

UNIVERSITY SERVICE QUALITY FACTORS AND STUDENT
PRIORITIES

ÜNİVERSİTE HİZMET KALİTESİ FAKTÖRLERİ VE ÖĞRENCİ ÖNCELİKLERİ

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ABSTRACT

Researchers have produced a large number of studies on university service quality that examine quality factors separately in the last 30 years, but there are few studies that present all quality factors from a holistic perspective. Although the universities have various stakeholders such as society, business world and academics, the most important of all stakeholders is undoubtedly students. This study aimed to examine the subject from the perspective of students and tried to reveal which service quality factors are given priority by university students. As a result of this research, it has been determined that the factors related to the services provided in teaching, academic and non-academic facilities, student affairs, sustainability, internationalization and career center are considered as important and high priority.

Keywords: Service Quality, University, Higher Education.

ÖZ

Araştırmacılar son 30 yılda üniversite hizmet kalitesi konusunda kalite faktörlerini ayrı ayrı ele alan çok sayıda çalışma üretmiştir, ancak tüm kalite faktörlerini bütüncül bir bakış açısıyla sunan çok az çalışma vardır. Üniversitenin toplum, iş dünyası, akademisyenler gibi farklı paydaşları olsa da, tüm paydaşları arasında en önemli olanı şüphesiz öğrencilerdir. Bu çalışma konuyu öğrenci perspektifinden incelemeyi amaçlamış ve hangi hizmet kalitesi faktörlerine üniversite öğrencileri tarafından öncelik verildiğini ortaya çıkarmaya çalışmıştır. Bu araştırma sonucunda öğretim, akademik ve akademik olmayan tesisler, öğrenci işleri, sürdürülebilirlik, uluslararasılaşma ve kariyer merkezi konularında sunulan hizmetlerle alakalı faktörlerin önemli ve öncelikli görüldüğü tespit edilmiştir.

Anahtar Kelimeler: Hizmet Kalitesi, Üniversite, Yükseköğretim.

1. Introduction

Universities attach great importance to quality, customer satisfaction and loyalty in order to maintain their competitive position like many companies and organizations operating in the service sector. Examining and increasing the quality of the services offered by universities are of great importance for the progress of society, since they have an important mission for continuous knowledge production and raising students and they are open to innovations and changes in education and training.

In the last 30 years, in order to increase the service quality of higher education institutions, many useful scientific studies have been carried out by the relevant government institutions, universities themselves and academicians who are experts in the subject. In addition, universities are listed each year by many respected international ranking organizations such as Times Higher Education, QS, U.S. News and Greenmetrics according to their success in service quality.

Universities must be aware of the quality of the service they offer in order to compete with other universities in their own country and around the world. Service quality is a multidimensional issue. It is perceived in different ways by various stakeholders of the university such as academics, students, business world and society. Among all these, the most important stakeholder is undoubtedly university students. It is an undeniable fact that researching and improving all kinds of services offered by the university to its students will affect the future of the university and society in the long run.

2. Aim of Research

In the last 30 years, many studies have been carried out on the quality of service in higher education institutions. However, there are very few studies that examine the dimensions of university service quality and the quality factors related to each dimension in a holistic way and present them to the scientific world. This study aims to contribute to the literature by examining the university service quality from the perspective of the student, who is the most important stakeholder, and by revealing the service quality factors that attract the most attention of the students. In this context, this research seeks an answer to the following question:

What are the important university service quality factors from the students' point of view?

3. Research Methodology

This study is a qualitative research based on systematic literature review methodology. Initial stage of this study includes searching for well-accepted keywords such as “university service quality, SERVQUAL, student satisfaction and student loyalty” to identify related scientific works in respected databases such as Web of Science, Scopus, ResearchGate and Google Scholar. More than 400 articles are discovered in this stage, however, after reading abstract and conclusion parts of these articles in detail, most of them are eliminated and only 93 of them are found eligible to use in this paper.

Second part of this study includes creating a literature review, which is a compilation of the opinions about various service quality dimensions and quality factors from the perspectives of university students. Aim of the study in this stage is to draw a framework of the mainstream topics on service quality factors for student satisfaction and loyalty.



Third part of this study consists of creating lists and tables to present service quality dimensions and factors in a holistic approach. These visuals help researchers on this field to better understand which dimensions are considered as important attributes from the perspective of students. Final part of the study includes conclusion remarks, managerial implications and directions for future researchers.

