAL showed high reliability when developed and tested in which Cronbach alpha = 0.90 (e.g. Annamdevula & Bellamkonda, 2012); (3) each dimension in HiEdQUAL groups items together to represent a particular functional area within a higher education institution. Such grouping facilitates the identification and measurement of perceived SQ for each functional area. For example, students perceived SQ of academic services could be identified and measured separately from students perceived SQ of support services or non-academic services. Consequently, HiEdQUAL structure can provide accountability for different functional areas in addition to the identification of perceived strengths and areas of improvement from a functional perspective.

In light of the previous discussion, when re-examining SQ dimensions, it is necessary to segregate different services provided to students rather than view various educational services holistically. Table 1 below summarizes predominant models used in SQ of HEIs.

When examining the dimensions of HiEdQUAL model, it is found that the dimensions incorporate different value creators in a typical higher education institution such as academicians in academic aspects, administrators in administrative aspects, IT staff in support services, librarians in academic facilities among others. Inclusion of different value creators is aligned with value co-creation premise in Service Dominant Logic paradigm (SDL) developed by Vargo and Lusch (2004, 2008) and later used by other scholars (e.g. Babb & Keith, 2012; Gannage, 2014; Grönroos & Gummerus, 2014; Wilden & Gudergan,

Table 1. Summary of SQ models in higher education.

Model	Dimensions	Sources
SERVQUAL	Assurance-Empathy-Responsiveness-Reliability- Tangibility (expectations – perception of performance)	Parasuraman et al. (1985)
SERVPERF	Assurance-Empathy-Reliability-Responsiveness Tangibility- (Perception only measurement)	Cronin and Taylor (1992)
HedPERF	Academic aspects- Program issues Reputation- Access- Non-academic aspects	Abdullah (2005)
HEDQUAL	Academic quality- administrative services quality- Library services quality- Supportive services quality- Quality of providing career opportunities	Icli and Anil (2014)
HiEdQUAL	academic aspects, administrative aspects, academic facilities, campus infrastructure, and support services	Annamdevula and Bellamkonda (2012)

2017; Zinser & Brunswick, 2016) as a paradigm shift in service marketing theory. Within an HEI, efforts of all value creators, such as educators, IT staff, administrators, librarians, are essential for value creation. Therefore, HiEdQUAL accounts for all value creators within a higher education institution except for students. From this point, it is found necessary to consider the inclusion of students as an integral part of the learning process itself and as co-creators of quality and thereby students' service role is suggested to be an element of measuring SQ in the HiEdQUAL.

Both higher education literature and service marketing theory support the service role of students in co-creating SQ. From a higher education perspective, several scholars view students as partners which emphasizes students' engagement in the educational process and addresses students as co-producers of education (e.g. Clayson & Haley, 2005; Ferris, 2002; Kotzé & Du Plessis, 2003). Students take part in building up their own and other students' service experience through acquiring knowledge, interacting and building relationships with colleagues and friends (Ng & Forbes, 2009), participating in class discussions and other learning activities including research and group presentations. Service marketing theory and particularly Service-Dominant Logic paradigm (SDL), initiated by Vargo and Lusch (2004), consider recipients of service as co-creators of value in line with Zeithaml, Bitner, and Gremler (2012) who indicate that service users co-produce the services they consume. The authors further explained that the value of services, including educational services, would be limited without the full participation of service users which are students in the current research context.

In higher education, students' self-regulation and autonomy are illustrated in the literature as critical ingredients of student-centered learning (Klemencic, 2017). The author concluded that students' capabilities to influence their learning pathways and the environment are essential components of student-centered learning. Students' engagement in learning, as an element of student-centered environment can be enhanced through active learning strategies (Kuh, 2008). Students' autonomy, self-regulation, student-centered learning environment, and active learning are all concepts that illustrate students' active role and co-production of their learning experience. Thus in the context of the current research, students are resources and value co-creators with an active role in the co-production of their own and other students' educational experience. Since students are viewed as co-creators of service/educational value, therefore students can be considered as an element of perceived SQ. Qualitative research is required to verify students' role as a resource for value co-creation and uncover ways by which students' may shape other students' service experiences.

