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Understanding postgraduate students' perception of service quality: a qualitative approach

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Abstract (~200 words):

Purpose: Despite extensive research on service quality in different countries, no single model has been agreed upon to measure service quality in higher education. Most studies conducted in the UK centred around undergraduates and English Universities, with limited studies conducted in Scotland. The paper aims to understand postgraduate students' perception of service quality in the Scottish context.

Methodology: A mono-method approach was adopted, utilising qualitative data collected through four focus groups involving 23 participants from several Scottish universities. Thematic analysis was used to analyse the qualitative data.

Findings: The findings indicate support for four dimensions of the HEdPERF model (non-academic aspects, academic aspects, reputation, and program issues) within the Scottish context. However, the access dimension was not completely recognised, contradicting the HEdPERF model. Additionally, three new dimensions emerged: support, career-related issues, and physical aspects. As a result, a seven-dimension postgraduate service quality model is proposed, encompassing Reputation, Academic aspects, Non-academic aspects, Program-related issues, Support, Career-related issues, and Physical aspects.

Research Limitations/implications: The study acknowledges limitations as it involved a small number of participants representing a single group of stakeholders in Scottish HEIs, limiting generalisation. However, the results provide valuable insights for Scottish HEIs, aiding their understanding of how postgraduate students evaluate services.

Originality/Value: This study contributes to evaluating service quality in the Scottish higher education context from the perspective of postgraduate students, using a qualitative approach. It also offers valuable insights to managers and executives in HEIs regarding postgraduate students' perception of service quality.

Key words: Service Quality; Higher education; HEdPERF; Postgraduate students; Qualitative approach

Paper type: Empirical original research

1. Introduction

Service quality, a critical aspect of service marketing literature, has drawn substantial attention from academics and practitioners. Service quality plays a vital role in the success of organizations operating in service industries (Lewis and Mitchell, 1990; Spathis, Petridou and Glaveli, 2004). High levels of service quality enable service providers to maintain customer satisfaction and gain a sustainable competitive advantage (Guo, Duff and Hair, 2008; Meuter et al., 2000). Higher education has been viewed as a “pure” service (Oldfield and Baron, 2000, P.86), higher education institutions (HEIs) have been classified as service provider (Kotler, 1985; Kotler and Andreasen, 1991), and students are considered to be their primary customers (Crawford, 1991), and its direct service recipients.

Scholars have examined service marketing constructs such as service quality and satisfaction in the higher education sector, aiming at helping HEIs succeed in the competitive marketplace (DeShields, Kara, and Kaynak, 2005; Russell, 2005). Service quality in this context refers to students' overall evaluation of services encompassing their educational experience (Allen and Davis, 1991; DiDominico and Bonnici, 1996; Holdford and Reinders, 2001). It includes a variety of educational offerings, like teaching and learning aspects, faculty-student interactions, physical environment, and administrations interactions, etc. Notably, service quality has been considered a key performance measure for excellence in education and a major strategic variable for HEIs seeking to expand their market share (Donaldson and Runciman, 1995). The creation and delivery of superior customer value have become crucial in creating a sustainable advantage in the highly competitive international education market (Kotler and Fox, 1995). Consequently, universities worldwide have greatly emphasized the quality of their offer and students' satisfaction with their educational experience, leading to numerous studies focusing on service quality in higher education.

Scottish higher education sector, like many others, is shaped by a range of policies, initiatives, and challenges that influence the delivery of service quality and student experiences. The Scottish Funding Council (SFC) plays a crucial role in ensuring quality of higher education and promoting continuous enhancement of learning and teaching in Scottish HEIs and the engagement of the university sector in Scotland with the UK Quality Code (Scottish Funding Council, no date). Initiatives such as the Enhancement Themes program aim to promote collaboration and improve the learning experience of students studying within the Scottish higher education sector (QAA Scotland, no date). Although Scottish HEIs have achieved global recognition for their excellence (Universities Scotland, no date), they face challenges such as

the increasing competition for students both domestically and internationally and evolving student expectations. These challenges require Scottish HEIs to continuously enhance their service quality to attract and retain students.

Despite the extensive research conducted across different countries, a well-accepted definition and model of service quality nor operational definition for measuring service quality remain elusive (Seth, Deshmukh and Vrat, 2005). Existing models like SERVQUAL and SERVPERF, developed for various industries, have been tested in higher education studies (LeBlanc and Nguyen, 1997; Oldfield and Baron, 2000; Sahney, Banwet and Karunes, 2004; Smith, Smith and Clarke, 2007; Ibrahim, Wang and Hassan, 2013), but have been proven inadequate due to the unique context (Cuthbert, 1996b; Abdullah, 2006a). Customers do not perceive quality in a one-dimensional way but rather judge quality based on multiple factors relevant to the context (Zeithaml, Gremler and Bitner, 2009).

As a result, various new models specific to education, such as ARCHSECRET, HEDPERF, EDUQUAL, ClassQual, SQM-HEI, HiEdQUAL, HEDQUAL, COURSEQUAL and TEdPERF, have been developed (Abdullah, 2006a; Mahapatra and Khan, 2007; Annamdevula and Bellamkonda, 2012; Vajda, Farkas and Málovics, 2015; Rodríguez-González and Segarra, 2016; Vaughan and Shiu, 2001). Among these, Abdullah's HEDPERF (2006a) has gained considerable attention as it focused solely on the higher education sector. However, it was developed to identify the determinants of service quality at a macro level (Icli and Anil, 2014). Furthermore, quality is subjective and varies across different contexts (Lovelock and Wirtz, 2011), and cultural differences can significantly impact the perception of service quality (Clemes, Ozanne and Tram, 2001; Clemes, Gan and Kao, 2008; Espinoza, 1999).

Most studies in the UK have primarily focused on undergraduates (Abu Hasan et al., 2008; Calvo-Porrall, Lévy-Mangin and Novo-Corti, 2013; Cuthbert, 1996a; Dado et al., 2011; Douglas, McClelland and Davies, 2008; Gallifa and Batalle, 2010; Hill, 1995; Holdford and Patkar, 2003; Joseph and Joseph, 1997; Joseph, Yakhou and Stone, 2005; Ling, Chai and Piew, 2010; Miller and Brooks, 2010; Oldfield and Baron, 2000; Peng and Samah, 2006; Stodnick and Roger, 2008; Sumaedi, Mahatma Yuda Bakti and Metasari, 2012), with limited research targeting postgraduate students (Angell, Heffernan and Megicks, 2008; Sahney, Banwet and Karunes, 2004; Barnes, 2007; Brochado, 2009; Icli and Anil, 2014; Sultan and Wong, 2010;). Moreover, a significant portion of research conducted in the UK has centred around English universities (Angell, Heffernan and Megicks, 2008; Barnes, 2007; Cuthbert, 1996a; Douglas, McClelland and Davies, 2008; Hill, 1995; Li and Kaye, 1998; Oldfield and Baron, 2000; Russell, 2005; Smith, Smith and Clarke, 2007), with limited attention given to Scottish HEIs (Vaughan and Woodruffe-Burton, 2011; Ibrahim, Wang and Hassan, 2013). Consequently, a focused investigation into service quality dimensions from the perspective of postgraduate students in the Scottish context is needed.