Table 1
Previous Research on University Service Quality

1985 - 2005	2006 - 2012	2013 - 2017	2018 - 2022
Parasuraman et al. (1985)	Abdullah (2006)	Calvo-Porrall et al. (2013)	Albareda-Tiana et al. (2018)
Rigotti & Pitt (1992)	Osman et al. (2006)	de Jager & Gbadamosi (2013)	Chaguluka et al. (2018)
Marsh & Roche (1993)	Ko & Pastore (2007)	Jain et al. (2013)	Mattah et al. (2018)
Cronin & Taylor (1994)	Lukman & Glavič (2007)	Manaf et al. (2013)	Mensah & Mensah (2018)
Donaldson & Runciman (1995)	Mahapatra & Khan (2007)	Sultan & Yin Wong (2013)	Roberts (2018)
Hill (1995)	Spooren et al. (2007)	Garg (2014)	Masserini et al. (2019)
Asubonteng et al. (1996)	Voss et al. (2007)	Green (2014)	Simangunsong (2019)
Shank et al. (1996)	Angell et al. (2008)	Icli & Anil (2014)	El Alfy & Abukari (2020)
Athiyaman (1997)	Beringer & Adomßent (2008)	Amaral et al. (2015)	Mulyono et al. (2020)
LeBlanc & Nguyen (1997)	Tuncer (2008)	Dužević & Časni (2015)	Ozdemir et al. (2020)
Kwan & Ng (1999)	Yeo (2008)	Martensson & Richtner (2015)	Rahimizhian et al. (2020)
van Weenen (2000)	Arambewela & Hall (2009)	Vázquez et al. (2015)	Rahman et al. (2020)
Clemes et al. (2001)	Chatterjee et al. (2009)	Adinegara & Putra (2016)	Alam et al. (2021)
Elliot & Healy (2001)	Radder & Han (2009)	Sonetti et al. (2016)	Almeyali & Al Mousawi (2021)
Kuh & Hu (2001)	Trivellas & Dargenidou (2009)	Teeroovengadum et al. (2016)	Budu et al. (2021)
Comm & Mathaisel (2003)	Waas et al. (2009)	Ushantha & Kumara (2016)	Dandis et al. (2021)
Holdford & Patkar (2003)	Gallifa & Batallé (2010)	Adel (2017)	Doan (2021)
Icli & Anil (2004)	Jain et al. (2010)	Latif et al. (2017)	Nuryanti et al. (2021)
Lagrosen et al. (2004)	Shonk et al. (2010)	Mokoena & Dhurup (2017)	Trivedi et al. (2021)
Sohail & Shaik (2004)	Đađo et al. (2011)	Mulà et al. (2017)	Gibbs & Kharouf (2022)
Thomas & Galambos (2004)	Shekarchizadeh et al. (2011)	Noaman et al. (2017)	Harrison et al. (2022)
Navarro et al. (2005)	von der Heidt & Lamberton (2011)		Zhu & Sharp (2022)
Russell (2005)	Annamdevula & Bellamkonda (2012)		
	Nejati & Nejati (2012)		



4. Literature Review

4.1. University Service Quality Definitions

There are different models and scales in the literature to measure service quality. First of all, it is necessary to inform researchers about the definition of this term. One of the early definitions about service quality is that it is “the difference between customers’ expectations for service performance prior to the service encounter and their perceptions of the service received” (Asubonteng et al., 1996). Researchers attempted to create different measurement tools to analyze service quality, however, only a small number of them have been approved by the scientific environment. Parasuraman et al. (1985) developed SERVQUAL, and they discovered “reliability, tangibility, assurance, responsiveness, reliability and empathy” dimensions of service quality. Another measurement tool, SERVPERF, was created by

Cronin and Taylor (1994) as an alternative to the SERVQUAL scale. The first model, SERVQUAL, is used to measure the service quality perceived by the customer. The second model, SERVPERF, was developed to examine service quality performance. Another more comprehensive and compatible model developed to measure service quality in higher education institutions is the HEDPERF model. Abdullah (2006) developed this model and listed quality dimensions as “non-academic aspects, academic aspects, reputation, access, program issues and understanding”. Latif et al. (2017) created their model called “HiEduQual” and they revealed “teacher quality, administrative services, knowledge services, activities, continuous improvement, and leadership quality” as important quality dimensions. Moreover, Icli and Anil (2014) studied MBA students and created “HEDQUAL” model, which presents “academic quality, administrative service quality, library services quality, quality of providing career opportunities, and supporting services quality” as main quality dimensions.

4.2. Teaching Service Quality

Teaching quality is considered as the most important aspect of service quality in higher education institutions. Educational activities, programs, curriculums, course materials, expertise and behavior of lecturers and the relationship between lecturers and students constitute teaching dimension of university service quality. In a study conducted in an Australian university, Soutar and McNeil (1996) separate service quality as academic and administrative services. Hill (1995) emphasizes meeting the expectation of students in all stages of education from registration to university to graduation from the university. He lists dimensions of service quality as “teaching quality, course content, personal contact with academic staff and feedback”.