2.2. Service quality antecedents in higher education

Limited consensus exists over SQ antecedents (e.g. Angell et al., 2008; Gounaris, Stathakopoulos, & Athanassopoulos, 2003; Sultan & Yin Wong, 2013). Several factors are found to influence perceived SQ including information that students receive about the institution (File & Prince, 1992; Sultan & Yin Wong, 2013), demographics (Min & Khoo, 2014), and management trust (De Jager & Gbadamosi, 2010). According to Crosby (1979), processes and people need to be managed for service excellence. Service organizations that illustrate high service performance drive SQ (Siu & Wilson, 1998; Voon, 2006). Narver and Slater (1990) provided further explanation through describing performance orientation (PO) as part of an organization-wide focus on rendering superior service performance to service recipients which in turn is expected to enhance their perceived quality. Additionally, Voon (2008) pointed out that staff capability and enthusiasm towards their job are necessary for performance excellence and which provides students with higher quality. Based on the above discussion, it can be deduced that performance orientation (Narver & Slater, 1990) and staff capability and enthusiasm, an integral part of employee orientation, (Voon, 2008) drive SQ.

Performance orientation (PO) is defined as an organization's emphasis on quality and service excellence to deliver superior value (Narver & Slater, 1990). It is an institutional effort that takes place so that service excellence provides more value to students. Voon (2006) specifies activities pertinent to performance orientation, such as pursuing service excellence, revisiting service performance for service improvement, measuring service performance. Employee orientation includes staff selection, training, and motivation (Voon, 2006). According to Zhang (2010), employee orientation is an organization's focus on creating a supportive environment for employees to provide superior value. Voon (2006) found a strong and positive relationship between employee orientation and perceived SQ. Lytle and Timmerman (2006) explain that SQ perceptions of service recipients are primarily influenced by staff; hence, employee orientation is a crucial factor affecting perceived SQ.

All elements of a service-driven market orientation model (SERVMO), including performance and employee orientation, are associated with a higher perceived SQ in a Malaysian higher education institution (Lam et al., 2012). A review of previous studies on SQ and its antecedents present the first step towards answering the research questions through guiding the subsequent phases of the research.

3. Research method

The research methods section present the research setting, research approach, data collection instrument, and sampling, as shown in Figure 1.

3.1. Research setting

The research is conducted in one of the private universities in the UAE. The majority of students of the selected university are postgraduate students. The university provides both Master and Doctorate programs in three different disciplines namely education, business and law, and engineering and IT. The postgraduate programs offered by the

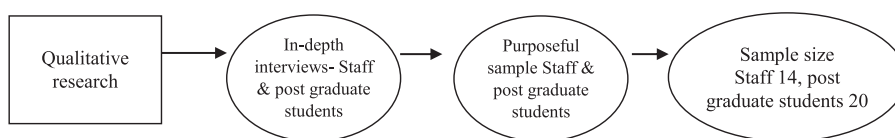


Figure 1. Research method.

university under study are licensed and accredited by the Ministry of Higher Education and Scientific Research (MOHESR) in the UAE. The staff population at the selected university was 52, while the current postgraduate population was 651. Patton (1990, p. 169) asserts that information richness is a standard criterion for research site selection. Since the chosen university has postgraduate students who experienced the university services, therefore the private university selected in the UAE is considered an information-rich source for addressing the research questions.

3.2. Research approach

A qualitative approach was adopted due to the exploratory nature of the research questions.

There is an apparent need for a qualitative approach to account for the ‘peculiarities of higher education’ (Akonkwa, 2009). Hau et al. (2013) assert the need for conducting contextual qualitative studies to explore phenomena in countries with different economic and political systems. In-depth interviews were conducted in which two different interview guides were developed to guide the conversation with each of the university staff and postgraduate students. Questions in the interview guide were driven by the research questions and the theoretical foundation of the current research in terms of Social Exchange Theory, Service Profit Chain Theory, and Service Dominant Logic paradigm.

To uncover antecedents of SQ, one of the questions posed, guided by social exchange theory, was as follows: ‘If you were a top manager at the university, what can you provide staff at the university to help them provide a better service level?’ Service-Dominant Logic and viewing students as co-creators of educational value through their interactions and participation in the educational service offered, has brought to attention students service role. Accordingly, one of the questions designed was about the extent to which students may affect the learning experience of each other. Alignment between research questions and interview questions was made to obtain data and insights relevant to the research questions (Appendix 1). Standardized semi-structured interviews were employed to facilitate comparability of qualitative data and data analysis (Christensen, Johnson, & Turner, 2014).

3.3. Sampling

Purposeful sampling was used to ensure that selected interviewees were well informed about the subject matter of the research (Creswell, 2009). Fourteen staff members and twenty students were purposefully selected and considered as sufficient and beyond theoretical saturation. The criteria for selecting staff participants was to have at least

one year of work experience at the same university under study and for student participants, at least one semester in the university. Theoretical saturation was taking place by the seventh in-depth interview for staff and by the twelfth interview for students. However, it was found beneficial to ensure that limited potential exists for new insights to emerge and to enhance the reliability of the data. Having more interviews beyond theoretical saturation was found counter-productive since interviewees' comments became redundant across various interview dimensions. Creswell (1998, p. 64) suggests a minimum of 5–25 in-depth interviews when using phenomenology.

