Arab American University

Faculty of Graduate Studies

User-Perceived Quality of Services in the Palestinian Continuing Education Centers

By

Rasha Mohammed Nasser Aldean

Supervisor

Dr. Wasim Idris Sultan

This thesis was submitted in partial fulfillment of the requirements for the Master's degree in Quality Management

September 2022

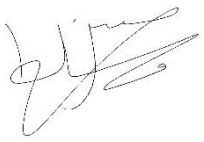
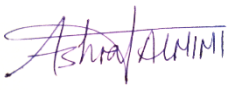
Thesis Approval

User-Perceived Quality of Services in the Palestinian Continuing Education Centers

By:

Rasha Mohammed Nasser Aldean

This thesis was defended successfully on 10 /10 / 2022 and approved by:

Defense Committee members	**Signature**
1. Dr. Wasim Sultan / Supervisor:	
2. Dr. Ashraf Almimi / Internal Examiner:	
3. Dr. Yahya Saleh / External Examiner:	

Declaration

Unless otherwise referenced, the work provided in this thesis is the researcher's work and has not been submitted elsewhere for any other degree or qualification.

Name: Rasha Mohammed Naser Aldean

Signature: 

Date: 2023/1/16

Dedication

To:

The soul of my father

My mother

My children and brothers

All loved ones who contributed to me this achievement

Appreciation and love.

Acknowledgment

I would like to thank Dr. Wasim Sultan for his invaluable assistance and insights leading to the writing of this thesis. The completion of this thesis could not have been possible without his supervision.

Appreciation also goes to the thesis examiners, Dr. Ashraf Al-Mimi and Dr. Yahya Saleh, for their efforts and time in reading and reviewing the thesis.

The greatest credit is to my family and friends for their unlimited motivation and support during my journey at the University and until the end of this study.

Abstract

Despite the importance of continuing education, empirical research on service quality in this sector has been limited in Palestine. In light of the lack of studies of service quality in continuing education in Palestine, as they affect students' satisfaction, this thesis investigates Students perceptions of service quality at Continuing Education Centers (CECs) in the West Bank, Palestine. The study employs SERVQUAL, a well-recognized framework in the literature to assess potential performance gaps at the Palestinian CECs. The further analysis tested the applicability of the SERVQUAL model as a measurement tool to determine the impact of service quality on student satisfaction and the gap between students' perceptions and expectations.

Primary data were collected through an online questionnaire from a sample of 113 respondents who attended a training program/diploma in one of the CECs. The questionnaire comprises three parts. The first collects data on students' perceived service quality, the second part gathers data on students' satisfaction, and the third part collects data on students' demographic characteristics. A five-point Likert scale was used in the questionnaire to score the responses. Data were analyzed using Excel, Minitab, and Smart-PLS.

The SERVQUAL proved to be a model that can assess the service quality of CECs. The results also show that the overall quality of CECs' services ranges from somewhat low to high.

In addition, the study revealed that empathy and tangibility constructs have a significant relationship and contribute to forming the CECs service quality. Unexpectedly, responsiveness, assurance, and reliability are not significant predictors of the CECs service quality. Regarding the impact of service quality on customer satisfaction, the study found a significant positive relationship between service quality and customer satisfaction. Based on

the research findings, efforts must be made to ensure that continuing education centers meet the students' needs, especially in the tangible dimension, by upgrading the equipment and the visual appeal of the physical facilities since this dimension has the lowest quality levels.

Keywords: User-Perceived Quality, SERVEQUAL model, Countiuing Education, Student Satisfaction.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

AVE	Average Variance Extracted
CE	Continuing Education
CEC	Continuing Education Centers
CR	Composite Reliability
HOC	Higher-Order Component
LOC	Lower-Order Component
MoHE	Ministry of Higher Education
OECD	The Organization for Economic Co-operation and Development
PA	Palestinian Authority
PCBS	Palestinian Central Bureau of Statistics
PLS-SEM	Partial Least Square-Structural Equation Modelling
SAT	Student Satisfaction
SQ	Service Quality
VIF	Variance Inflation Factor

Chapter One

Introduction

1.1 Overview

This chapter begins with an introductory overview of the research study. First, it provides the research background and then moves to the research problem, significance, and justification. Furthermore, the chapter presents the objectives of this study, the research questions, and the research hypotheses. The chapter concludes with research limitations and thesis structure.

1.2 Background

The literature is rich with scholars who emphasize that "service quality" is the key to achieving customer satisfaction and loyalty (Koni et al., 2013). Education quality is not an exception. In Palestine, higher education research focuses primarily on easily-quantifiable indicators such as teacher-to-student ratios and gender participation. Simultaneously, the assessment of educational service quality has yet to be explored, and the evaluation of higher education from the students' perspective has yet to be improved.

Universities are the communities' highest educational institutions. Besides their traditional role in education and research, they have the resources to expand their traditional education mission and provide the required training services and professional development programs. Academic staff, professionals, facilities, and education centers in the university can fulfill society's training needs, and, particularly, continuing education centers (CECs) are designed for this purpose.

In a broad sense, UNESCO summarizes Continuing education as "*spreading the education services beyond the boundaries of school age. Seeing education as a tool to improve the quality of life, improving education related to the needs of everyday life, individuals' participation in education decisions, being open-minded in planning, management, and target*

setting "(Cengiz , R., & Remzi, 2014). Continuing education centers serve as the university-community service arm aiming to boost the capacity of their students to improve their skills based on the market needs. They connect the community with the universities to enhance humankind's performance.

Many studies provide evidence of the importance of service quality in CECs (Angell et al., 2008). Thus, the applicability and adaptation of the service quality concepts and evaluation models into the higher education sector have received much attention in recent years and are considered a primary goal.

This study's first objective is to assess the Quality of Services in the Palestinian CECs as perceived by their students. More specifically, this study employs the well-known framework of SERVQUAL to evaluate the perceived quality among customers. Its focus is on the gap between service expectations and the perceptions of the provided service. The study examines service quality on five measurement dimensions: assurance, tangibility, reliability, responsiveness, and empathy. Then, the study examines the association between perceived quality and students' satisfaction.

The research employs a quantitative methodology that uses a questionnaire to survey a convenient sample of students of the eight working Palestinian CECs. More specifically, the questionnaire builds on the SERVQUAL model, the most frequently-used model for measuring service quality in education. This model is based on the expectancy-disconfirmation paradigm, which states that service quality is defined as the extent to which consumers' pre-purchase quality expectations are confirmed/disconfirmed by their actual perceptions of the service experience.

1.3 Research Problem

An employment diagnostic study prepared by the ILO[1] in Palestine (The Occupied Palestinian, 2018), pointed out that: "*If life-long training/continuing education is done properly, it can reduce the duration of unemployment for beneficiaries, increase earnings through training, increase the likelihood of employment beyond six months during two years through self-employment assistance, and support public employment*.". Continuing education serves both employed and unemployed individuals and contributes to economic and social growth. Workers must stay updated with the latest developments, skills, and technologies required for their fields. On the other hand, unemployed individuals can enhance their skills to boost their entrance into the labor market.