Jain et al. (2010) consider curriculum and student input quality as important dimensions of teaching quality. According to a study in King Fahd University, having a good orientation program, curriculum and responding students timely are factors of quality for business students (Sohail and Shaik, 2004). In order to increase service quality, Noaman et al. (2017) state that a curriculum should strengthen the capabilities of students and prepare them for labor market. Yeo (2008) argues that universities should review their curriculum regularly in order to meet new industry needs. Jain et al. (2013) also show that curriculum and interaction quality between students and lecturer are important factors of quality in Indian context.

Shank et al. (1996) point out the role of lecturer behaviors and their involvement. Kuh and Hu (2001) find out that increasing interaction between students and lecturer has a positive effect on education quality. In their research on pharmaceutical education, Holdford and Patkar (2003) propose that communication and interpersonal behavior between faculty lecturers are important dimensions of service quality. Spooren et al. (2007) mention that presentation skills of the lecturer, their coaching and attractiveness of the course are notable dimensions of teaching quality. Voss et al. (2007) state that a lecturer must have some characteristics such as “enthusiastic, friendly and approachable” to increase service quality in higher education. Chatterjee et al. (2009) conduct a research among Indian students and reveal that mode of presentation, regularity and punctuality and personality of the lecturer affect service quality in higher education. In their study conducted among international students in Malaysia, Shekarchizadeh et al. (2011) discover that professionalism and commitment are major dimension of quality. Manaf et al. (2013) consider delivery of teaching and empathy of lecturer as critical factors in quality, according to their research



done with postgraduate students in Malaysia. Mulyono et al. (2020) mention that lecturers should be interested in solving students' problems and spend enough time for consultation.

Table 2
Teaching Quality Factors

Quality Factors	Author(s)
adequate lecture rooms and class size	Teeroovengadum et al. (2016), Athiyaman (1997)
adequate quiet study places in campus	Teeroovengadum et al. (2016)
assessment of students	Masserini et al. (2019), Kwan and Ng (1999)
assignment for students	Clemes et al. (2001), Athiyaman (1997)
attractiveness of the course	Spooren et al. (2007)
communication about academic procedures	Mattah et al. (2018)
courses by guest lecturers	Lagrosen et al. (2004)
delivery of courses	Manaf et al. (2013), Chatterjee et al. (2009)
interaction between lecturer and students	Kuh and Hu (2001), Jain et al. (2013)
lecturer' approachability	Voss et al. (2007), Hill (1995)
lecturer's behaviour	Manaf et al. (2013), Voss et al. (2007), Shank et al. (1996), Chatterjee et al. (2009), Holdford and Patkar (2003)
lecturer's commitment	Shekarchizadeh et al. (2011)
lecturer's punctuality and regularity	Sohail and Shaik (2004), Chatterjee et al. (2009)
lecturer's qualification	Clemes et al. (2001), Masserini et al. (2019), Voss et al. (2007), Shekarchizadeh et al. (2011), Spooren et al. (2007)
online learning systems	Nuryanti et al. (2021), Adel (2017)
orientation program	Sohail and Shaik (2004)
peer review of teaching	Harrison et al. (2022)
quality of course content	Hill (1995), Kwan and Ng (1999), Athiyaman (1997), Teeroovengadum et al. (2016)
quality of curriculum	Jain et al. (2010), Jain et al. (2013), Noaman et al. (2017), Sohail and Shaik (2004), Yeo (2008)
regular feedback	Marsh and Roche (1993), Hill (1995), Teeroovengadum et al. (2016)
research orientation	Dužević and Časni (2015)
solving students' problem	Kwan and Ng (1999), Mulyono et al. (2020)
supervision of students	Mahapatra and Khan (2007)
teaching in foreign languages	Lagrosen et al. (2004), Kwan and Ng (1999)
time for office hour, consultation and coaching	Athiyaman (1997), Marsh and Roche (1993), Mulyono et al. (2020), Mahapatra and Khan (2007), Spooren et al. (2007), Clemes et al. (2001)

Athiyaman (1997) states that availability of staff for student consultation, student workload, class sizes and difficulty of course content are remarkable attributes of service quality. Marsh and Roche (1993) regard feedback and consultation as important attributes of teaching effectiveness. In their research to measure technical education quality, Mahapatra and Khan (2007) see supervision of students and regular consultation to them as dimension of academic service quality. Mattah et al. (2018) state that communication about academic policies and procedures affects student loyalty.