As shown in Figure 1, the research adopts a qualitative approach, in which in-depth interviews are conducted with staff and postgraduate students. A purposeful sample is used to ensure that respondents have sufficient service experience with the university under study. Saturation before reaching 14 interviews with staff members and before reaching 20 interviews with postgraduate students.

4. Data analysis

A systematic approach to qualitative data analysis was utilized in which responses of different groups including staff and postgraduate students were reviewed and compared; data was assembled to identify common themes among responses, percentage frequency of responses were calculated to indicate an overall perception of SQ elements and factors affecting them. Research questions guide the organization of data collection and analysis to maintain focus on the primary research issue (Creswell, 2009). Accordingly, data analysis presented in the following sections includes analyses of SQ dimensions to answer RQ1 and SQ antecedents to answer RQ2.

4.1. Service quality dimensions

RQ1 aims at understanding what constitutes SQ based on postgraduate students and staff perceptions. Interview questions were designed to trigger respondents to describe aspects of SQ that are relatively important to them. Therefore, respondents were asked to describe their service level and experience provided by the university. Strengths points and improvement areas for the university were discussed to uncover important service attributes as determined by students and staff. Table 2 below presents the categorization of the sub-constructs into higher order dimensions of SQ and relevant examples of respondents quotes.

Four different SQ dimensions are identified from which three (academic services, academic facilities, and students' service role) are multidimensional while administrative services is a unidimensional construct.

Further investigation of students' service role is required due its newness as a component of SQ and the different forms it takes as explained by respondents (Table 3). Additionally, students' service role has the highest frequency distribution among other SQ dimensions uncovered in this research (Table 4). Both staff and post graduate students confirmed other students' active role in students learning and overall SQ experienced by students in many different forms. Table 3 shows the different ways in which students can either have a positive or a negative role in co-creating value in an educational setting as perceived by staff and postgraduate students.

Table 2. Service quality dimensions and respondents quotes.

Theme		Examples of respondents quotes
Academic services	Course related	‘Modules are well structured’, ‘Projects and research is a good part of the course’, ‘One of the courses was too easy, same like what we had in masters’, ‘courses are research based so we can learn from different resources’. A faculty member stated that ‘it is good we evaluate the courses we deliver after each semester to improve them’ ‘Some courses were difficult and not useful but the instructor made it interesting’ ‘Some topics in the courses were very useful ... I wish the instructor gave more examples and went slower on these topics’
	Instructor related	‘faculty teaching us are very qualified and competent in their job’, ‘Staff is highly qualified, ... broad experience and friendly’, ‘very informative and helpful – qualified calibers academically’ ‘ Sometimes there is inconsistency, a good instructor in a bad course and vice versa ... It is always good when we have a good course content and an excellent faculty’.
Academic facilities	Library	‘People in the library are so helpful but I think we can have more access to databases to help us more in our research’, ‘Our study is research based and accessibility to resources need to be more facilitated by the library’, ‘Library needs to be bigger in terms of textbooks’
	Education technology	‘Technology platforms are important ... Sometimes I am stuck in a meeting and unable to attend, in this case it is good to have the class on the portal’, ‘There are things that can be done through technology, I do not need to come all through the way from ... to work with my team on the project we can have a share point and work virtually ...’ Faculty members highlighted several aspects ‘There is a need to involve and use more technology and IT support in teaching ...’, ‘now using more technology in teaching is a criterion for better quality of work’, ‘More IT use and software are needed’
Students service role	Positive service role	A faculty interviewee: ‘Personal interest from students can create more synergy, value to themselves and to other students’, ‘There are students who are very active and take advantages of all services provided and this positive and inspiring to other students’, ‘Students have a role in SQ received just as the faculty and administrative staff have a role ... peer pressure is high, interaction is high too among students ... when students see other students exerting an effort they start increasing their effort and vice versa ...’
	Negative service role	‘A low quality cohort does not have much to bring to the table when it comes to class discussion or group projects Sometimes divert class discussion to irrelevant issues’, ‘some students are highly empowered in class and they enforce what they want even when others may not agree’.
Administrative services		‘not easy to reach admin staff on phone so maybe we need to rely more on technology, register online, chat online and so on ...’, ‘Admin people are helpful and their induction and orientation sessions were useful’, ‘They usually guide me when I am not sure of something’.