While previous studies have predominantly employed quantitative methods to measure service quality in HEIs, there has been limited attention given to qualitative aspects, particularly from the perspective of postgraduate students (Abbas, 2020). Thus, this study aims to understand postgraduate students' perception of service quality in Scottish HEIs using a qualitative approach. Specifically, the study seeks to answer the following research questions:

- Is the existing industry-specific model HEDPERF applicable in the context of Scottish higher education?

- What are the factors/dimensions of service quality in Scottish higher education intuitions from the perspective of postgraduate students?

By evaluating the applicability of the HEdPERF model and identifying the factors/dimensions of service quality from the perspective of postgraduate students, this study contributes to the evaluation of service quality in HEIs and provides insights into service quality dimensions specific to the Scottish higher education context.

2. Literature review

2.1 Service quality

Service quality has gained significant attention in recent decades as organisations recognise its importance for growth, survival and success (Anderson, Fornell and Lehmann, 1994; Donaldson, 1995; Rust, Zahorik and Keiningham, 1995). Understanding customer expectations and meeting them effectively are essential for managing service quality.

Assessing service quality is more challenging than evaluating goods quality (Asubonteng, McCleary and Swan, 1996). It is subjective and varies from person to person, making it difficult to define precisely.

Early scholars such as Churchill and Suprenant (1982) considered service quality an attitude that leads to superior service quality. Grönroos (1984, p.37) defined perceived service quality as “the outcome of an evaluation process, where customers compare their expectations with the service they have received”. Maynes (1985) was of the opinion that service quality was the extent to which a product offers the characteristics that the individual desires. Although Maynes’s (1985) research was the earliest attempt to quantify service quality by placing a number on the level of satisfaction, it failed to answer the characteristics of service quality and raised many questions.

Parasuraman, Zeithaml and Berry (1985, 1988) defined service quality as the extent of the discrepancy between customers’ expectations and perceptions. They emphasised that expectations mean what the customers feel that organisations should provide rather than would provide. This definition has been widely used, but aroused subsequent academic debate. Cronin and Taylor (1992) questioned the conceptualisation of service quality as a gap between expectations and performance, proposing that service quality should just focus on customers’ attitudes towards the service, while satisfaction should address the gap between expectations and perceptions.

Most definitions of service quality are customer-centered (Galloway and Wearn, 1998), with customer satisfaction seen as a function of perceived quality (Anderson and Sullivan, 1993), or perceived quality being a function of customer satisfaction (Parasuraman, Zeithaml and Berry, 1988).

Consequently, service quality has been regarded as customers’ general attitude or judgement towards a service (Cronin and Taylor, 1992; Parasuraman, Zeithaml and Berry, 1985) and is subjective in nature (Gummesson, 1991; Rust and Oliver, 1994). Customers’ perceived service quality involves a comparison of customers’ expectations with their actual service experience (Sasser, Olsen and Wyckoff, 1978; Grönroos, 1982, 1984; Parasuraman, Zeithaml and Berry, 1985, 1988; Bitner and Hubbert, 1994). Meeting or exceeding expectations leads to good service quality, while failing to do so results in poor service quality.

In higher education, service quality is vital for institutions to differentiate them from others and maintain a competitive advantage in the market (Parasuraman, Zeithaml and Berry, 1985). Service quality in higher education institutions refers to the factors that influence students' choice of institution, and failing to meet perceived quality is the main reason for students to withdraw from the institution (Mahmood et al., 2014). Brochado (2009) argued that a higher level of service quality provision will not only gain more customers' loyalty, but also improve staff productivity and increase customer referrals. Students' perception of service quality is an important issue to HEIs. The way HEIs deliver a service is crucial to the overall service quality and student loyalty (Abdullah, 2006a).

Many scholars have discussed that HEIs need to look at service quality expectations from students' perspective (Joseph, Yakhou and Stone, 2005; Oldfield and Baron, 2000; Russell, 2005; Tan and Kek, 2004). HEIs need to look at the service quality expectations from students' perspective and deliver a higher level of overall service quality (Douglas, Douglas and Barnes, 2006; Smith, Smith and Clarke, 2007) to enhance loyalty and satisfaction. After all, students are their primary customers and also key stakeholders. Understanding students' perceptions of service quality can help the HEIs to bridge the gap between students' expectations and their actual perceptions of service quality.

2.2 Service quality models

Over the years, a growing number of researchers have contributed to the literature on the measurement of service quality, resulting in a range of proposed models (see Grönroos, 1990; Mels, Boshoff and Nel, 1997; Brady and Cronin, 2001; Kang and James, 2004). Although service quality is widely acknowledged as multidimensional (e.g. Parasuraman, Zeithaml and Berry, 1985, 1988; Grönroos, 1990; Gummesson, 1992), a consensus on its dimensions remained elusive. The intangible nature of services adds to the complexity of defining and modeling service quality (Palmer, 2011), making it one of the most debated and controversial topics in services marketing (Brady and Cronin, 2001).

Grönroos (1984) introduced two dimensions for the measurement of service quality: technical quality and functional quality. Technical quality refers to the tangible aspect of service quality, including attributes such as employees' technical ability, employees' knowledge, technical solutions, computerized systems, and machine quality. Functional quality focuses on the intangible aspect of service encounters, encompassing attributes like employees' behaviour, attitude, accessibility, appearance, customer contact, internal relationship, and service-mindedness. Grönroos (1988) later added a third dimension, corporate image, which relates to customers' perception of the service provider. A positive and well-established image is considered a valuable asset that influences customers' perception of service organisations (Ghobadian, Speller and Jones, 1994). Grönroos' model suggests that customers' overall assessment of service quality is shaped by their perceptions of both the physical features and the performance features of the service package, which are further influenced by the image of the organisation.