In a comparative study conducted in Hong Kong and China, Kwan and Ng (1999) discover that course content, concern of students, assessment and medium of instruction are factors of service quality. Adequate lecture rooms, adequate quiet study places in campus, well-defined course content, regular feedback, and active participation of students in



learning process are listed by Teeroovengadum et al. (2016) as notable dimensions of educational service quality. Clemes et al. (2001) reveal that perceptions of students are affected by lecturer's qualification, course delivery, assignments, and office hours. Availability of highly qualified teachers and quality of organization of exams affect student satisfaction and loyalty (Masserini et al. 2019). Lagrosen et al. (2004) consider courses by guest lecturers and teaching in foreign languages as variables of quality. Harrison et al. (2022) recommend peer review of teaching for teaching quality. Research conducted in Indonesia reveals that quality of online learning systems is important for student satisfaction (Nuryanti et al. 2021). Moreover, Adel (2015) finds that e-learning service quality increases student satisfaction. According to the research conducted in Croatian universities, research orientation is found as an important aspect of service quality (Dužević and Časni, 2015).

4.3. Student Affairs Service Quality

Students are the most important stakeholders in university service quality. Tari and Dick (2016) approach university service quality with stakeholder focus and mention that people and process management are two vital dimensions of service quality. All the actions regarding service quality are expected to be student-centered. Lazibat et al. (2014) show us that how students and lecturers perceive service quality can be different, according to their research applied in Croatian universities. In their research among Greek universities, Psomas and Antony (2017) find that student focus is a major dimension of total quality management. As an early study in the field, Rigotti and Pitt (1992) examine business schools and mention that universities should keep their promises, have user-friendly systems, and employ helpful staff for service quality.

Staff in student affairs and other administrative departments have an influential role in service quality. Mahapatra and Khan (2007) list quality attributes in their departments as willingness to help, prompt service and transparency of procedures as parts of responsiveness. In his research in South Africa, Green (2014) mentions that staff should provide quick response, they should be ready to help and behave students politely. Adinegara and Putra (2016) consider service speed as an important aspect of service quality. Ozdemir et al. (2020) focus on solving the problems of students. In their research in Sri Lanka, Ushantha and Kumara (2016) reveal that showing interest in problem solving, quick response for student complaints and regular opening hours for student affairs office increase service quality. Mulyono et al. (2020) also express that administrative staff should deal with complaints and inquiries effectively, provide quick response to students and keep their promises for their services. Student affairs staff should register students effectively and put them in the center of their service (Elliot and Healy, 2001). Navarro et al. (2005) suggest that universities should have convenient enrollment period, easy enrollment process and a good form of payment. Moreover, staff is expected to be friendly and care about their appearance (Sohail and Shaik, 2004).



Table 3
Student Affairs Service Quality Factors

Quality Factors	Author(s)
appearance and behaviors of staff	Green (2014), Rigotti and Pitt (1992), Sohail and Shaik (2004), Mahapatra and Khan (2007)
cooperation between staff	Donaldson and Runciman (1995), Gibbs and Kharouf (2022), Trivellas and Dargenidou (2009), Roberts (1989)
dealing with student complaints	Mulyono et al. (2020), Ushantha and Kumara (2016)
enrollment process	Navarro et al. (2005), Elliot and Healy (2001), LeBlanc and Nguyen (1997)
keeping promises	Rigotti and Pitt (1992), Mulyono et al. (2020)
payment process	Navarro et al. (2005)
regular office opening hours	Ushantha and Kumara (2016)
sending opinions of students to the management	Kwan and Ng (1999)
service speed	Adinegara and Putra (2016), Mahapatra and Khan (2007), Green (2014), Mulyono et al. (2020), LeBlanc and Nguyen (1997)
solving students' problems	Ozdemir et al. (2020), Ushantha and Kumara (2016), Roberts (2018)
standardization of tasks	Donaldson and Runciman (1995)
student-centered mindset	Kwan and Ng (1999), Elliot and Healy (2001)
transparency of procedures	Mahapatra and Khan (2007)
user-friendly systems	Rigotti and Pitt (1992)

Besides solving student problems, providing communication between university management and students is certain duty for service quality. For example, LeBlanc and Nguyen (1997) emphasize role of staff in informing students quickly about changes and registration with no error. Kwan and Ng (1999) mention that student affairs staff should have the concern for students, and they should act as channels for sending opinions of students to the management.

Management of student affairs is another aspect of service quality in student affairs. Trivellas and Dargenidou (2009) analyze roles of leadership among administrative staff. Donaldson and Runciman (1995) examine service quality from a management perspective and underline the state of standardization of tasks, lack of teamwork and role conflict as service quality factors. Research conducted in Australia by Roberts (2018) reveals that universities should decrease student attrition and create an institutional culture. Gibbs and Kharouf (2022) emphasize co-operation and goodwill between university staff.

4.4. Academic and Non-Academic Facility Quality

Facility services offered by universities are basically divided into academic and non-academic services. Academic ones include services related to classroom environment, library, and laboratory, while non-academic ones include services related to housing, health, transportation, and entertainment. In addition to the quality of education and training and services related to student affairs, the quality of facility services needs to be improved because of students' commitment to the university, their satisfaction, loyalty, and their impact on future students.