Table 3 explains different aspects of students positive and negative service roles from staff and postgraduate students’ perspectives. Items holding a positive connotation such as ‘adding value to class discussions, improving learning environment’ represent students’ positive service role. Items holding a negative connotation such as ‘wasting class time, causing disturbance’ represent students’ negative service role.

Table 4 shows the percentage frequency of perceived strengths and improvement areas of service aspects experienced. A percentage frequency distribution shows the percentage of observations for a certain response (Lavrakas, 2008). A high percentage reflects a higher occurrence of a specific response and therefore may indicate the relative importance of that service aspect and are considered elements of SQ.

Table 4 shows that the strengths and areas of improvement mentioned by staff and students were similar. However, there were differences among respondents on whether these

Table 3. Student service role as a service quality dimension.

	Staff perspective	Students perspective
Positive role	Students have a positive role in: <ul style="list-style-type: none"> • Enhancing instructors motivation • Enhancing other students' motivation • Improving learning environment and • Adding value to class discussions 	Students have a positive role in: <ul style="list-style-type: none"> • Creating more learning opportunities • Raising instructors' expectations and teaching level. • Adding value to class discussions • Helping & supporting other students • Making the class more enjoyable
Negative role	Students have a negative role due to: <ul style="list-style-type: none"> • Peer pressure negatively affect students service experience • Students heterogeneity may cause conflict • Class interruptions and inefficient use of time • Students' Negative WOM create a biased negative perception • Students' misbehaviours create a negative atmosphere. 	Students have a negative role due to: <ul style="list-style-type: none"> • Students may demotivate instructors • Wasting class time on unrelated topics • Class etiquette is not followed, causing disturbance. • Free riders getting good grades demotivate other students to learn.

elements are seen as strengths or improvement areas. The focus was to uncover elements of concern for respondents to be considered as elements constituting SQ.

Course content and staff competence have high frequency percentages, and both can be categorized as academic services (Table 3). However, it is found necessary to regard them as sub-constructs. Students mentioned that some courses were not useful, but the instructor made it interesting while some courses were useful, but the instructor did not meet their expectations. Therefore, the two sub-constructs are independent of each.

Library and education technology have a relatively moderate frequency percentage from both students and staff perspectives and can be both categorized into academic facilities. Both sub-constructs are viewed as facilitating research and learning for post-graduate students.

Students' discussion, other students' knowledge and behavior, other students' interactions, and student selection demonstrate students' service role. However, students highlighted several ways in which other students may have a role in their service experience at the university. Based on postgraduate students and staff quotes, it is found that students' role in the service experience of other students can be positive and negative.

Table 4. Frequency distribution of service quality items –staff and students.

	Staff	Frequency	Students	Frequency
Strengths	Course design and content	46%	Course design and content	30%
	Staff competence and qualifications	93%	Staff competence and qualifications	90%
	Library services	15%	Library services	20%
	Campus facilities	8%	Campus facilities	10%
	Students enriching discussion	100%	Other students interactions	90%
Improvement areas	Student mentoring & guidance by faculty	62%	Student mentoring & guidance by faculty	70%
	Educational technologies	54%	Educational technologies	25%
	Student selection	23%	Other Students knowledge & behaviors	10%
	Library Services	31%	Library services	20%
	Curricula & course content	8%	Curricula & course content	25%
	Campus facilities	8%	Students registration and enquiries	40%
			Campus facilities	5%

Students' registration and inquiries were highlighted only by students but held 40% frequency distribution, and therefore, it is categorized under administrative services. Several quotes express students concern with administrative services.

Campus facilities has a low frequency distribution between 5% and 10% which indicates a low level of importance as compared to other aspects and demonstrated by respondents in few quotes such as 'Campus facilities does not matter much because we postgraduate students working we do not attend or stay for long at premises', 'facilities are ok as we are part-time postgraduates students'. Based on such quotes, campus facilities were not viewed as an important component of SQ from postgraduate students' perspective and was not included among SQ dimensions. After uncovering dimensions constituting SQ, it was found important to explore factors that affect SQ from the same key informants.

4.2. Antecedents of service quality

Questions were posed in the interview guide to explore ways by which SQ can be improved. Among the points discussed were actors that may affect the service level offered to students and steps the respondent would take if he/she were assigned as a quality consultant. Finally, respondents were asked to suggest ways to support staff in providing a higher level of services.

Table 5 shows the higher-order constructs affecting SQ and their relevant quotes.

The percentage frequency of mentioned factors are presented in Table 6 showing that respondents focused on specific factors for enhancing SQ.

Table 6 above shows that staff professional development has the highest frequency distribution from staff (85%) and postgraduate students' (90%) perspectives. In addition to professional development, staff selection, recruitment, and motivation constitute employee orientation, which is a higher order construct conceptualized by (Voon, 2006). Similarly, having a positive leadership orientation and policies and building service culture is categorized as performance orientation (Narver & Slater, 1990).