The OECD[2] Skills Strategy (Schleicher, 2012) states that effective development and skills are central to economic and social development. Higher Education, including continuing education, helps produce advanced skills and generate new knowledge and innovation. It also plays a vital role in up-skilling and re-skilling individuals throughout their lives to enhance employability. However, determining the skills needed in the labor market is complex since they rapidly change over time and place. Also, the current supply of skills can influence future labor market needs. Therefore, it is believed that the recommendations of the OECD Skills Strategy report are vital for inducing job-rich growth in the short term. One of these specific recommendations is to "*Enhance skills, address skills mismatch, and induce the development of a market-oriented educational system*."

Because continuing education centers play a fundamental role in providing professional development services that create opportunities for individuals who have already finished school, these centers are also responsible for guaranteeing transparency and quality in this

[1] ILO is the International Labor Organization

[2] OECD is The Organization for Economic Co-operation and Development is an intergovernmental economic organization with 37 member countries, founded in 1961 to stimulate economic progress and world trade.

learning journey. Therefore, it has been vital to focus on these centers' Service Quality. One way to address the quality of education is through the student perspective. For this, using the SERVQUAL instrument to score the five types of satisfaction gaps may shed light on potential improvement areas. Studies show that continuing education is essential, but eight continuing education centers are units/subunits of 8 universities in Palestine. Therefore, questions are raised about the quality of their services. This thesis aims to investigate the students' satisfaction with the quality level of the services offered by these centers. More specifically, finding whether continuing education has enhanced their skills or boosted their entrance to the market is essential to planning for better services. Although many Palestinian studies covered relevant university education topics, continuing education services have not been investigated. Unfortunately, there has been minimal literature surrounding this topic in Palestine.

1.4 Research Significance and Justifications

Knowledge, innovation, and research are imperative for the competitiveness of an economy and essential for achieving economic growth. The role of continuous learning in organizations to outperform in the marketplace drives the importance of this research effort. The CECs are sound candidates to play this crucial role on the universities' side. Therefore, investigating their effectiveness is vital and indirectly contributes to organizations' outperformance.

Palestinian researchers, like the study of Khatib & Tsipouri (2013), tackled the role of universities in enhancing market employability in their research work by testing the effectiveness of the academic programs. However, continuing education performance is not yet investigated in the literature. This research would fill the literature gap by providing empirical knowledge on the user-perceived quality of service provision in Palestinian CECs. This study addresses the perceived quality by measuring the students' satisfaction level. As

has been stressed by Iacobucci et al., (1995), "*Presumably, if quality programs were initiated based on marketing research- that is, the changes are market-driven and customer-oriented, then quality improvements are more likely to satisfy customers*." Quality of Education has been recognized as a national priority in the Palestinian National Policy Agenda 2017–2022. The National Policy Agenda pointed out that higher education institutions have better aligned their mission with the labor market needs and upgraded and expanded the technical vocational education and training infrastructure and facilities to enhance education quality. This could be achieved by enhancing the quality of services provided by the CECs in Palestine (Ministry of Education and Higher Education, 2017).

1.5 Research Questions and Hypotheses

This study aims at answering the research questions below:

1- What constitutes service quality in the context of Palestinian CECs?

2- Is there an association between the perceived quality dimensions and students' satisfaction in CECs in Palestine?

Accordingly, this study tests the following central hypothesis:

The more the perceived quality, the more students of CECs services are satisfied.

The research sub-hypothesis are given below:

H1: The better the perceived quality of the tangibles in the Palestinian CECs, the greater the level of students' satisfaction will be.

H2: The better the perceived reliability of services in the Palestinian CECs, the greater the level of students' satisfaction will be.

H3: The better the perceived level of responsiveness in the Palestinian CECs, the greater the level of students' satisfaction will be.

H4: The greater the level of assurance provided by the Palestinian CECs, the greater will be the level of students' satisfaction.

H5: The better the perceived level of empathy in the Palestinian CECs, the greater will be the level of students' satisfaction.

Figure 1-1 depicts the conceptual framework of this study.

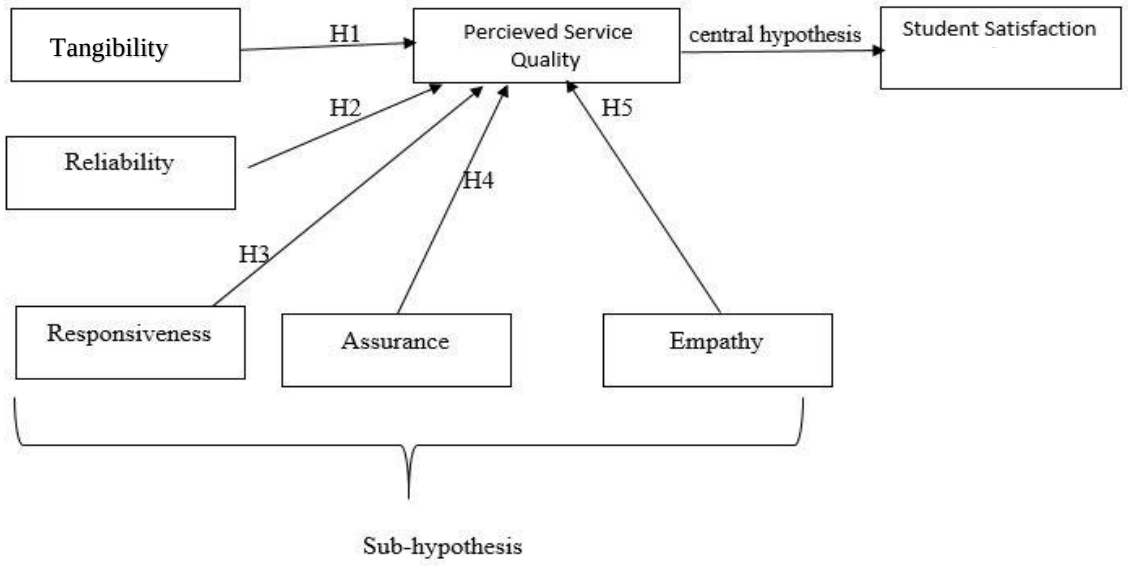


Figure 0-1 Conceptual Model

1.6 Delimitations of the Study

Geographical*:* This study has covered the students/trainees from 8 universities on the West Bank.

Population and Sample: the population is the already-served students who have received services from the Palestinian continuing education centers within the last four years.

Sample size: the unit of analysis is individuals who got a form of education in the targeted centers during the last four academic years—a random representative sample of students from eight CECs units from Palestinian universities located in the West Bank. A sample size of 300 can statistically represent our population using the Steven Thompson formula (Thompson,

1987). The data collection tool was distributed to the following eight universities. Unfortunately, only five centers responded to our communication and data collection process:

1 Al Quds Open University.

2 Arab American University.

3 Birzeit University.

4 Palestine Technical University – Kadoorie

5 An-Najah National University

6 Bethlehem University.

7 Palestinian Ahliya university

8 Palestine Polytechnic University.

Knowledge: The study examines the perceived quality of service in CECs in the West Bank using the SERVQUAL model, which studies five quality gap dimensions (tangibles, reliability, assurance responsiveness, and empathy). An extensive literature review was conducted to review the previous relevant literature.