Early studies in service quality facilities focus mainly on educational and recreational facilities. Hill (1995) state that a university should improve the services in computing facilities, library, and university bookshop. Athiyaman (1997) mentions that library services



and computing facilities affect student satisfaction. LeBlanc and Nguyen (1997) measure service quality perceptions of business school students. They find that study rooms and computer facilities are significant variables of service quality. Kwan and Ng (1999) state that increasing quality of quiet places to study, cleanliness of facilities, library facilities, computing facilities, sports and recreational facilities are required. According to their research in Australia, Sultan and Yin Wong (2013) assert that “library facilities, entertainment facilities, career counselling, transport facilities and dining facilities” are important factors of service quality. Mattah et al. (2018) show the roles of lecture halls and laboratories for student satisfaction. Mahapatra and Khan (2007) also mention well-equipped labs.

Table 4
Technological service quality factors

Quality Factors	Author(s)
computer facilities	Arambewela and Hall (2009), Lagrosen et al. (2004), LeBlanc and Nguyen (1997), Sohail and Shaik (2004)
computing facilities	Athiyaman (1997), Hill (1995), Kwan and Ng (1999)
education technology	El Alfy and Abukari (2020)
e-services	Rahimzhan et al. (2020)
internet infrastructure	Annamdevula and Bellamkonda (2012)
technology infrastructure	Calvo-Porrall et al. (2013)

Trivedi et al. (2021) state that “leadership, policy and strategy, staff management and resources” are five key attributes for university library services quality. In their research in Ghana, Budu et al. (2021) show us a direct effect of library service quality on student loyalty. Calvo-Porrall et al. (2013) state that quality in library services and technology services create a positive perception among students. El Alfy and Abukari (2020) state that education technology and library services are remarkable quality factors for postgraduate students. Moreover, Icli and Anil (2014) develop a service quality scale called HEDQUAL and list rich printed and electronic sources in library, labs, social facilities, and sports facilities as service quality factors for MBA students. Lagrosen et al. (2004) indicate four main dimensions for quality. They are computer facilities, library resources, availability of cafes and shops near the university.

Table 5
Educational facilities service quality factors

Quality Factors	Author(s)
conference hall	Annamdevula and Bellamkonda (2012)
laboratories	Mattah et al. (2018), Annamdevula and Bellamkonda (2012), Icli and Anil (2014), Mahapatra and Khan (2007)
lecture halls	Mattah et al. (2018)
study rooms	LeBlanc and Nguyen (1997), Sohail and Shaik (2004)
university bookshop	Hill (1995), Simangunsong et al. (2019)
library services	Kwan and Ng (1999), Sultan and Yin Wong (2013), Lagrosen et al. (2004), Hill (1995), Budu et al. (2021), Athiyaman (1997), Calvo-Porrall et al. (2013), El Alfy and Abukari (2020)
richness of educational sources	Icli and Anil (2014)
staff	Trivedi et al. (2021)



Quality of service in recreational facilities attracts the attention of students. Social integration of students is a notable aspect of service quality (Thomas and Galambos, 2004). According to the work of Osman et al. (2006), campus recreation has 3 quality dimensions, which are “ambiance of the facility, operations quality and staff competency”. Mokoena and Dhurup (2017) mention that “people interaction, facility design, sociability, equipment and ambience” are important recreational service quality factors. Shonk et al. (2010) stress the role of student identification in campus recreational activities, which also affects student satisfaction. Rahman et al. (2020) mention that having training camp for sport, sport equipment and inter-university sport influence student perception for recreation quality.

Table 6
Recreational service quality factors

Quality Factors	Author(s)
ambiance of the facility	Osman et al. (2006), Mokoena and Dhurup (2017), Ko and Pastore (2007)
facility design	Mokoena and Dhurup (2017), Ko and Pastore (2007)
social activities	Sultan and Yin Wong (2013), Kwan and Ng (1999), Icli and Anil (2014)
social facilities	Mokoena and Dhurup (2017), Thomas and Galambos (2004)
sport equipment	Mokoena and Dhurup (2017), Rahman et al. (2020)
sport training camp	Rahman et al. (2020)
sports facilities	Icli and Anil (2014), Kwan and Ng (1999), Rahman et al. (2020)
staff	Osman et al. (2006)
travel agency	Hill (1995)
shops	Lagrosen et al. (2004)

In their HiEdQUAL service quality scale, Annamdevula and Bellamkonda (2012) list conference hall, labs, internet facility, canteen and medical facility. Mensah and Mensah (2018) state that responsiveness and empathy increase customer satisfaction in campus restaurant. Furthermore, Garg (2014) emphasizes that employee behaviors and physical environment of university restaurant affect emotional perception of service quality.