Based on the above analysis in Tables 5 and 6, performance orientation and employee orientation are antecedents of SQ. Management that focuses on measuring and improving service level, and staff performance and accountability are all integral elements of performance orientation since those elements emphasize superior performance (Voon,

Table 5. Factors affecting service quality.

Theme	Examples of respondent quotes
Performance orientation	Staff: 'leadership and management should set systems and polices that helps in providing high service level', 'taking actions to improve quality from the surveys that students fill every semester', 'Staff should have service culture and positive attitude to serve students', 'Management should focus more on staff performance and accountability'. Students: 'we need more attention, guidance and mentoring ... so encourage staff to do that ... automatically more student guidance improves services offered'
Employee orientation	Staff: 'Develop and train the people to provide better output', 'student administration team training in customer service', 'More motivation is needed for people to do what they do better', 'More motivation is needed especially for administration staff and professional development ... motivation is important for better service'. Students: 'Faculty needs to be continuously updated and developed', 'Increase the number of administrative staff' ... , 'Select people with the right attitude', 'motivation is critical and we feel it inside and outside the class', 'keep getting highly qualified people', 'More people are needed to handle students'

Table 6. Antecedents of service quality.

Staff	Frequency	Students	Frequency
Employees professional development to increase staff competence	85%	Faculty needs to be continuously updated and developed	90%
Effective staff selection	80%		
Leadership orientation and policies	57%		
Build a service culture	62%	Encourage student mentoring and guidance	70%
Recruit more academic staff	31%	Increase academic staff number	10%
Staff motivation & training	32%		

2008). According to Siu and Wilson (1998), market-oriented service organizations, especially HEIs, emphasize professionalism and performance for service excellence, which is confirmed through respondents' quotes (Table 5). Additionally, employee training and development, motivation, and effective people selection are elements of employee orientation (Voon, 2006). Both performance and employee orientation are organization-specific internal factors that are expected to enhance SQ if managed effectively. However, due to the strategic nature of a performance orientation as defined by Narver and Slater (1990), performance orientation is expected to precede and drive employee orientation.

Accordingly, it can be proposed that in addition to the direct relationship between performance orientation (PO) and (SQ), an indirect PO-SQ relationship exists in which employee orientation is a mediator. In light of the qualitative data analysis, a conceptual model can be developed in Figure 2 to show the relationships among the study variables.

Literature review and qualitative data analysis guided the development of the conceptual model. However, Service-Dominant Logic (SDL) can further explain adding students' service role as an SQ dimension while Social Exchange Theory (SET) and Service Profit Chain (SPC) explain relationships among variables in the conceptual framework (Figure 1). Service-Dominant Logic paradigm (SDL), initiated by Vargo and Lusch (2004), consider recipients of service as co-creators of value. Zeithaml et al. (2012) service users co-produce the services they consume. The authors further explained that the value of an educational service would be limited without the full participation of service users/ students. Thus students' role in terms of motivation, interactions, and behaviors may enhance or diminish SQ.

Service Profit Chain Theory (SPC) explains PO-SQ and EO- SQ relationships. It states that internal SQ affects external SQ (Kotler & Keller, 2015; Tortosa Edo, Llorens-Monzonis, Moliner-Tena, & Sánchez-García, 2015; Yee, Yeung, Cheng, & Lai, 2009). In the current research context, it is suggested that a higher internal SQ in terms of performance orientation is expected to enhance SQ. Performance orientation in which a university is committed to providing service excellence, measuring service performance for improvement is expected to improve SQ. Therefore, SPC establishes proposition 1.

Proposition 1: Performance orientation affects service quality.

Similarly, Service Profit Chain (SPC) theory suggests that high quality support services and policies will enable employees to create more value (Heskett, Sasser, & Schlesinger, 1997) and in turn, enhance SQ. Performance orientation in which there is a high commitment to service excellence can drive systems, processes, and policies towards a higher level of