Parasuraman, Zeithaml and Berry (1985) developed a widely accepted model based on gap analysis, positing that service quality is determined by the gap between customers' expectation and the actual service performance along the quality dimensions. Initially, ten dimensions of service quality were identified namely: tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication, and understanding the customer. Later, these ten dimensions were refined into five dimensions, namely reliability, responsiveness, tangibles, assurance and empathy, known as SERVQUAL to measure customers' perception of

service quality (Parasuraman, Zeithaml and Berry, 1988).

Although SERVQUAL gained wide acceptance, Cronin and Taylor (1992) questioned the gap analysis framework and proposed an alternative model called SERVPERF. They argued that service quality is a form of consumer attitude and perceptions only are better predictors of service quality. According to their perspective, service quality should be evaluated based on perceptions alone, without considering expectations and importance weights.

Despite the development of various service quality models across different service industries, no agreement has been reached pertaining to the measurement of service quality (Navarro, Iglesias and Torres, 2005a), and debates persist regarding on how to perceive basic dimensions of service quality, in terms of the number and content of the basic dimensions. It is widely acknowledged that the service quality construct should be operational and context specific, tailored to the unique characteristics of specific service industries (Dabholkar, Shepherd and Thorpe, 2000).

2.3 Service quality in Higher education

The higher education sector is recognised as a service industry, sharing similar characteristics with other service sector. As such, HEIs need to meet and exceed the needs of students (Gruber et al., 2010). However, quality in higher education is a complex and multifaceted concept, lacking a universally agreed-upon definition (Harvey and Green, 1993). Quality in higher education has been defined in many ways by many researchers and each definition has its own standards and perspective and is considered to be stakeholder-relative (Harvey and Green, 1993).

Considering students as key stakeholders, DeShields, Kara and Kaynak (2005) argued that if HEIs want to succeed in a competitive service environment, they must strive to deliver a high-quality service and satisfy students. Therefore, understanding the level of service quality and the various factors that influence overall service quality is of paramount importance. HEIs can make sure that all service encounters are maintained in a way that can improve students' perception of service quality (Abdullah, 2006a). Understanding the strengths and weakness of different factors and their impact can help HEIs better allocate resources and improve their services (Abdullah, 2006a).

The dimensions of service quality in higher education have been examined by many researchers, but there has been a lack of consistency in methodology and variables used to evaluate the service quality in this context (Leonard, Pelletier and Morley, 2003). Developing an adequate model for assessing service quality in higher education remains a challenge (Chong and Ahmed, 2012). Researchers emphasised the importance of selecting appropriate measurement tools to assess service quality and design effective service delivery (Brochado, 2009)

The SERVQUAL model has been widely applied to measure service quality in higher education (Cuthbert, 1996a, b; Soutar and McNeil, 1996; Pariseau and McDaniel, 1997; Arambewela, Hall and Zuhair, 2006; Wong, Tunku and Rahman, 2012). However, studies have shown that the direct application of SERVQUAL to a business school with undergraduates has been less successful (McElwee and Redman, 1993), which has been further proved by Cuthbert (1996a, b). Cuthbert (1996a, b) tested a modified version of SERVQUAL among 134 undergraduate students in the UK and found low reliability coefficients. The analysis of the results showed that the original five dimensions of SERVQUAL did not align with the higher education context. Pariseau and McDaniel (1997) conducted an empirical study among undergraduate students

and faculty staff to assess service quality in two small, private business schools in the US and they discovered significant differences in perceptions of service quality between students and faculty staff. These findings suggest that HEIs need to understand students' perspectives and identify important components of quality to improve service delivery.

Comparative studies between SERVQUAL, SERVPERF and other service quality models have been conducted in the education sector. It has been suggested that the five dimensions of service quality measured by SERVQUAL are likely to be industry-specific (Asubonteng, McCleary and Swan, 1996). Modified versions of SERVQUAL have been put forward (Barnes, 2007; Kwan and Ng, 1999; Sahney, Banwet and Karunes, 2004; Tan and Kek, 2004). Cronin and Taylor (1992) proposed an alternative, SERVPERF model, an instrument focusing on the performance level of the various attributes without considering expectations or importance weights, and it has even been suggested to possess better psychometric properties (Brady, Cronin and Brand, 2002). This instrument also has many applications in diversified areas such as higher education (Abdullah, 2006a). In the context of higher education, many researchers (e.g. Li and Kaye, 1998; Mahmoud and Khalifa, 2015; Nadiri, Kandampully and Hussain, 2009; Oldfield and Baron, 2000; Sultan and Wong, 2012) adapted SERVPERF as it presents a better measurement against SERVQUAL (Abdullah, 2006b; Adil, Al Ghaswyneh and Albkour, 2013; Brochado, 2009; Li and Kaye, 1998; Oldfield and Baron, 2000). However, it is worth noting that students may not be clear about their expectations of the higher educational service (Joseph and Joseph, 1997; Ford, Joseph and Joseph, 1999; Angell, Heffernan and Megicks, 2008).

Rather than simply adopting or modifying the existing models, researchers have developed new measuring instruments specific to higher education (Abdullah, 2006a; Annamdevula and Bellamkonda, 2012; Mahapatra and Khan, 2007; Rodríguez-González and Segarra, 2016; Senthilkumar and Arulraj, 2011; Sumaedi, Mahatma Yuda Bakti and Metasari, 2012; Vajda, Farkas and Málovics, 2015). One notable scale is HEdPERF, developed by Abdullah (2006a, 2006b), which focuses specifically on higher education and enables institutions to improve service performance (Abdullah, 2006b). HEdPERF initially comprised six dimensions but was later modified to include five dimensions: academic aspects, non-academic aspects, reputation, access, and program issues (Abdullah, 2006a). The modified version omitted understanding because of its low reliability score (Abdullah, 2006b). The five dimensions were broken down and operationalised into 41 items. Brochado (2009) compared five alternative measures of service quality in the high education sector and concluded that both SERVPERF and HEdPERF exhibited the best measurement capability with inconclusive results relating to reliability and consistency, but found it was difficult to identify which one was the best measurement. Other comparative studies showed that the HEdPERF scale captured more variance relative to that of the SERVPERF scale (Sultan and Wong, 2010).

The literature the complex and multifaceted nature of service quality constructs in higher education. Although several models, such as SERVQUAL and SERVPERF, have been applied and modified for the education sector, no universally accepted model or measurement approach exists. The unique characteristics of higher education and the diverse expectations of students call for the development of context-specific models. While HEdPERF has shown promise in capturing the unique dimensions of service quality in higher education, further research is needed to understand postgraduate students' perceptions of service quality within a Scottish higher education context.