Table 7
Food service quality factors

Quality Factors	Author(s)
cafes around university	Lagrosen et al. (2004)
canteen	Annamdevula and Bellamkonda (2012)
catering service	Hill (1995)
dining service	Sultan and Yin Wong (2013)
employee behaviors	Garg (2014)
food court	Simangunsong et al. (2019)
physical environment	Garg (2014)

In addition to the accommodation opportunities that the university can offer to its students, the fact that the university offers these opportunities in a quality way will make it easier for the students to choose that university. In a study conducted in South Africa, Radder and Han (2009) find that “interaction, empathy, general amenities, and room amenities” are main quality attributes of university accommodation. In their research in Bangladesh,



Rahman et al. (2020) list room capacity, hostel security, prayer room and hostel communication as factors for accommodation quality.

Table 8
Accommodation quality factors

Quality Factors	Author(s)
communication	Rahman et al. (2020)
cost	Arambewela and Hall (2009)
interaction	Radder and Han (2009)
prayer room	Rahman et al. (2020)
residential facilities	Mahapatra and Khan (2007)
room amenity	Arambewela and Hall (2009), Radder and Han (2009)
room capacity	Rahman et al. (2020)
security	Rahman et al. (2020)

Moreover, Mahapatra and Khan (2007) mention the importance of residential facilities, and aesthetic view of facilities. Arambewela and Hall (2009) survey international students coming from Asian countries to Australia and find that access to computer facilities, availability of modern facilities and accommodation with reasonable cost and good standard affect student satisfaction. Gallifa and Batallé (2010) emphasize the factors of security and confidence for multicampus universities.

The external appearance and aesthetics of this facility play an important role as much as the facilities offered by the facility for university students. Ko and Pastore (2007) assert that design and atmosphere of the facility are important.

Table 9
Campus buildings quality factors

Quality Factors	Author(s)
aesthetic view of facilities	Mahapatra and Khan (2007)
cleanliness of facilities	Kwan and Ng (1999)
location	Rahimzhan et al. (2020)
security	Simangunsong et al. (2019), Gallifa and Batallé (2010)

The fact that the transportation facilities of the university are developed, and the transportation options are diverse greatly affect the students' perspective on the university. The quality factors are availability of transport information, security, and hygiene (Rahman et al., 2020), e-services and location (Rahimzhan et al., 2020) and parking area (LeBlanc and Nguyen, 1997; Sohail and Shaik, 2004).

Table 10
Transportation service quality factors

Quality Factors	Author(s)
hygiene	Rahman et al. (2020)
parking area	LeBlanc and Nguyen (1997), Sohail and Shaik (2004)
security	Rahman et al. (2020)
transportation facilities	Sultan and Yin Wong (2013), Alam et al. (2021), Rahimzhan et al. (2020)
transportation information	Rahman et al. (2020)



The quality of the service provided by the university in health facilities is a factor that greatly affects student satisfaction. Ushantha and Kumara (2016) considers health services an important factor for quality. Dandis et al. (2021) list “administration quality, interpersonal quality and technical quality” as the main service quality factors for healthcare centers of universities. In their research in Bangladesh, Alam et al. (2021) mention that health and transportation services are remarkable dimensions of service quality. Besides food court, bookstore and security, Simangunsong et al. (2019) reveal that availability of first aid facility and emergency service is required for health service quality.

Table 11

Health service quality factors

Quality Factors	Author(s)
emergency service	Simangunsong et al. (2019)
general medical facilities	Annamdevula and Bellamkonda (2012), Alam et al. (2021), Ushantha and Kumara (2016)
communication	Dandis et al. (2021)
technical infrastructure	Dandis et al. (2021)
administration of facilities	Dandis et al. (2021)

4.5.Sustainability Related Service Quality

Universities are institutions that lead the society in environmental awareness and sustainability. For this reason, creating a sustainable campus and providing services that support sustainability are their most important duties. Universities offer a variety of services related to campus layout, infrastructure, energy efficiency, renewable energy, climate change, waste management, water resources, transportation, education, and social responsibility. The quality of these services contributes to the awareness of future generations on sustainability and to take important steps in this regard.

Amaral et al. (2015) emphasize service quality in green campus buildings, energy saving, creating collaboration with society and sector, and increasing research on sustainability issues. Doan (2021) examines sustainability dimensions of university service quality and finds that establishing partnership with NGO’s, campus waste management and helping local environment are factors increasing sustainable service quality towards students. Beringer and Adomßent (2008) mention that universities should focus on supporting sustainability projects and create sustainability related learning environment. Mulà et al. (2017) state that they should transform education programs for sustainable mindset and organize workshops for sustainability.

In their research in an Australia business school, von der Heidt and Lamberton (2011) find out that curriculum should be compatible with sustainability. In her research in Turkey, Tuncer (2008) mentions that universities should provide a background for sustainable development topics to their students. Waas et al. (2009) state that orientation of research activities towards sustainability is an important factor for service quality. Lukman and Glavič (2007) express that universities should add sustainability in their curriculum and support projects related to sustainability issues.