Time: The questionnaire survey (distribution and collection) was administered on May 7- 30, 2022.

1.7 Thesis Structure

The thesis is divided into the following chapters:

Chapter 1: Introduction

This chapter begins with the background of the research. Then, it introduces the reader to the research topic. Then, it covers the problem statement, the study's justification, research objectives, questions, hypotheses, research delimitations, research design, research limitations, research contribution to knowledge, and research outline.

Chapter 2: Literature Review

Chapter two reviews the literature relevant to the study's research problem. More specifically, the chapter includes sections on service quality and continuing education concepts and the importance of these concepts. In addition, the chapter defines customer satisfaction and its importance and how service quality plays a significant role in customer satisfaction. Lastly, the chapter describes the most commonly used models to measure service quality.

Chapter 3: Research Methodology

This chapter dwells on the research design and method and details the technique used in the analysis and the data collection methodology.

Chapter 4: Data Analysis and Results

Chapter four is devoted to the study's findings and their discussion. It provides an analysis and discussion of the results and compares them with the findings of previous studies.

Chapter 5: Conclusions and Recommendations

This chapter presents the study’s conclusions and their associated recommendations. It also includes the study limitations as well as future research directions.

Chapter Two

Literature Review

2.1 Overview

In this chapter, continuing education is discussed, including its definition, importance, and types. In addition, service quality in continuing education is discussed, including its measurement. Moreover, student satisfaction is discussed, including its definition, importance, and determinants. Finally, the most important empirical studies are reviewed.

2.2 Continuing Education

2.2.1 Definition of Continuing Education

Literature implies that lifelong learning has existed since humanity's beginning. Only lately has it been institutionalized (Kallen, 2002); others believe it started with great thinkers such as Plato and Comenius (Yin, 1997). Continuing education, lifelong learning, and professional development are synonyms for training or an educational process that is an inseparable part of an organizational arsenal.

The twentieth century saw the birth of continuing education. As countries progress toward industrialization, the demand for continuing education and the attainment of necessary skills have increased, challenging prior educational places and providing chances for career and personal improvement. Evidence shows that the demand for continuing education in the twenty-first century is rising; there is a substantial need to access information enhancing global interactions, industry shifts, fast technology changes, and skills requirements (Laal et al., 2014).

There are many definitions for continuous education and lifelong learning in the literature; for example, continuing education can be defined as: *"all learning opportunities which can be*

taken up after full-time compulsory schooling has ceased. They can be full-time or part-time and include vocational and non-vocational study" (Venables, 2005).

In other words, every chance that can be a course or even a training after school is optional.

Continuous learning is viewed as a supporting process that enables individuals to acquire skills and knowledge throughout their lives and to apply what they have learned with confidence and enjoyment; hence, it is a component of life that occurs at all times and in all places. As a result, several phrases are linked with adult education, such as continuing education, permanent education, training, and other terms relating to learning beyond the traditional school system (Duţă & Rafailă, 2014).

As stated in a UNESCO report, lifelong learning is a lifelong endeavor that can be fulfilled in informal and non-formal ways to raise a person's standard of living and the community. On the other hand, the European Commission defined it as: "*All learning activity is undertaken throughout life, to improve knowledge and skills within a personal, civic, social and/or employment-related perspective*" (Tuijnman & Boström, 2002). Continuing education includes everything that takes place during a person's life that, in the end, creates opportunities to attain more skills. This learning process addresses the needs of the individual as well as the community needs (Abukari, 2005).

This is accomplished by integrating information and practical training in several policy areas, including research employment and youth. What is remarkable in continuing education practices is that a person can select from various learning environments, jobs, regions, and countries to enhance their skills, knowledge, and competencies and apply them to their fullest potential (Harvey, 2004).

2.2.2 Importance of Continuing Education

Literature has indicated that continuing education is essential for individuals, the economy, and communities. For an individual, it's vital in many dimensions, such as personal development. It helps develop new interests and enhance self-esteem. Besides, skill development is necessary to create job opportunities, upgrade the person's skills, and help explore new ideas and best practices. In addition, it helps in the academic development aspects as you can obtain a diploma and improve the soft skills that help you communicate with your surroundings. In addition, continuing education can play an essential role in career satisfaction. Besides, continuing education can boost confidence, leading to career advancement. Also, acquiring new skills, knowledge, and abilities will increase a person's contribution to the economic system. Moreover, when employees receive new skills and perspectives, continuing education results in more productive and inventive societies. Those who wish to better adapt to the changing demands of the job must continually acquire new skills and train for new challenges (Laal et al., 2014).

On the other hand, continuing education helps develop the economy by assisting firms in improving their competitiveness and making the area more appealing for inward investment and business start-ups. Moreover, in addition, assisting individuals in improving their lifetime career prospects and having more control over their lives. Furthermore, continuing education helps achieve greater social cohesion by integrating all segments of the population into the economy; and providing a demanding market for learning providers (West & Marchand, 2001).

Due to the frequent changes in the workplace, continuing education is necessary; everyone m ust continually update their skills to meet their jobs' demands. The university must react to the rising demand for university-level professional training (Abukari, 2005). Furthermore, previous literature proved that training improves employee competence by enhancing their

service-related knowledge, skills, and capacity to manage demanding customers (Shen & Tang, 2018).

2.2.3 Types of Continuing Education (CE)

According to Tissot & Professionnelle, (2004), there are three types of Counting Education. Table 2-1 describes the proposed types.

Table 0-1 Continuing Education Types

Type of Education	Description
Formal Education	-This type of education is conducted in an organized way. - Education occurs according to the educational institution's rules and timetable for education. - Students ultimately receive a certificate/diploma.
Non-formal education	- This form of learning is not designated as learning explicitly. - However, it includes an important aspect of education, such as acquiring vocational skills in the workplace. - Adaptable to the needs of the student. Certification is not ultimate
Informal education	This education is achieved by gaining skills and knowledge from daily social experiences at work or home. It does not usually lead to a certification.

Continuing education is available in various formats, including online classes, classroom lectures, labs, and more, making it adaptable to work schedules. Besides, continuing education can occur in multiple settings, including university campuses, training centers, and workplaces.

2.2.4 Continuing Education Centers (CECs)

In most countries, continuing education courses are offered through a college or university division known as a continuing education center. The Organisation for Economic Co-operation and Development (OECD) argued that continuing education should be "*fully integrated into institutional life rather than being often regarded as a separate and distinctive operation employing different staff.' It is to feed into mainstream programs and be given the due recognition deserved by this type of provision.*"

As stated above, these educational centers should be "*a subunit of a parent institution*" with programs relevant to its missions and goals. These subunits provide their services as organization members or as individuals. Their services were regarded as allowing CECs a good quality of education flexibly and innovatively and promoting adult lifetime learning. CECs'primary role is tackling people's demands concerning professional development and personal growth. It usually occurs by helping them attain new skills and knowledge in different fields (Mclean, 2007).