3. Method

3.1 Participants

This study strictly adhered to the university research Ethics Policy, and key ethical consideration were kept in mind throughout the research process. Ethical approval was sought prior to the data collection.

A convenience sample of 23 students from several Scottish universities voluntarily participated in the four focus group sessions. The participants were recruited through the researcher's personal network. Efforts were made to ensure that the participants represented diverse populations and backgrounds. Gender diversity was considered during participant selection. All participants were current postgraduate (taught and research) students enrolled in various business and management programs at Scottish universities. Of the 23 participants, 14 were female and nine were male. They represented a diverse mix of nationalities, with 11 being home students (including students from Scotland and other parts of the UK) and 12 being international students (including students from European Union and other non-EU countries). Table 1 presents the demographic properties of focus groups and the code assigned to each participant.

Table 1 Demographic properties of focus groups

Stakeholder Groups	Code	gender	nationalities	Size
Group 1	S1, PhD	F	Intl	5
	S2, PhD	F	Intl	
	S3, PhD	M	Home	
	S4, PhD	M	Intl	
	S5, PhD	M	Intl	
Group 2	S6, MBA	M	Intl	6
	S7, MBA	F	Intl	
	S8, MSc	M	Intl	
	S9, DBA	F	Intl	
	S10, DBA	M	Intl	
	S11, MSc	M	Intl	
Group 3	S12, MSc	F	Home	6
	S13, MSc	F	Home	
	S14, MSc	F	Home	
	S15, MSc	F	Intl	
	S16, MSc	M	Intl	
	S17, MSc	F	Home	
Group 4	S18, MSc	F	Home	6
	S19, MSc	F	Home	
	S20, MSc	F	Home	
	S21, MSc	F	Home	
	S22, MSc	F	Home	
	S23, MSc	M	Home	

3.2 Procedure

All focus group sessions were conducted by a single researcher with expertise in conducting qualitative research and facilitating focus group discussions. Prior contacts with participants were established well in advance to explain the purpose of the study and gain their informed consent to participate in the focus groups. Their permission to use recording devices during the sessions was obtained.

Each focus group lasted between 40 minutes and 1 hour 20 minutes. A focus group guideline

was developed based on the HEdPERF model (Abdullah, 2006a, b). The guideline included topics and questions that aimed to elicit participants' critical evaluation of the five dimensions with 41 items of the HEdPERF model, their experiences with the service provision in Scottish HEIs, and the applicability of the HEdPERF dimensions in the Scottish context. Participants were encouraged to provide their own insights and identify any new items or dimensions that they felt were relevant to the Scottish higher education context. The overall impression of the service provided by Scottish HEIs was also discussed.

All focus group sessions were conducted in English, and audio recordings were made for later transcription and analysis. Participants' identities were anonymized to ensure confidentiality and privacy. Transcripts were generated by the researcher and no translation was required.

3.3 Data analysis

Thematic analysis, following the guidelines outlined by Braun and Clarke (2006), was adopted to analyse the qualitative data from the four focus group sessions. NVivo 11, a computer-assisted qualitative data analysis software (CAQDAS), was utilized to facilitate the analytical process and organise the data.

The analysis focused on validating the dimensions and scale items of the HEdPERF model in the Scottish higher education context, as well as identifying any additional dimensions and items that emerged from the data. The HEdPERF scale served as a reference model throughout the analysis process.

During analysis, themes were identified through a systematic process of coding and categorisation. The coding process involved iteratively reviewing the data, identifying patterns, and assigning codes to represent key themes and concepts.

4. Results

4.1. Evaluation of HEdPERF

The participants were asked to evaluate the 41 items based on their own experiences and assess the applicability of the five dimensions in the Scottish higher education context. While four dimensions (non-academic aspects, academic aspects, reputation, and programme issues) received support from the majority of participants, the dimension of access did not gain complete recognition..

(1) Non-academic aspects

The majority of the participants (20 out of 23) considered non-academic aspects to be an important dimension in the Scottish higher education context. They agreed all the items in this dimension were applicable. Participants highlighted the significance of administrative processes, such as application, admission, registration, fee payment, and induction, as well as the importance of positive interaction and communication with administrative staff. The participants emphasized the importance of clear and efficient administrative procedures, especially for international students who may face additional challenges. One of the students said:

“I agree. Administrative process like application, admission, registration, fee paying, induction, etc. should be here. I think it is important especially for the application process and administration process. Especially when you are a foreign student, you don't live in Scotland. You cannot go to the university and drop in, like personally with the staff. Sometimes it can be quite confusing. It should be easy to apply.” (S6, MBA)

Additionally, the participants highlighted the need for administrative staff to be courteous, approachable, friendly, respectful, and willing to help. Interestingly, some participants mentioned the professionalism and appearance of administrative staff as important factors while others expressed differing opinions regarding the significance of staff appearance, indicating that opinions on this matter varied among students.

Some of the quotes are:

"Yeah. It's definitely important. I think that is about professionalism. Administrative staff should look professional."(S6, MBA)

"I would say they are very judgmental statements. You know. It is not beauty competition." (S4, PhD)

(2) Academic aspects

The majority of participants recognized the importance of academic aspects in the Scottish higher education context. They emphasised the importance of academic staff being courteous, approachable, and respectful. Some of the examples are:

"I think academic staff need to be courteous, approachable, friendly and respectful. They should really care about students." (S20, MSc)

Participants also highlighted the need for academic staff to possess relevant knowledge, experience, and qualifications in their respective fields. For example:

"... I would say the experience of the lecturer is quite the key. We got work experienced and we need more experienced staff who deliver the lectures but also have experience. They should know the current development in the area of their expertise." (S23, MSc)

The provision of prompt and useful feedback on coursework and progress was considered crucial. For example:

"The feedback should be provided promptly. Yeah, the prompt feedback is important. However, the quality of the feedback, whether it is useful for students, is also important for students. Sometimes, the feedback the teachers provided is not always useful for students to gain their knowledge, their skills, their abilities....." (S4, PhD)

However, opinions varied regarding the significance of academic staff's professional appearance, with some participants emphasizing the significance of professional image, particularly in business and management disciplines, while others focused more on the staff's knowledge and abilities.

"Especially for the academic staff from business school, obviously they need to be like that."(S6, MBA)

"Academic staff, like Professors, they don't care about their outfit and appearance. I do question these really matter. For me, their knowledge, their ability, their skills, those are more important." (S4, PhD)

(3) Reputation

Reputation was identified as the most important by the majority of participants. They acknowledged the relevance and applicability of items related to the institution's appearance, accommodation facilities, academic and recreational facilities, rankings, programme quality, international certifications/accreditation, and the overall atmosphere and culture of the institution. Participants believed that reputable

institutions should provide excellent quality programmes, have well-rounded education, and deliver services within a standardized and simple service delivery procedure.