If universities want to provide sustainability-related services to students and improve the quality of existing services, they should start from the senior management level. It is important to involve students in decision-making processes in order to give students a sustainable university perception and to highlight their services in this field. Comm and Mathaisel (2003) assert that university management should have an agenda about



sustainability, and they should count students in their decision making for sustainability policies.

Table 12
Sustainability Related Service Quality Factors

Quality Factors	Author(s)
campus waste management	Doan (2021), Nejati and Nejati (2012), Ozdemir et al. (2020)
education programs for sustainability	Beringer and Adom̂ent (2008), Tuncer (2008), Lukman and Glavič (2007), Vázquez et al. (2015), von der Heide and Lamberton (2011), van Weenen (2000), Mulà et al. (2017)
energy efficiency	Nejati and Nejati (2012), Ozdemir et al. (2020), Sonetti et al. (2016)
entrepreneurship education	Vázquez et al. (2015)
environmental protection	Vázquez et al. (2015), Ozdemir et al. (2020)
green campus spaces	Amaral et al. (2015), Clemes et al. (2001)
land use	Nejati and Nejati (2012)
planning for sustainability	Nejati and Nejati (2012)
projects with society, sector and NGOs	Albareda-Tiana et al. (2018), Vázquez et al. (2015), Amaral et al. (2015), Nejati and Nejati (2012), Doan (2021)
supporting sustainability research projects	Amaral et al. (2015), Waas et al. (2009), Lukman and Glavič (2007), Beringer and Adom̂ent (2008)
sustainable campus coordination	van Weenen (2000)
university policies for sustainability	Albareda-Tiana et al. (2018), Nejati and Nejati (2012), Comm and Mathaisel (2003), van Weenen (2000),

Van Weenen (2000) states that changing university mission statement, assigning a coordinator for sustainable campus and revising university curriculum are important factors for service quality. Albareda-Tiana et al. (2018) point out creating an institutional synergy between different departments of the university to collaborate on sustainability issues. Furthermore, Nejati and Nejati (2012) emphasize community outreach and inclusion of students to sustainability policies.

According to the study of Vázquez et al. (2015), collaboration with NGOs, supporting local development, environment protection, moral contents in the syllabus, collaboration with employers and entrepreneurship education are noticed by students as service quality factors. Other quality factors in the literature are listed as energy efficiency (Sonetti et al., 2016), green spaces for interaction (Clemes et al., 2001), environmental sensitivity, energy conservation and waste management policies (Ozdemir et al., 2020).

4.6. Internationalization Related Service Quality

Thanks to the rapid progress of globalization, universities are becoming more and more internationalized institutions. The increase in foreign students, academicians and bilateral cooperation agreements in universities has a profound effect on the students' perspective on the quality of education. In addition, university lists published by international ranking institutions such as Times Higher Education (THE), QS, US News and CWUR affect the university selection process of students. When all these issues are taken into consideration, it becomes clear that increasing the service quality in the field of internationalization is an important issue for universities. Significant research has been carried out for the last two decades on internationalization and service quality perception of students.

In their HiEdQUAL scale, Annamdevula and Bellamkonda (2016) consider internationalization of university as a major dimension of service quality. De Jager and



Gbadamosi (2013) state that internationalization and international student and staff are necessary to increase student satisfaction and improve quality. Calvo-Porrall et al. (2013) mention that higher education institutions should have an international relations service for academic exchange and training with universities from other countries. Universities should provide opportunities to students to study abroad. They should also meet international standards (Lagrosen et al., 2004). Adinegara and Putra (2016) consider student exchange programs as necessary attributes of service quality.

Martensson and Richtner (2015) assert that rankings and international diversity of the student are factors for higher education service quality. Recruiting international students at postgraduate level is necessary for internationalization of universities as a study in South African universities suggest it (Chaguluka et al., 2018). For example, Chaguluka et al. (2018) express that satisfaction of international postgraduate students about service quality affects enrollment of other international postgraduate students. International students see marketing activities as a quality factor; therefore, universities should consider them for consumer satisfaction (Russell, 2005). Accreditation and ranking in the prestigious index are parts of it. Research in Indonesia reveals that international accreditation of university by renowned institutions such as AACSB or EQUIS is an indicator of service quality (Simangunsong, 2019). Furthermore, according to the research conducted among international students in UK universities, helping international students for employment opportunities is found necessary for service quality (Zhu and Sharp, 2022).