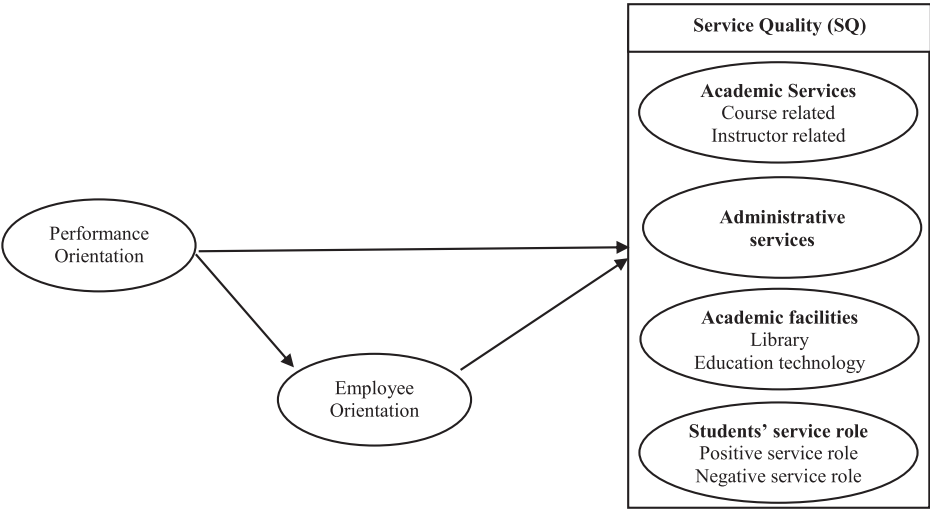


Figure 2. Research model.

employee orientation. A higher level of employee orientation in terms of better training and enhanced employee motivation can thereby lead to a higher SQ level.

Proposition 2: Performance orientation affects employee orientation and thereby affects service quality.

Social Exchange Theory (SET) postulates that a benefit given to one party creates a future obligation for that party to return the benefit and recipients reciprocate benefits through exchanges (Blau, 1964, p. 93; Coyle-Shapiro & Shore, 2007; Wikhamn & Hall, 2012). Employee orientation is expected to create a social obligation for employees to provide value in return in terms of a better quality of work and a higher SQ. Employee motivation, training, competence, and positive attitude are expected to enhance SQ. The following proposition can be formulated.

Proposition 3: Employee orientation affects service quality

5. Findings

RQ1 focused on uncovering SQ dimensions from staff and postgraduate perspectives. Four dimensions emerged based on qualitative data analysis, which are academic services, academic facilities, administrative services, and students' service role. Academic services, academic facilities, and students' service role are multidimensional while administrative services is a unidimensional construct. Academic services involved two separate sub-constructs, which are course related and instructor related services as both are not mutually exclusive. Academic services are those services that facilitate postgraduate students learning and includes two sub-constructs, namely education technology and library services. Students' service role consists of a positive student service role and a negative student service role. Administrative service is a unidimensional construct that involves receiving administrative services accurately, timely, and courteously.

RQ2 focused on exploring antecedents of SQ through which items identified by respondents were categorized into two well-established constructs in service marketing literature, which are performance orientation (PO) and employee orientation (EO). Both performance orientation and employee orientation are aspects of internal service quality, which, according to Service Profit Chain (SPC) theory drives external service quality to service recipients. Thus, PO-SQ and EO-SQ are explained. PO is an organization-wide orientation that focuses on service excellence, and therefore, it is found to drive employee orientation, which focuses on employee-related aspects such as employee motivation, training, and selection. Thus, an indirect relationship is suggested between PO-SQ that is mediated by employee orientation.

6. Discussion

As for SQ dimensions, interpretation of transcribed data identified themes that were common with existing SQ conceptualization and uncovered new aspects. When participants' ideas of SQ were grouped, common constructs with HiEdQUAL, recently developed by Annamdevula and Bellamkonda (2012), were found, including academic aspects, administrative aspects, and academic facilities. However, unlike HiEdQUAL, the current research uncovered the multidimensionality of two constructs, namely academic services and academic facilities which are unidimensional under HiEdQUAL model.

The multidimensionality of academic services in terms course-related and instructor related services has emerged in this research while previous SQ models such as HEDPERF (Abdullah, 2005) and HiEdQUAL (Annamdevula & Bellamkonda, 2012) viewed academic services as unidimensional. Course design and instructor related aspects are studied independently. For example, Swanson and Davis (2000) studied how students believe in instructors' ability to create satisfaction. Tracy, Knight, and Rieman (2014) studied the importance of course design and development to increase student satisfaction in learning.

The multidimensionality of academic facilities in terms of educational technology and library services emerged to constitute academic services. Faculty and Students' interest in enhancing technology and higher utilization of available technologies supports scholars and proponents of technology use. Culp, Honey, and Mandinach (2005) pointed out that education technology has resulted in changes in content, teaching methods, and learning process. New technology drives a continuous search for effective learning methods and teaching excellence (El Alfy, Gómez, & Ivanov, 2017). The flexibility, variety, and convenience that education technology provides make integration and utilization of education technology appealing to students. Quality standard six about learning resources established by the commission for academic accreditation (CAA) in the UAE has led to the increased importance of education technology. Quality standard six includes having classrooms equipped with technological supports, having technologies, which support student learning technologies, online learning, video conferencing, laptop computers, smart boards, and the Internet. Interaction between faculty and students is facilitated by a variety of technologies, including email, SharePoint, and Blackboard Learn. Due to evidence for the importance of education technology from academic and practical perspectives, education technology is added as a dimension of academic facilities along with library services.