Continuing education within universities extends the universities' resources into the communities those universities serve, resulting in more educated people who will eventually be better off economically. In addition, CECs are essential for helping to improve the quality of life of the people (Schejbal & Wilson, 2008).

Unlike university academic programs, continuing education provides non-credit courses aiming to enhance a specific area or field of the beneficiary's interest in these learning opportunities. Furthermore, they offer nonacademic practical courses that aim to increase effectiveness, improve the students' communication skills, or the pleasure of continued learning experience (Jewel, 1996). It takes the shape of technical and vocational training. These subjects are usually offered through a college or a university as an extension, known as the center/unit for continuing education (CEC).

In Jordan, due to the scarcity of natural resources, the national report on adult education pointed out that investments in Human Resources are a critical goal for sustainable development plans. Therefore, the quality of this goal will aid in bridging the gap between limited natural resources and promote opportunities to reach a high standard of living (Jordanian Ministry of Education, 2008). A set of activities were suggested; one of these goals was establishing CECs. These centers aim to reduce poverty and unemployment through multiple activities such as handicraft skills in additional reading, writing, and basic mathematics.

In Turkey, the goal of establishing CECs is to execute short and long-term training programs and consultancy projects in corporations with the private and public sector and international institutions and develop various consultancy projects. In addition, the CECs will implement activities in fields other than those in which taught courses are given, both at the undergraduate and graduate levels. These centers are established under universities to organize activities that build the capacities of individuals to improve their skills and knowledge toward a better career or self-development (Arslan,2008)

Continuing education centers serve as the community service arm, connecting the community with the universities to enhance humankind's quality. It is usually offered as Vocational and Technical Training, and these services are how universities connect with their communities and other organizations (Cengiz , R., & Remzi, 2014).

2.2.5 Continuing Education in Palestine

The Palestinian Authority recognizes the importance of Continuing Education, and therefore, continuing education programs have always been one of the main goals of the Ministry of Higher Education (MoHE). For example, one of the Mid-Term Strategy goals for the Higher Education Sector 2010-2013 was "*To open and encourage continuing education programs in*

the universities". This goal aims to serve policy 1, "*To introduce Entrepreneurial learning in the higher education institutions.*" In addition, one of the key strategies and policies in the education sector's strategic plan for 2018-2022 is to encourage continuing education programs in universities (Ministry of Education and Higher Education, 2017).

Under the Palestinian Law of Higher Education (Article No.11), eight CECs (as shown in Table 2-2) have been established under universities, each with programs based on the market and individual needs, along with each university's mission and goals.

Table 0-2 Lists of The Universities with Continuing Education Centers (CEC)

University	Year of Foundation	Type
1. Al-Quds Open University	1991	Public
2. Arab American University.	2000	Private
3. An-Najah National University	1977	Public
4. Bethlehem University	1973	Public
5. Birzeit University	1972	Public
6. Palestine Ahliya University	2007	Private for-profit
7. Palestine Polytechnic University	1999	Public
8. Palestine Technical University	2007	Governmental

These CECs offer a variety of training programs that are formally divided into:

- *Professional Diploma Programs:* The professional diplomas are accredited by the Ministry of Education and Higher Education. These programs are intended to meet the growing demand for professional and continuing education in a rapidly changing market with significant changes in workplace dynamics. To get the certificate, participants have to complete all courses offered in the diploma, and these diplomas are at least nine months a period without any academic rights.
- *Intermediate Diplomas:* are accredited 2-year program 66-72 Credit Hours; to get the certificate. Participants have to have completed all courses offered in the certification.
- *Non-Credited Training:* includes workshops, courses, seminars, and specialized consultations in various fields. For example, technical services for private and public sectors.

2.3 Service Quality

2.3.1 Concept of Perceived Service Quality

Quality definitions have come from the manufacturing sector. There have been many definitions for good quality; for example, Dr.Juran defined quality as" *fitness for use/purpose*." Dr. Edward Deming "*Good quality means a predictable degree of uniformity and dependability with a quality standard suited to the customer*." Crosby (1979) has another definition for quality as "*conformance to requirements."*

To comprehend service quality, it is not enough to know about the definitions of product quali ty because the unique characteristics of services are not found in the goods. For example, service characteristics include intangibility, heterogeneity, and inseparability. These attributes must be acknowledged for a complete understanding of service quality (Parasuraman et al., 1985).

Services are intangible, contrary to goods; services cannot be counted or tested before the sale. In addition, services are heterogeneous; performance often varies from provider to provider, from day to day. Furthermore, consistency of behavior from the service providers is difficult to assure because what the company proposes to deliver may differ from what the customer receives. Finally, the production and consumption of many services are inseparable (Parasuraman et al., 1985).

Philip Kotler defines a service as " *any activity or benefit that is being offered that is intangible, and you can not claim ownership of what you buy*." However, when customers purchase goods, they have many tangible cues to judge quality: color, design, package, and fit. On the other side, fewer tangible indications exist to evaluate quality without tangible evidence when acquiring services(Kotler & Connor Jr, 1977) .

The distinguishing feature of services is that they are processes, not things; a service company has only interactive operations with no tangible products (Grönroos, 2001). Quality of service

has become a significant area of attention because of its impact on business performance during the last decades. Since customers always prefer businesses that provide higher quality. Because of this, service quality has become very important since it directly impacts the service provider's image (Lien et al., 2014). Lewis (1993) defined service quality as evaluating how-well the service meets customer expectations.

Others have defined service quality as an assessment of service, overall customer impression, or organizational advantage and services (Silvestri et al., 2017). Quality is an essential element that must be examined in services, especially in the education and training field (Budiyanti et al., 2020).

Service quality is also defined as an overall evaluation of how a service is good or bad (Twaissi & Al-Kilani, 2015). According to Mwiya et al. (2017), service quality is the customer's opinion on how a service is considered superior or excellent. Another definition for this concept is the general assessment of a given service by stakeholders, including customers (Roy & Ganguli, 2008).

Regarding higher education, service quality is described by O'Neill & Palmer (2004) as the gap between what students anticipate receiving and what they receive. The literature has documented that service quality in higher education is a complicated and diverse issue that, as Sultan & Wong (2010) point out, should be treated as a contextual issue. The perceived quality of service varies significantly amongst various populations. It can vary even within a single group (for example, in different periods), confirming that service quality depends on specific settings and changes depending on the students' environment, as demonstrated by the data.

In this study, service quality is defined as the gap between what the students of Palestinian CECs expect to learn and how they perceive the provided services.

2.3.2 Importance of Service Quality

Service quality is crucial for all service sectors, including higher education, for many reasons: Service quality is essential for participants' satisfaction; many studies have investigated customer satisfaction and service quality in education. For example, Khan et al. (2011) show that university service quality substantially affects student satisfaction; they used the SERVPEF methodology to test their hypothesis and found that all five service quality dimensions positively relate to customer satisfaction.