One of the examples is:

“I think they can be used in Scotland. Those institutions which run excellent quality programmes are definitely attractive to students.” (S10, DBA)

Some participants agreed that reputation was not just related to the level of excellence, but also the delivery. The delivery did affect their perceptions of the service. They believed that a reputable institution should have a standardized and simple service delivery procedure and value the feedback from students so that it could improve its service quality.

(4) Access

Participants expressed limited recognition of the access dimension in the Scottish higher education context. They believed that most items under this dimension were not applicable, as services like health care were provided by external entities such as the National Health Service (NHS), and communication with academic staff was primarily done through digital platforms rather than phone calls.

For example:

“I think most of the items are not applicable to the Scottish context. For example, the health services are provided by NHS rather than the university. The university does not have any clinics. We usually send emails to the professors or lecturers or put questions on moodle module forum rather than contact the academic staff by phone.” (S17, MSc)

However, participants acknowledged the importance of counseling services, which they felt should be classified under support services. Some participants also suggested that certain items related to feedback and standardised service delivery should be categorised under the reputation dimension rather than access.

(5) Programme issues

Participants highlighted the significance of programme-related issues, encompassing course content, teaching and learning processes, flexibility in entry requirements and major switching, and the development of knowledge, ethics, and skills. They agreed that the programme/course-related issues were very important during their learning journey. They emphasized the importance of courses being relevant, enjoyable, and providing valuable skills for future employability. Participants also stressed the role of universities in promoting values and ethics and providing a broad knowledge base. Feedback from students regarding the curriculum was seen as essential for continuous improvement.

Some of the examples are:

“I would suggest that the dimension can also be called course related issues. I think they are applicable. Personally for me, the higher education institutions I’d like to choose to study at are those which pay more attention to the course and programme issue. For me, it is important.” (S11, DBA)

“I think for me, the courses are definitely important. The end result is how higher education helps me to develop my abilities and capabilities in terms of my employability. My concern is that the knowledge I acquire from the courses is useful and makes me

more employable in future.” (S5, PhD)

(6) Overall impression of service quality

When asked about their general impression of the service provided by Scottish HEIs, the majority of participants expressed satisfaction, describing the service quality as good. They mentioned positive experiences with both academic and administrative staff, emphasising friendly interactions and care for students' needs. For example:

“I would say the services provided by my institution is good. So far, I’m quite happy about it.” (S7, MBA)

“Yes, the overall service quality in the Scottish higher education is good. Universities care about students’ voices.” (S2, PhD)

“I’m a home student. I have to say that the services provided by the universities are generally good. I have studied in different universities here. It seems that both academic staff and administrative staff are friendly.” (S14, MSc)

4.2. Identification and development of new dimensions

During the focus group sessions, participants were also asked to identify dimensions that were not covered by the HEdPERF instrument but were relevant and deemed important in the Scottish context. The participants provided valuable insights, leading to the identification of three new dimensions that complemented the existing ones.

4.2.1 Support

Support emerged as a crucial dimension, as highlighted by six participants who emphasised the significance of personal guidance and support in shaping their perception of service quality in HEIs. The participants expressed the need for academic guidance, financial-related support, induction programs, counseling services, and various forms of support services. It was clear that students not only seek academic knowledge but also consider their personal development and well-being. They also stressed the importance of social and cultural activities that foster a sense of community and provide opportunities for networking and making friends. The provision of comprehensive support services was regarded as vital in enhancing the overall service quality.

For example:

“Is there any financial guidance or support? If there is, where can we find out the information? I think those are important for me.” (S12, MSc)

“There should be social and cultural activities and support. Like universities or students unions should organize different kinds of activities. Because when we study and we are under the pressure, we need to enjoy life. Especially for international students, we need the social and cultural sides of university life.” (S7, MBA)

“My primary concern is international students. They are different from home students. They do need more opportunities and occasions to make more friends so that they can feel peace of mind. There need to social space and social wellbeing so that they can interact with other students.” (S3, PhD)

4.2.2 Career-related issues

Participants stressed the need to include career-related issues as a separate dimension in the assessment of service quality. For example:

“What I feel missing here is something related to the employability. It should be added.” (S5, PhD)

“I definitely agree that career-related issues are one of our concerns. Those should be covered.” (S7, MBA)

Employability emerged as a primary concern, with 20 out of 23 participants emphasising the importance of HEIs establishing strong industry links. Internship and placement opportunities were viewed as essential for enhancing students' employability.

Some of the participants said:

“Universities should have links with organisations and businesses, like a kind of special agreement, which means there would be internships available and also kind of employment opportunities. Students need those opportunities to get work experience.” (S16, MSc)

“University like XXX, what they do is they make sure a large number of students employable. For master’s students, during the summer holidays, they get jobs in banks, in hotels, in different industries. Those help students to develop their employability.” (S5, PhD)

The provision of career information and guidance, including support with CVs and interview techniques, was seen as crucial in preparing students for their future careers.

For example:

“It’s not just about career information. We definitely need someone to help with our CVs, to help with interview techniques, etc.” (S16, MSc)

4.2.3 Physical aspects

Although physical aspects was considered to be the least important among these factors, the majority of the participants agreed that physical facilities, the environment and accessibility definitely needed to be considered when assessing the service quality of HEIs. The library, in particular, was considered essential in students' academic journey, with its resources, learning environment, and facilities playing a vital role. One said:

“One thing missing here is the physical aspects. We study in the classroom or in the library. They are definitely important.” (S10, DBA)

Adequate access to computers and the internet was viewed as necessary for students' study experience. For example:

“Computers and internet are definitely essential. Without them, how can we access the moodle or other useful information and material?” (S18, MSc)

“I can’t imagine which university will not provide computers or internet. We live in a modern society and we use them almost every day or every moment.” (S14, MSc)

Participants also emphasised the importance of amenities, accessibility for disabled students and staff, aesthetics and comfort of physical facilities, and campus safety. Some of the participants agreed that childcare impacted their choice of higher education institution. Others also showed concerns for gym, parking, catering service and cafes. For example:

“And again, there is Childcare. My kid is only two years old. I need to think about it.” (S12, MSc)

“I think all the universities should have gym. That’s important.” (S10, DBA)

“I drive to the uni. For me, parking is very important as well. If there is parking space available, I don’t have to struggle to find a place to park my car each time.” (S14, MSc)

The focus group sessions helped to gain as much information as possible from participants with regard to their perceptions of service quality. The focus groups supported the four dimensions of HEDPERF and identified three new dimensions in Scottish higher education. The new seven

hypothesised dimensions are Reputation, Academic aspects, Non-academic aspects, Programme-related issues, Support, Career-related issues, and Physical aspects. Among the seven dimensions, reputation was considered as the most important while physical aspect was the least.