Administrative services remained as a unidimensional construct with items that are aligned with the SQ dimension named non-academic aspect in the HEdPERF model (Abdullah, 2005), and another SQ dimension named administrative service in HiEdQUAL model (Annamdevula & Bellamkonda, 2012).

The fourth SQ dimension that emerged in the current study is students' service role in with two sub-constructs, which are positive and negative students' service roles. Such finding is in alignment with the Service-Dominant Logic paradigm in which service recipients, which are students, are resources and co-creators of service value (Grönroos, 2007; Gummesson, 2007; Lusch & Vargo, 2006). Students being co-creators of value is part of the increasing reliance of organizations on service recipients input and interactions for creating more value (Grove & Fisk, 1997; Gummesson, 2008; Zeithaml et al., 2012) within service and marketing management disciplines. Since customers are service recipients who can detract or enhance quality perceptions of their 'fellow customers' (Zeithaml et al., 2012), therefore using the same reasoning, students as service recipients can weaken or enhance quality perceptions of their peer students. Students role exist in educational literature as learner-to-learner interaction in which a reciprocal communication among learners for knowledge, information, and ideas exchange (Moore & Kearsley, 1996). Students' role is also evident in education literature through the metaphor of students as partners (Bryson, 2016). According to Clayson and Haley (2005), students should be seen as partners in the educational experience. However, operationalization of students' service role in SQ based on viewing students as partners in the educational experience has not gained sufficient attention.

Research question two regarding the factors affecting SQ, the points frequently mentioned by students and staff were classified into performance orientation and employee orientation. Items in performance orientation and employee orientation were identified by interviewees as factors affecting SQ, and therefore, the two constructs were found to be antecedents of SQ. This relationship is further explained by Service Profit Chain Theory (SPC) in which high-quality support services and policies, which are aspects of internal SQ, will enable employees to deliver high-quality service (Heskett et al., 1994, 1997).

7. Research implications

Research findings are expected to add to the knowledge base of marketing in higher education through its theoretical, contextual, and methodological contribution. Theoretically, the current study contributes several benefits to service quality research. Firstly, it extends the current SQ models in higher education through drawing from service marketing, service management, and HE literature. Secondly, to the best of the authors' knowledge, the research brought to attention students' service role as a newly introduced dimension of SQ among postgraduate students. Thirdly, the multidimensionality found in academic services (instructor related, course-related) and academic facilities (education technology, library services) provide more depth and insight to understanding those SQ dimensions which were unidimensional in previous models (e.g. HedPERF by Annamdevula & Bellamkonda, 2012). For example, education technology is found as a sub-construct of SQ that has relatively high importance from both students' and staff perspectives. Agarwal and Kumar (2016) reviewed 19 different models of SQ and highlighted three unaddressed gaps from which information technology was one.

Therefore, the current research among few others (e.g. Abdullah, 2005; Annamdevula & Bellamkonda, 2012; Icli & Anil, 2014; Teeroovengadum et al., 2016) went beyond importation of existing SQ models to SQ development. Consequently, the research addressed the need for developing models in the marketing of higher education highlighted in previous research (e.g. Chong & Ahmed, 2012; Hemsley-Brown & Oplatka, 2006; Sunder & Sunder, 2016).

Methodologically, the current research adds value through adopting a qualitative approach needed for theory generation since the majority of studies in SQ are quantitative (e.g. Annamdevula & Bellamkonda, 2012; Ansary et al., 2014; Bayraktaroglu & Atrek, 2010; Brochado, 2009; Cheruiyot & Maru, 2013; De Jager & Gbadamosi, 2010; Hazilah Abd Manaf et al., 2013; Min & Khoon, 2013; Senthilkumar & Arulraj, 2010) and few studies are conceptual and qualitative studies (e.g. Anis et al., 2014; Sultan & Yin Wong, 2013). Studies incorporating two stakeholders (students, academic and administrative staff) to revisit SQ are uncommon.

Contextually, given that the universality of social models is questioned (e.g. Gelfand, Erez, & Aycan, 2007) researching SQ in the UAE is a contextual contribution. Focusing on postgraduate students of a private university as a segment that is different in selection criteria, characteristics, and needs as compared to undergraduates add to the uniqueness of the context.