Due to increased competition in the higher education industry, service quality and other associated characteristics such as student satisfaction and student loyalty have increasingly been crucial factors in determining the long-term viability of higher education institutions (Psomas & Antony, 2017). The quality of services has been viewed as one of the critical variables that lead to (1) service differentiation, (2) distinctive advantage, (3) more satisfied customers, (4) positive word-of-mouth, (5) enhanced customer loyalty, (6) increased customer retention, (7) lower costs of acquiring new customers, (8) a larger market share, and ultimately (9) improved financial results (Gounaris et al., 2003). In addition, firms that enhance service quality have competitive advantages in increased customer retention and loyalty (Alexandris et al., 2002).

Any organization willing to expand its market share or reduce expenses to increase profit or productivity must provide higher-quality services (Anderson & Zeithaml, 1984). In addition, firms that offer superior services can better differentiate their services from their rivals, enabling them to provide their consumers with more excellent added value. As a result, the rate of client retention rises (Thomas, 2011). It should be noted that measuring customer satisfaction in the service sector is also complicated because personal attitudes towards quality vary between people. A customer may consider a service outstanding in quality while

another may see it as average. This leads to the definition of quality as "*quality lies in the eyes of the beholder*." (Garvin, 1984)

2.3.3 Measurement of Service Quality

Providing good-quality services is the key to success and is the most vital tool for competition that leads to customer satisfaction; therefore, evaluating service quality is a complex and major task. Literature has suggested several models; below are the most commonly-used models:

- **The Nordic Model**

The nordic model is a famous model used in service quality, first presented in 1982, is also known as the Grönroos model. This model explains the perceived service quality as "the outcome of an evaluation process where the customers compare their expectations with service they have received" (Milner & Furnham, 2017).

Customers evaluate service quality by comparing their perceptions of service experiences and their expectations for service performance (Tamilselvi, 2016). This model is based on three components, as depicted in Figure 2-1:

Technical quality: the outcome of the service -or what the customer receives as a result; for example, the customer of a coffee shop will get a hot drink. It can be measured by the consumer objectively, as any technical dimension of a product.

Functional quality: is how it is provided; in other words, it's the interaction between the customer and buyer during the service, for example, how the waiter is dressed in a restaurant, how s/he talks to the customer, and how s/he treats him.

Image quality: the connection between technical quality and functional quality of service, incl uding conventional marketing efforts, external impact by traditions, ideology, and word-of-mouth marketing.

For example, the service will be considered excellent if perceptions exceed expectations but imperfect if it is below their perceptions; therefore, customer satisfaction is based on the difference between their expectation and perceptions.

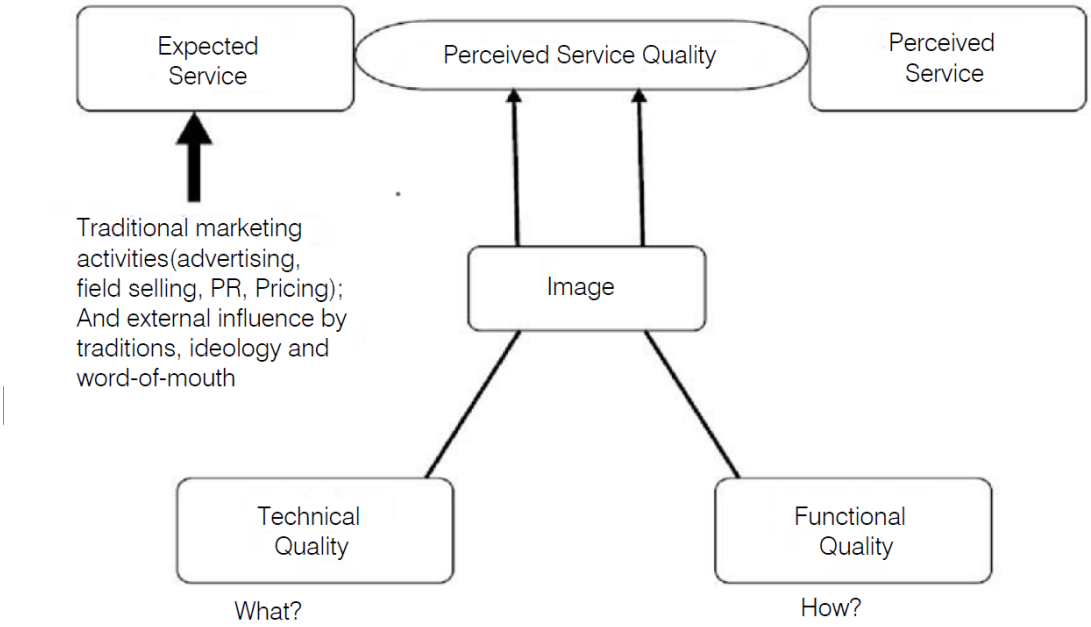


Figure 0-1 The Nordic Service Quality Model, Source: (Grönroos, 2001)

- **SERVQUAL Model (Parasuraman et al., 1985, 1988)**

This model was developed by Parasuraman et al. (1985) in the USA. Parasuraman et al. (1985) described service quality as "*an organization's ability to meet or exceed customer expectations.*"

Based on this model, customers use ten dimensions to evaluate their perceived service quality. The ten service quality dimensions are as follows:

1. Tangibles: the physical facilities, personnel, equipment, and communication materials look like.
2. Reliability: the ability to perform the promised service dependably and accurately.
3. Responsiveness is how willing the staff is to help customers and provide prompt service.
4. Competence – Possessing the necessary knowledge and skills to carry out the service.
5. Courtesy – Respect, thoughtfulness, and politeness are all characteristics of courtesy.

6. Credibility- the service provider's trustworthiness and believability are used to describe this term.
7. Security – a sense of safety, security, and confidence
8. Access –The term approachability and facilitating contact.
9. Communication – this includes listening and speaking skills
10. Understanding the customer – seeking to understand customers' requirements.

Later on, Parasuraman et al. (1988), based on further research, regrouped and reduced the ten determinants into five determinants. These determinants should provide a complete scoring system to every industry to serve its primary goal to improve service and assist with efficiency and credibility as follows:

1. Tangibles: the physical facilities, personnel, equipment, and communication materials.
2. Reliability is the ability to perform the promised service dependably and accurately.
3. Responsiveness: the willingness of the staff to help customers and provide prompt service
4. Assurance: the employees' knowledge, courtesy, and ability to inspire confidence.
5. Empathy: the provision of individualized attention to customers.