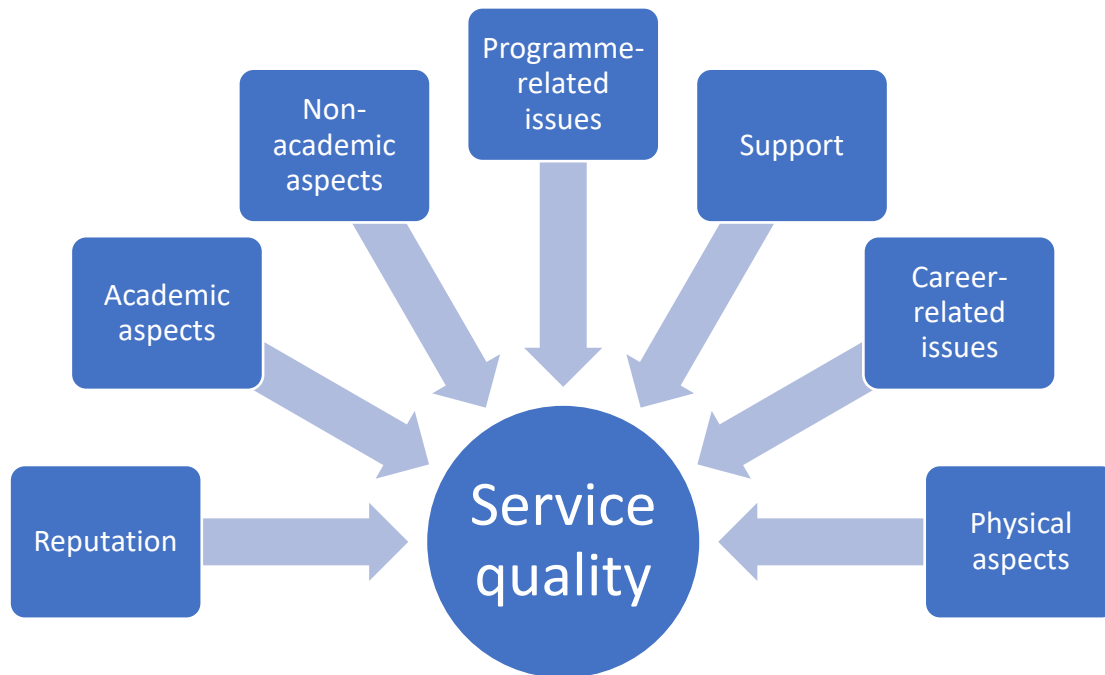


Figure 1. the proposed postgraduate service quality model

5. Discussion

The qualitative analysis of data from four focus groups with 23 postgraduate students identified seven dimensions/factors that measure postgraduate students' perception of service quality in Scottish HEIs.

5.1 Non-academic aspects

Non-academic aspects were identified as one of the dimensions, consistent with Abdullah's (2006a) HEdPERF model and supported other previous studies (Surprenant and Solomon, 1987; LeBlanc and Nguyen, 1997; Holdford and Patkar, 2003; Sadiq Sohail and Shaikh, 2004; Joseph, Yakhou and Stone, 2005; Ling, Chai and Piew, 2010; Annamdevula and Bellamkonda, 2012; Vrana, Dimitriadis and Karavasilis, 2015; Mahmoud and Khalifa, 2015; Teeroovengadum, Kamalanabhan and Seebaluck, 2016; Rodríguez-González and Segarra, 2016). The findings further emphasise the importance of administrative staff's interactions and communication with students in service quality assessment. They should exhibit courteous, approachable, and friendly behavior, possess good knowledge of systems and procedures, perform their duties properly, and provide individual attention (Abdullah, 2006a; Icli and Anil, 2014; Ling, Chai and Piew, 2010). Providing quality services to students can contribute to the positive assessment of the higher education institution (Icli and Anil, 2014). Higher education managers and executives should set quality standards for process-related variables such as registration, records, rules, and procedures and ensure all contact personnel should be involved in setting goals and quality standards and adhere to them. In any attempt to deliver a quality service, higher education executives and managers need to be constantly aware that interaction between students and staff lies at the heart of good service delivery (Oldfield and Baron, 2000), as students' interaction is an important factor for overall satisfaction (Ng and Forbes, 2008).

Administrative staff's knowledge and performance were also identified in this study, which supported previous studies (Abdullah, 2006a; Annamdevula and Bellamkonda, 2012; Holdford and Patkar, 2003; Icli and Anil, 2014; Sadiq Sohail and Shaikh, 2004; Teeroovengadum, Kamalanabhan and Seebaluck, 2016; Vrana, Dimitriadis and Karavasilis, 2015; Rodríguez-González and Segarra, 2016). Administrative service quality acts a predictor of student satisfaction (Kuo and Ye, 2009). Therefore, the administrative staff need to understand the procedures, perform their duties properly, and be able to provide proper guidance and advice to students, as all students, whatever their experience, demand high quality administrative support as well as high quality teaching (Wiers-Jenssen, Stensaker and Groggaard, 2002). For example, higher education managers and executives should work in close harmony with the administrative personnel as this contributes to students' perception of good quality of service (Sadiq Sohail and Shaikh, 2004). Meanwhile, higher education institution managers and executives also need to make sure that the relevant and proper training should be provided to the administrative staff so that they can understand the systems and procedures well and provide students with thorough information (Icli and Anil, 2014). Administrative staff's attitude and professionalism impact students' impression of the higher education institution.