Table 13

Internationalization Related Service Quality Factors

Quality Factors	Author(s)
exchange programs	Calvo-Porrall et al. (2013), Adinegara and Putra (2016), Lagrosen et al. (2004)
helping international students for employment	Zhu and Sharp (2022)
international accreditation	Simangunsong (2019)
international educational standards	Lagrosen et al. (2004)
international marketing activities	Russell (2005)
international training programs	Calvo-Porrall et al. (2013)
internationalization policy	de Jager and Gbadamosi (2013)
presence of international staff	de Jager and Gbadamosi (2013)
presence of international students	de Jager and Gbadamosi (2013), Chaguluka et al. (2018)
rankings in reputable international index	Martensson and Richtner (2015)
student diversity	Martensson and Richtner (2015)



Career Services Quality

Career and counseling services empower students for their future pathways, that's why this area is examined by numerous scholars for the last two decades. There is a strong literature about the importance of service quality of higher education institutions on career and counseling. As one of the pioneers of this area, Hill (1995) lists career services and counselling as important quality dimensions. Āad'o et al. (2011) mention that career prospects is a major dimension of service quality. Calvo-Porrall et al. (2013) express that university should inform students about career opportunities and the current market conditions. It is necessary to have a career center at the university and they should help students find a job easily (Icli and Anil, 2004). Almeyali and Al Mousawi (2021) underline

the availability of a unit in university that is responsible for creating ties with business world, increasing relations with foreign universities abroad and awareness of students about university services. Ozdemir et al. (2020) mention that universities should help their students find internships and jobs. In their research in Ghana, Mattah et al. (2018) state that mentoring and career guidance increase student satisfaction.

Universities should start to move for fast employability of students (Ushantha and Kumara, 2016), for this reason, they should arrange trainings and organize job fairs to increase employability of their students (Latif et al., 2017). According to their research in the United Kingdom, Angell et al. (2008) mention that universities should have a career platform and strong industry links. In their research in Singapore, Yeo (2008) emphasizes that it is essential to establish relationship with industry partners. Keeping in contact with their alumni facilitates maintaining industry partnership (Lagrosen et al., 2004). It is very important for service quality to organize industrial tours and on-the-job training for students and invite guest lecturer from industry (Jain et al. 2010). These activities increase self-confidence of students, their critical thinking and self-awareness (Teeroovengadum et al. 2016).

Table 14

Career Service Quality Factors

Quality Factors	Author(s)
alumni relations	Lagrosen et al. (2004)
career center	Icli and Anil (2004)
career counselling	Mattah et al. (2018), Hill (1995), Teeroovengadum et al. (2016)
career platform	Angell et al. (2008), Calvo-Porrall et al. (2013)
finding internship	Ozdemir et al. (2020)
industry relations	Almeyali and Al Mousawi (2021), Yeo (2008)
industry tours	Jain et al. (2010)
job fairs	Latif et al. (2017)
on-the-job training	Jain et al. (2010)
relations with foreign universities	Almeyali and Al Mousawi (2021)
strong industry links	Angell et al. (2008)
support for job search	Đad'o et al. (2011), Ushantha and Kumara (2016), Ozdemir et al. (2020), Icli and Anil (2004)
training programs	Calvo-Porrall et al. (2013), Latif et al. (2017)

5. Conclusion

Examining the quality of services offered by universities to students, identifying deficient and problematic aspects and producing solutions to these problems is a significant task for researchers. This study aimed to compile the studies published in the literature on university service quality in the last 30 years, to reveal a general framework of the factors affecting quality and to guide researchers in this field.

Although there are different stakeholders such as academics, business world and society for the services offered by the university, the most important of all stakeholders is undoubtedly students, therefore, understanding how the services offered are perceived by students and how they change according to their perspectives are significant research topics. This article aimed to reveal which service quality factors are more significant and important from the students' perspectives.



As a result of the study, it was revealed that the students focused on five main topics, which are services offered in teaching, student affairs, academic and non-academic facilities at the university, sustainability, internationalization, and career service. In addition, various service quality factors affecting these five main dimensions are presented in tables. While the first studies in the field of university service quality were mostly related to teaching quality and facility quality; internationalization, sustainability, and career service issues were also discussed in the studies carried out in the following periods.

6. Managerial Implications

It is an undeniable fact that thousands of students enroll in different universities in their countries or go abroad each year. Aggressive competition among higher education institutions always pushes them to develop new policies to attract best students, increase their incomes, maintain their activities and score high in respected university ranking lists. Therefore, increasing the number of studies on university service quality factors is important for supporting university administrators.

It is expected that this study will provide information and insights to university administrators and researchers in the field of higher education. It will affect their perspectives and help them recognize problems with university service quality, therefore, it will contribute to the university's quality management, student satisfaction and loyalty.

Although various scales have been developed to measure service quality in the literature, it is essential to conduct new research that will reveal new service quality dimensions and their quality factors. In particular, there is a wide area for research opportunities in the fields of internationalization, sustainability, social responsibility and mentoring. Developing quality measurement methods or scales related to these fields will help managers to better understand the priorities of students and the dynamics of university service quality.



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