To measure the perceived quality of service, Parasuraman et al. (1988) developed a measurement scale named SERVQUAL. This measurement tool uses the five dimensions of service quality mentioned above to assess customer expectations and perceptions, as depicted in Figure 2-2. The SERVQUAL model includes five quality gap dimensions (tangibles, reliability, assurance responsiveness, and empathy) and 22 items in each of the two sections (expectation and preception). This model is based on the expectancy-disconfirmation paradigm, which states that service quality is defined as how consumers' pre-purchase quality expectations are confirmed/disconfirmed by their actual perceptions of the service experience. In this model, the customer's perception is of utmost importance since the perceived quality value is calculated based on the customer's perception. Therefore, the result will be customer

satisfaction/dissatisfaction. Furthermore, defining service quality from the customer's standpoint is vital.

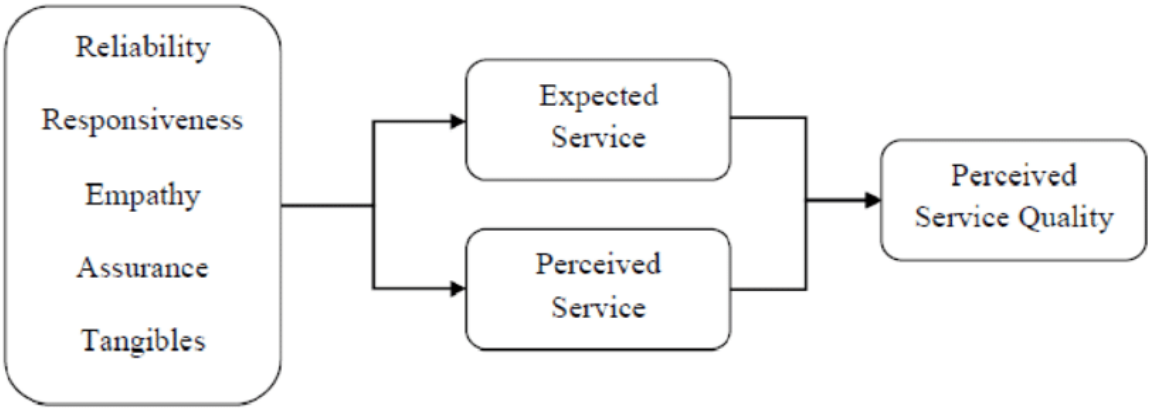


Figure 0-2. The conceptualization of the SERVQUAL tool,
Source: (Parasuraman et al., 1988)

As a result, service quality can be intellectualized as a simple equation:

Service Quality = Customer perceptions of service - Customer expectations of a given service.

It should be noted that when customer perception is lower than his/her expectation, the perceived service quality is low, which means that the customer is dissatisfied with the service. And when the customer's perception is higher than his/her expectation, perceived quality is high, and therefore the customer is satisfied.

The SERVQUAL tool, developed by Zeithaml et al. (1988), indicates that the five gaps influence consumers' quality perceptions (see Figure 2-3) that affect customer satisfaction. The gaps are, according to their study, ": from gaps (1) through (4)."

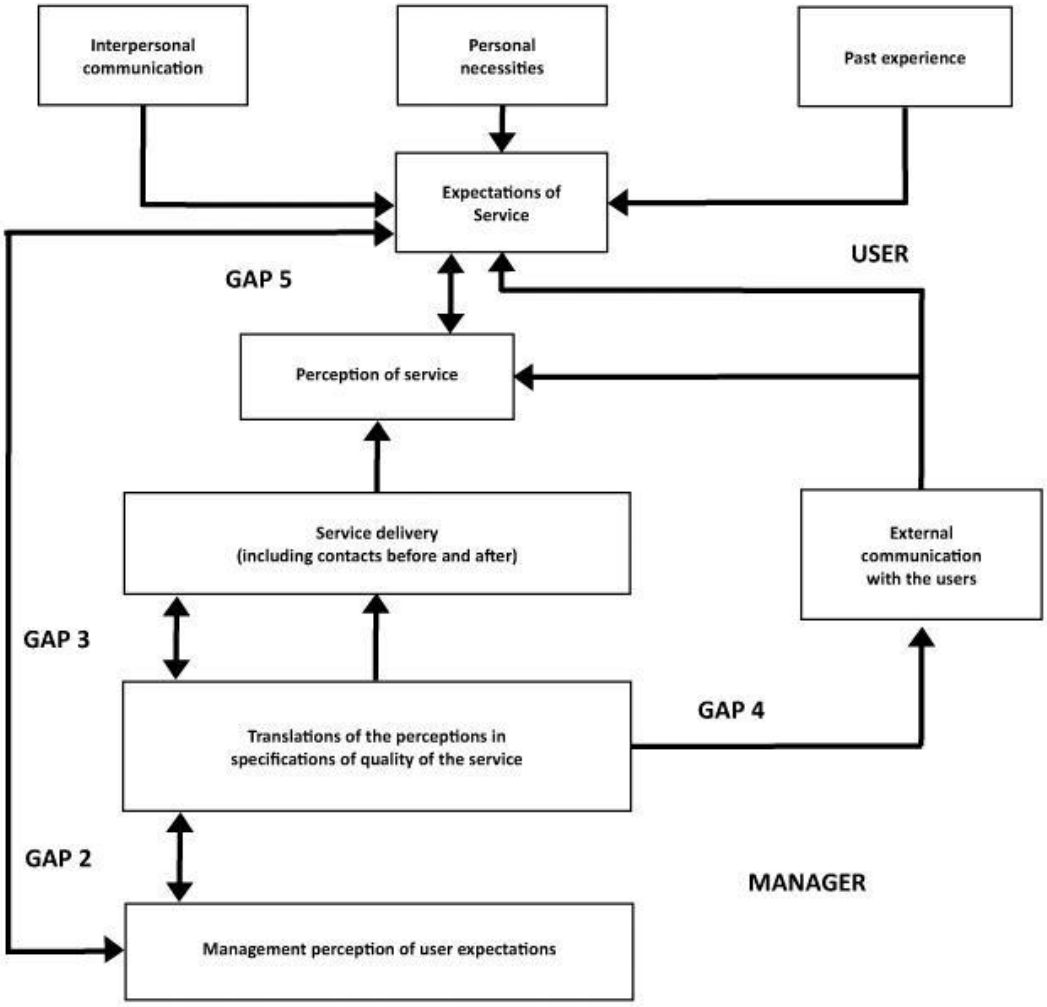


Figure 0-3 Gap Model Source: Parasuraman, Zeithaml, & Berry, (1986).

1. The knowledge gap is defined as the difference between customers' expectations of service and what management perceives the customers to expect;

2. The standards gap is defined as the discrepancy between what management believes customers anticipate and the service delivery standards.

3. The delivery gap is between service delivery standards and actual service delivery quality.

4. The communication gap is the difference between the quality of service provided and the quality of service described in the organization's external communications.

5. The service gap — the difference between perceived performance and expectations, which result from gaps (1) through (4)."

Even though SERVQUAL was initially developed for the financial services sector, it has been used to measure the perceived quality of services in other service sectors such as healthcare, hospitality and education (Gupta et al., 2005).

Institutions can more effectively design their service delivery processes if they know how the SERVQUAL factors affect overall service quality. More excellent knowledge of these aspects can lead to a better allocation of resources, which can result in better service.