5.2 Academic aspects

The dimension of academic aspects aligns with previous studies highlighting the importance of academic staff-student interactions and their impact on students' perceptions and satisfaction (Icli and Anil, 2014; Surprenant and Solomon, 1987; Soutar and McNeil, 1996; LeBlanc and Nguyen, 1997; Holdford and Patkar, 2003; Mahapatra and Khan, 2007; Angell, Hefferman and Megicks, 2008). The findings further supported the crucial role of academic aspects in students' perceptions of service quality. Quality specific and useful feedback from academic staff was particularly valued by postgraduate students (Abdullah, 2006a; Clemes, Gan and Kao, 2008; Hill, 1995; Holdford and Patkar, 2003), as specific and useful feedback enables students to improve their work. Prompt feedback was emphasised, in line with students valuing responsiveness and its impact on overall perceived service quality (Parasuraman, Zeithaml and Berry, 1985, 1988; Soutar and McNeil, 1996; Cuthbert, 1996a,b; Pariseau and McDaniel, 1997; LeBlanc and Nguyen, 1997; Sadiq Sohail and Shaikh, 2004). Therefore, strategies such as workload distribution among staff to ensure timely feedback should be considered by HEIs, especially in larger classes. The study also confirmed the significance of academic staff's knowledge and experience (Abdullah, 2006a; Clemes, Gan and Kao, 2008; Holdford and Patkar, 2003; LeBlanc and Nguyen, 1997; Soutar and McNeil, 1996; Teeroovengadum, Kamalanabhan and Seebaluck, 2016). Students are more likely to engage and perform well when taught by knowledgeable and experienced academics. HEIs can employ faculty who are experienced and experts in their fields and ensure that they provide opportunities for academic staff development, advanced studies, and industry involvement to enable the academic staff to be current with the developments in their subject areas and gain relevant industry experience. Academic staff should continuously follow training sessions and seminars on effective teaching methods and their areas of expertise (Leblanc and Nguyen, 1997), and publish scientific articles and carry out research (Icli and Anil, 2014), which will help to increase the satisfaction and loyalty of students at the HEIs by good interaction with the students who would like to undertake research in order to improve themselves (Thomas, 2011).

5.3 Reputation

Reputation was considered as the most important dimension by the majority of participants in this study, consistent with previous studies (Ford, Joseph and Joseph, 1999; LeBlanc and Nguyen, 1997) highlighting its influence on students' perception of service quality in higher

education. The findings indicated that reputation, including the institution's professional appearance, highly reputable programs, and excellent atmosphere and culture, influences students' overall perception of service quality (Abdullah, 2006a; Ford, Joseph and Joseph, 1999; Joseph and Joseph, 1997; Joseph, Yakhou and Stone, 2005; Ling, Chai and Piew, 2010; Rodríguez-González and Segarra, 2016). Corporate image, related to reputation (Solomon, 1985) has been identified as an important quality indicator for students in this study, which supported the previous studies (Grönroos, 1984; Lethinen and Lethinen, 1982 cited by Leblanc and Nguyen, 1997). Higher education institution executives and managers need to formulate and implement different strategies to uphold the overall reputation and make a favourable impression on the key stakeholders --- students and on other various stakeholder groups (Leblanc and Nguyen, 1997). For example, HEIs can engage in relevant events, research and development activities locally, nationally and globally to build positive publicity and a professional image. Once the reputation has been built, HEIs should continue promoting and maintaining its standing (Bitner, Booms and Tetreault, 1990), as a distinctive image will help a higher education institution create competitive advantage in competing with other institutions to recruit students. The findings from this study also revealed that a reputable institution is one which has highly reputable programmes, which was consistent with previous studies (Abdullah, 2006a; Ford, Joseph and Joseph, 1999; Ling, Chai and Piew, 2010; Joseph and Joseph's, 1997; Joseph, Yakhou and Stone, 2005). HEIs should try to offer reputable programmes as these can largely contribute to a positive evaluation of service quality. It was also suggested that the culture and atmosphere of the institution were found to affect perceived service quality, influencing students' behavior and actions. A positive campus culture and atmosphere can drive students to be more positive, goal-oriented, and successful, leading to positive word-of-mouth and peer influence (Zineldin et al., 2011). Reputation is built through the credible actions of each member of the organisation (Herbig, Milewicz and Golden, 1994), thus higher education institution administrators should work closely with both administrative and academic staff to set quality standards and continuously deliver quality service to meet students' needs and maintain a credible and positive reputation.

5.4 Programme-related issues

The programme-related issues dimension was supported as an important dimension of service quality in this study, which supported the similar findings from various researchers (Abdullah, 2006a; Annamdevula and Bellamkonda, 2012; Clemes, Gan and Kao, 2008; Hill, 1995; Ford, Joseph and Joseph, 1999; Holdford and Patkar, 2003; Jain, Sahney and Sinha, 2013; Joseph and Joseph, 1997; Joseph, Yakhou and Stone, 2005; Ling, Chai and Piew, 2010; Rodríguez-González and Segarra, 2016).

The importance of the teaching and learning process of programmes was confirmed in this study. The findings highlight that HEIs should make sure that course content is useful and relevant to students' personal development and reflects industry and social needs. Postgraduate students have previous study or work experience, so their perceptions of quality programme can be critical. Opportunities for students to give feedback regarding the courses should be provided to students so that improvements can be made on the programme-related issues. Meanwhile, on-the-job training, industrial tours, seminars/workshops, guest lectures from industry experts, etc. can be organised during the teaching and learning process so that students can enjoy the programme more. More advanced technologies, facilities and contemporary teaching methods can be used to make students more engaged in class and be more involved in academic activities. Online instructions can be provided to help students to search for the required information and a web-based service can be offered to help students easily access a well-organised collection of information sources (Icli and Anil, 2014). Programme-related

issues affect students' perceptions of service quality. Higher education managers and executives should understand the importance of programme issues and take proper measures to ensure positive and motivating interaction and communication between students and academic staff, focusing on useful and relevant course content.

5.5 Support

Notably, the identification of support as a new dimension in this study diverged from the original HEdPERF scale. The findings show that students need guidance and support in various areas such as finance, academic studies, social life, well-being, etc. aligning with previous studies (Annamdevula and Belamkonda, 2012; Barne, 2007; Gatfield, Barker and Graham, 1999; Icli and Anil, 2014; Kwan and Ng, 1999; Russell, 2005). The emergence of support-related items can be attributed to the composition of the focus group participants, with 12 out of 23 respondents being non-EU students who often require additional support from HEIs compared to home students. The inclusion of support as a distinct dimension highlights the significance of addressing students' support needs beyond academic aspects. This finding emphasizes the importance of providing comprehensive support services to cater to the diverse needs of students, particularly those from international backgrounds. HEIs should prioritize the provision of financial guidance, academic support, social and cultural activities, and counselling services and have dedicated strategies for students' wellbeing and mental health. The findings confirm that support services contribute significantly to students' perception of service quality and should be considered as a critical component of the overall student experience. By acknowledging and addressing the support needs of students, HEIs can create a more inclusive and supportive learning environment. This, in turn, can enhance students' perceptions of service quality and contribute to their overall satisfaction and success.