The research provides practical implications for education managers and practitioners. Practitioners are expected to extend more attention to the student selection criteria and screening to ensure a positive students' service role, which is found as an integral part of SQ. Thus, practitioners need to view students' attitudes, motivation to learn, and personality as important as their educational records and documents that meet entry requirements. Practitioners are expected to expand on learning technologies and encourage technology facilitated interaction between faculty and students to provide more learning opportunities and convenience to postgraduate students.

Performance and employee orientation are two institutional- related factors that affect SQ. Consequently, service performance needs to be measured periodically, and corrective actions are to be taken accordingly. Given the dynamic nature of SQ, service standards need to be revisited to ensure its relevance to students and feasibility to staff. Staff competence is highlighted as the main strength of the university and a sub-construct of SQ (termed as instructor related activities). Therefore, staff recruitment and selection, professional development, and motivation earn increased attention as a way of improving SQ.

8. Conclusion

Perceived SQ in higher education is dynamic and contextual. Using qualitative approach, revealed four dimensions of SQ including academic services (course-related and instructor related), administrative services, academic facilities (library and education technology) and student service role (positive service role and negative service role). Items to measure the previously identified constructs were developed based on interviewee responses. Being in a human-intensive context like higher education makes students' positive and negative service roles in SQ does not appear as a surprise. Similarly, with the pervasiveness of technology in postgraduates students' busy life, the role of education technology as an integral part of SQ reflect the effect of technology as an environmental factor on higher education

institutions as well as the dynamic nature of quality and what it represents. Active and adaptive learning and new teaching approaches explain the heightened importance of education technology as a component of SQ.

8.1. Limitations and future research directions

The developed model is based on a literature review and a qualitative study to further explore the research variables. Therefore, quantitative research is recommended to test the suggested model by investigating the nature and magnitude of relationships among performance and employee orientation and SQ. The current research found performance orientation and employee orientation as organization-related factors affecting SQ. Since organizations are complex systems, future research can focus on other factors pertinent to the workplace environment, and that may affect suggested relationships in the model. Such factors may include autonomy, supervisory support, the pressure to perform, performance feedback among other constructs that could potentially affect performance and thereby service quality level. Student service role represents one way of approaching students as partners and co-creators of value. Research effort need to be directed to uncover a means for effectively managing value co-creation and exploring new ways for co-creating value. The research is conducted in a private university, and therefore, future research can qualitatively explore the context of public universities to see if in-depth interviews would yield additional insights in model building.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix 1

Table A1. Alignment of interview questions to research questions–staff.

Research questions	Interview guide questions–staff
RQ1: What are students and staff perceptions of service quality at the university under study?	1.1. How would evaluate the service level experience by students at the university*? What are the strengths & improvement areas? 1.2. What represents an ideal service quality at the (university) from your point view? 1.3. Do you think students may affect each other learning and/or experience through their interactions within the class or outside the classroom? If yes, 1.4. To what extent can a student play a role in the service quality offered to other students? 1.5. In what ways can students play a role in the service quality offered to other students?
RQ2: What are the determinants of perceived service quality at the university under study from students and staff perspectives?	2.1. What are possible factors that may affect the service quality/service level offered to students? 2.2. If you were assigned a quality consultant to the university, what steps / activities would you focus on to improve the level of service quality / service level at the university? 2.3. If you were a top manager at the university, what can you provide employees at the university to help them provide higher quality of service?

*University was substituted with the name of the university under study, it is written as ‘the university’ to protect confidentially and anonymity of university under study.

Table A2. Alignment of interview questions to research questions–students.

Research questions	Interview guide questions–students
RQ1: What are students and staff perceptions of service quality at the university under study?	<p>1.1. How do you see the service level provided by the university* to students? Why? (Discuss strengths & weaknesses/ aspects you like or you dislike)</p> <p>1.2. Generally, what would be the characteristics of an ideal educational institution?</p> <p>1.3. Do you think students could have a role in your experience as a student or service level you receive? (If yes) In what ways can other students affect your experience here at the university?</p> <p>1.4. How would you evaluate your overall service experience</p>
RQ2: What are the determinants of perceived service quality at the university under study from students and staff perspectives?	<p>2.1. What are possible factors that may affect the service quality/service level offered to students?</p> <p>2.2. If you were assigned a quality consultant to the university, what steps / activities would you focus on to improve the level of service quality / service level at the university?</p> <p>2.3. If you were a top manager at the university, what can you provide staff at the university to help them provide higher quality of service?</p>

*University was substituted with the name of the university under study, it is written as 'the university' to protect confidentially and anonymity of university under study.