- **Performance-Only Model, SERVPERF (Cronin and Taylor, 1992)**

This model is based on the SERVQUAL model but only measures the service's performance aspect. Like the SERVEQUAL model, the SERVPERF model consists of five service dimensions: tangibles, reliability, responsiveness, assurance, and empathy, with two sets of 22-item statements that measure the perception and importance of the dimensions. Owners and managers can use the SERVPERF model to pinpoint areas for improvement, and managers should target items with the lowest scores for improvement. On the other hand, managers should be alerted if some attributes have high scores because sometimes that indicates an "over-supply" of particular features (Rasyida et al., 2016). Figure 2-4 is the diagram of the SERVPERF.

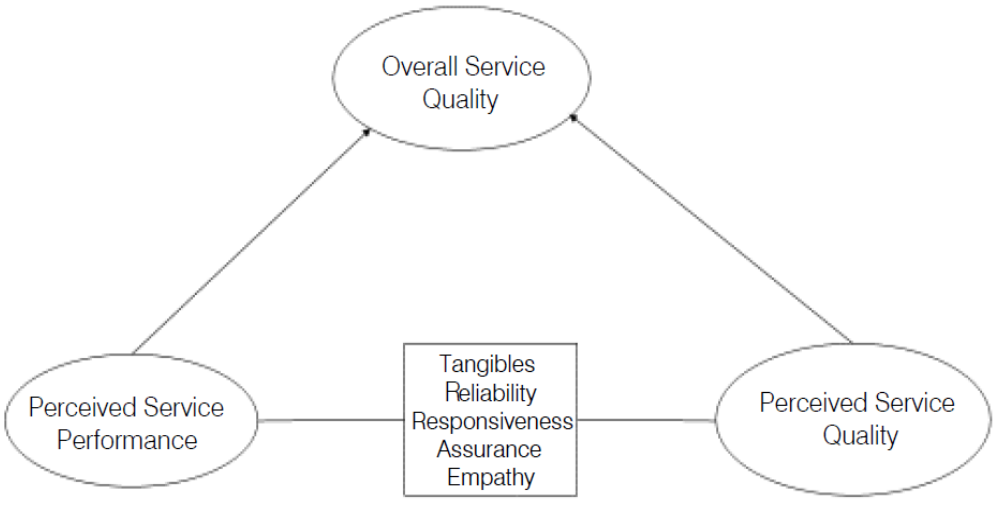


Figure 0-4 The SERPERF Model (Source: Cronin and Talyor (1992))

- **HEdPERF Scale**

This scale was explicitly developed to measure service quality in the higher education sector, developed by Firdaus Abdullah. The scale is based on SERVPERF; the model aims to understand the students' view on quality performance; this model could improve the service in educational institutions. According to the model, the service quality is equal to the performance. The tool consisted of 41 service performance items, of which 13 were adapted from the SERVPERF scale and grouped into five dimensions (Abdullah, 2006):

Nonacademic aspects: are service difficulties related to nonacademic work from admission through course completion.

Academic aspects: are service issues relating to the academic delivery process and the support required from academic people.

Reputation: are the facilities that generate instant images for the company

Access: This dimension includes approachability, convenience, ease-of contact

Program issues relate to the courses delivered to programs and health services.

2.3.4 Higher Education as a Service

Higher education can be a "pure" service; they "*fall into the field of services marketing*" (Hennig-Thurau et al., 2001). Educational services differ from other services in a few respects: They play an important role in student life, requiring enormous amounts of motivation and intelligence to achieve their goals. In addition, educational services are predominantly perishable, heterogeneous, and intangible and the professor's teaching efforts are collectively "produced" and "consumed" by the professor and the student together as part of the teaching experience (Shank et al., 1996). Because of the inherent properties of services, service quality cannot be objectively evaluated (Parasuramam et al., 1985).

2.3.5 User-Perceived Quality of Services in Education

Higher education institutions are increasingly confronted with increased competition for students, reduced government funding, and increasing demands for research outputs. Therefore, Higher Education Institutions started recognizing the importance of stakeholders' expectations in their strategic decision-making process. Furthermore, creating and retaining a competitive advantage in an increasingly competitive environment is difficult in today's more competitive economy. Consequently, it becomes imperative to investigate the characteristics that enable higher education institutions to attract and retain students, especially considering the numerous options available (Pedro & Lourenço, 2009).

Service Quality is a well-established prerequisite for maintaining a solid and positive customer relationship (Young & Varble, 1997). A study by Bigné et al., (2012) found that customer satisfaction is highly influenced by overall service quality, focusing on services delivered by universities and hospitals. They found that these organizations' overall quality and satisfaction will lead to customer satisfaction. Service quality is cardinal in the higher education sector for multiple reasons; high quality generates a referral system that is a primary source of customers. As well as, it is essential to retain excellent academics and trainers.

Adding to that high quality will protect the educational institution from negative word of mouth; as the well-known adage in business, "*a happy customer tells a friend, an unhappy customer tells the world*," is extensively documented in marketing textbooks. Besides, it has been shown that quality service has established a quantifiable financial impact (Zammuto et al., 2008). On the contrary, perceived inferior service quality will decrease the educational institution's popularity and, thus, the number and quality of applicants, resulting in a decrease in funding and viability (Kitchroen, 2004)

Reeves & Bednar (1994) research paper pointed out that service quality in education should follow the general definition of service quality. This is exceeding or meeting customer expectations, and it should always be measured from the customer's point of view. This supports using SERVQUAL as an appropriate tool to measure service quality.

One of the most commonly used models to measure educational service quality is the SERVQUAL model, developed by Parasuraman, Zeithaml, and Berry (1985). Despite widespread SERVQUAL applications, it has been criticized by some scholars for its shortcomings at conceptual and operational levels (Buttle, 1996). Therefore, the SERVPERF (Service Performance) model was developed to overcome the drawbacks of SERVQUAL. SERVPERF adopts a performance-based approach to measure service quality by focusing only on the perceptions component (Brochado, 2009).

Others, like Kuo & Ye, (2009), believe that SERVQUAL is a well-known service quality assessment tool for higher education institutions. Still, they argue that SERVPERF is more suited because it assesses consumers' actual impressions of their service. SERVQUAL, on the other hand, examines the gap between the customer's expectations and their impressions of the service delivered. Real-life experiences influence student expectations that students have had during their time in education, according to Kuo & Ye (2009), who support this theory. In addition to SERVPERF, several other models were also developed. Although the SERVQUAL model has been criticized, it remains the most widely-used approach for evaluating service quality. Several studies have demonstrated that it can be successfully applied across various industries, including public service institutions such as healthcare, local governments, and higher education.

Mwiya et al. (2017), applied the SERVPERF model to a public university in Zambian. The purpose was to study the impact of each service quality dimension on overall service satisfaction. The article was based on a quantitative approach, where primary data was

collected from a sample of senior undergraduate students at a governmental university. According to the findings, service quality performance dimensions are significantly and positively related to overall customer satisfaction.