5.6 Career-related issues

Career-related issues emerged as an important dimension in this study, which was not part of the original HEdPERF model. The findings indicate the significance of career guidance and opportunities in determining service quality, which align with previous studies (Angell, Heffernan, and Megicks, 2008; Barnes, 2007; Clemes, Gan and Kao, 2008; Dado et al., 2011; Ford, Joseph and Joseph, 1999; Gatfield, Barker and Graham, 1999; Hill, 1995; Icli and Anil, 2014; Jain, Sahney and Sinha, 2013; Joseph and Joseph, 1997; Mahapatra and Khan, 2007). Career-related issues were constantly highlighted by almost all participants, which indicated that postgraduate business and management students value career prospects and employability, consistent with the findings of previous studies (Hill, 1995; Joseph and Joseph, 1997; Ford, Joseph and Joseph, 1999; Dado et al., 2011; Senthilkumar and Arulraj, 2011; Icli and anil, 2011). The findings reaffirm the importance of these factors in shaping postgraduate students' perceptions and their expectation for HEIs. Graduate employability affects not only current students' perception of service quality, but also that of prospective students (Arambewela, Hall and Zuhair, 2006). To meet these expectations, HEIs should ensure academic staff have relevant industry experience, invite industry experts for guest lectures, and facilitate internships/placements. Effective career centres should be set up to provide relevant career-related information and guidance to students. Meanwhile, HEIs can communicate positive employment statistics to students. The findings also indicated that HEIs should investigate ways of improving the future job prospects of its postgraduate students and build good links with industry players, local communities, councils and other organisations. More opportunities should be offered to students to become involved in different kinds of activities to help them develop their skill sets so that they can be more employable after graduation. By addressing career-related needs, HEIs can support students' transition to the workplace, enhance employability, and positively influence their perception of service quality.

5.7 Physical aspects

Physical environment aspects have been tested by many marketing researchers as one of the important indicators of overall students' perceived service quality (Athiyaman, 1997; Bigne, Moliner and Sánchez, 2003; Cuthbert, 1996a, b; Ford, Joseph and Joseph, 1999; Joseph and Joseph, 1997; Joseph, Yakhou and Stone, 2005; Sadiq Sohail and Shaikh, 2004). The findings of this study provided further evidence to previous studies that physical aspects, similar to Parasuraman, Zeithaml and Berry's (1985, 1988) tangible dimension, affect students' overall perception of service quality. Physical facilities and environment are essential parts of student life as students will link various tangible elements to the services provided by the higher education institution (Oldfield and Baron, 2000; Russell, 2005). The quality of its campus facilities and ability to retain current students contribute to the success of a higher education institution (Nadiri and Mayboudi, 2010, cited by Icli and Anil, 2014). In Sadiq Sohail and Shaikh's (2004) study, physical evidence was the second most important factor. However, in this study physical aspects were the least important factor among the seven identified dimensions. These findings supported Cuthbert's (1996a, b) contention that when measuring the overall level of service quality in a university environment, staff and student interaction factors override physical aspects (Clemes, Gan and Kao, 2008).

The findings of the study also conformed with the previous study that issues relating to disability and environment affect service quality (Aldridge and Rowley, 1998). As disabled students are an integral part of the academic community, accessible and appropriate provision is not additional but a key element of the overall service (cited in Vaughan and Woodruffe-Burton, 2011). In responding to equality and diversity in our society and the wider access, and social inclusion agendas in higher education, the finding of this study supported the fact that it is important to ensure that disabled students enjoy the same access to a high-quality education experience as non-disabled (Vaughan and Woodruffe-Burton, 2011). Accessibility is not only the key driver of the disabled student experience of service delivery (Vaughan and Woodruffe-Burton, 2011), but also influences all students' perceptions of service quality. Higher education administrators need to take measures in their identification of service quality shortfalls to ensure that all disabled students and staff have access to all physical facilities.

Students spend much of their time in contact with the physical aspects of their educational experience, it is likely that they are strongly influenced by the physical facilities (Ling, Chai and Piew, 2010; Oldfield and Baron, 2000). Students cannot see the education service, but they can see and experience various tangible elements associated with the service (Oldfield and Baron, 2000). They can see service facilities, equipment, campus appearance, etc. and these are referred to as clues (Zeithaml, Parasuraman and Berry, 1990), and it is possible to manage the evidence using these clues (Shostack, 1977). Higher education administrators must pay attention to detail and make sure that the physical environment is appealing and comfortable: for example, ask students' opinion about the arrangement in the classrooms, and what facilities they need in the computer labs and library. Students should have a say regarding the physical aspects. After all, students are the major recipient of higher education service and they experience the service for the most part.

6. Conclusion

The study utilised the HEdPERF model as a starting point to explore postgraduate students' perception of service quality in Scottish HEIs. Through a comprehensive review of existing literature and the conduct of four focus groups with postgraduate business and management students, seven dimensions of service quality were proposed: reputation, academic aspects,

non-academic aspects, programme-related issues, support, physical aspects, and career-related issues.

The findings of this study contribute both to theoretical knowledge and practical implications. Firstly, the identification of these seven dimensions expands the theoretical understanding of service quality measurement in the context of Scottish HEIs. It sheds light on the dimensionality of service quality and provides insights into the specific aspects that influence postgraduate students' perceptions of service quality. Secondly, this study also offers valuable managerial implications for higher education executives and managers. It emphasises the need to address the newly identified dimensions and provides guidance on improving service quality in Scottish HEIs. Higher education executives and managers should focus on enhancing the institution's reputation, ensuring the quality of academic and non-academic aspects, providing relevant support, creating an appealing physical environment, and addressing students' career-related needs. By implementing strategies that align with these dimensions, Higher education executives and managers can enhance overall service quality and meet students' expectations more effectively.

While the study has contributed valuable insights, it is important to acknowledge its limitations. The sample size was relatively small, and convenience sampling techniques were used, potentially limiting the generalizability of the findings. Future study should aim for a larger and more comprehensive sample population that represents the entire student body. Furthermore, the study only focused on postgraduate students' perspectives. Future studies can explore the viewpoints of other stakeholders such as faculty, employers, parents, and government entities which would provide a more comprehensive understanding of service quality in higher education. Moreover, only qualitative data were collected in this study. To further advance the field, future study could use quantitative data to validate and confirm the robustness of the model.

In conclusion, this study provides valuable insights into postgraduate students' perceptions of service quality in Scottish HEIs. By identifying and highlighting the seven dimensions of service quality, it contributes to the existing literature and offers practical recommendations for higher education administrators. Despite its limitations, this research serves as a foundation for future investigations that can enhance our understanding of service quality in higher education and facilitate continuous improvement in the delivery of high-quality educational experiences.

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