Ham & Hayduk (2003), in their study of higher educational competitive advantages, confirmed the appropriateness of the SERVQUAL tool in studying service quality and customer satisfaction in higher education. To approve that, the researchers conducted the validity and reliability test for the SERVEQUAL tool, and the results proved its appropriateness in measuring service quality in education. The researchers tested the model by distributing the survey to four hundred Southern Wesleyan University and Western Michigan University students. The five dimensions of the SERVQUAL were tested for validity and reliability.

Despite the lack of unanimity in measuring methodologies for service quality in higher institutions, the SERVQUAL structure has been extensively identified and appealed to evaluate quality from the students' points of view (Abili, Thani, & Afarinandehbin, 2012; Saadati, 2012; Seymour, 1992; Twaissi & Al-Kilani, 2015). Many researchers used the SERVQUAL model to assess service quality in educational institutions, and these researchers dealt with students as the primary customer in education (Akhlaghi et al., 2012). Considering these reasons, the present research employed the SERVEQUAL model to assess quality in higher education.

Another study by Hasan et al. (2008) applied the SERVQUAL framework in two private universities in Malaysia to examine the relationship between service quality dimensions and overall service quality and student satisfaction. The study showed that service quality positively correlates with student satisfaction. Moreover, two dimensions of service quality are the critical factors for customer satisfaction: empathy and assurance. Therefore, whatever is done to increase empathy and assurance of service quality will increase their satisfaction.

Yusof et al., (2012) propose a conceptual framework for measuring service quality in higher education from the students' perspective. The framework was based on the SERVQUAL model. In their research, they studied the importance of the sub-dimensions of the SERVQUAL model. According to their model, the Educational Service Quality sub-dimensions were Communication, knowledge/ expertise, responsiveness, self-development, assurance, empathy, reliability, social responsibility, tangibles, and system services. The research also revealed that self-development and tangibles are the most important sub-dimensions, whereas empathy and assurance are the least important.

A study by Twaissi & Al-Kilani (2015) examines the impact of perceived service quality in a governmental university in Jordan. The study objectives were to investigate the differences in service quality perceptions between men and women. And the second goal was to look into the effect of perceived service quality on students' willingness to recommend their educational institutions and transfer to another one. Therefore, perceived quality and impact differences were evaluated for each service quality dimension and the overall perception.

The survey was conducted on 841 students; the authors used the SERVQUAL model based on recommendations from other studies that used this model to measure perceived quality in higher education institutions. The findings showed that perceived service quality and the tangibility and assurance dimensions are the most critical factors. If these factors were hostile, they might affect students' decision to study at another university. Another result was that gender perceived the tangibility dimension of service quality differently. Women reported lower assessment than males; therefore, the study recommended paying attention to the tangibility dimension associated with females. For new students, the most impactful factor is the tangible, followed by the assurance dimension. Additionally, no other dimension had a statistically significant effect. Finally, in terms of transfer intentions, assurance was the most

effective dimension, followed by empathy, while the remaining service quality dimensions had no statistically significant influence.

Nooripoor et al. (2020) conducted a research paper to evaluate the quality of academic services at Yasouj University in Iran using the SERVQUAL model. A questionnaire that includes students' perceptions and expectations was distributed to a sample of 508 students; the questionnaire covered three areas educational, research, and welfare services. According to the findings, the level of satisfaction regarding welfare was the lowest among students. On the other hand, the highest satisfaction was educational services. Besides, the paper revealed that the most significant service gap was in research and welfare. Accordingly, the relevant authorities should consider better providing research and welfare services.

A recent study employed the SERVEQUAL model to assess student satisfaction at Public Engineering School in Morroco (Goumairi, 2020). The author tested the model on a sample of students and found that a significant impact on service quality comes from physical installations and tangible elements. Unfortunately, they both have negative quality gaps. Based on that, efforts are urgent to improve service quality in these two dimensions.

The Palestinian university's history is relatively new; the first university was established in 1975; however, the impact of higher education in Palestine is undeniable. Like many other universities in the region and worldwide, they strive to meet students' educational needs while maintaining excellent standards. Yet, in Palestine, studies of the higher education sector seem to focus on quantifiable indicators such as teacher vs. student ratios, the number of grants, equity, and Part-time vs. full-time teachers. On the other hand, the assessment of educational services quality has not yet been worked on. In addition, the assessment of higher education from the students' standpoint will be explored. This raises the need for studies that measure the university's service quality from the students' view. Unfortunately, the literature neither

yielded any prior studies measuring the service quality in Palestine Universities nor the students' perceptions (Twaissi & Al-Kilani, 2015).

Based on the need to conduct a study that covers the service quality of higher education from the student point of view and to measure the students' satisfaction. Twaisii and Al-Kilani (2015) conducted an assessment based on the SERVQUAL model on two universities in the West Bank which they named by A and B. The study aims to help policymakers make well-informed choices on the efficacy of their educational initiatives.

According to their study, the reliability test supported the strength of the tool's constructs. In addition, it proved the applicability of the SERVQUAL model to be used in the Palestinian higher education sector context. However, the findings imply that students are dissatisfied with the "service quality" at Palestinian universities and that more attention is needed. All five service constructs were false to the study's findings. "Computing Facilities" and "Learning, Teaching, and Advising" have the most unfavorable disconfirmations. "Library Facilities," "Assessment," and "University Facilities," the three remaining service structures, were ranked from closest to expectations to the most distant. Service quality measures show that institutions do not provide the same degree of service to students as they had expected.

Besides these evaluation methods, SERVQUAL is recognized as an implemented and practical instrument effectively employed in various contexts (Buttle, 1996).

2.4 Student Satisfaction

In a competitive marketplace where institutions compete for customers, customer satisfaction becomes a significant differentiator of marketing strategy; therefore, it is imperative to know its definition. According to Philip Kotler, customer satisfaction is a person's view of a product's performance or outcome concerning his expectations (Kotler et al., 2000).

In his book Marketing Metrics, Paul Farris describes customer satisfaction as the percentage or number of customers whose experience exceeds their satisfaction goals (Farris et al., 2010). Customer satisfaction's most prevalent definition is assessing whether a product or service satisfies customers' wants and expectations. If demands and expectations are not fulfilled, this will result in dissatisfaction (Wilson et al., 2016)

Today, economic factors from the expansion of global education markets and the loss of government funding are pressuring schools and universities to seek alternative funding streams to remain competitive (Munteanu et al., 2010).

Higher education institutions must care about how society values their graduates' skills and knowledge and how their students feel about their educational journey (Ginsberg, 1991). One reason students' satisfaction is important is that it contributes to the university's image and reputation and the student's educational achievement (El Ansari & Oskrochi, 2006). If a student is satisfied with the classes s/he takes, the professors s/he has, or the services the university offers, s/he would be proud to be a student there. As a result, s/he would recommend the university to other potential students and might even return to the same university if s/he decided to go to college again. So, measuring customer satisfaction in education is essential for making an independent assessment of the quality of education. This is backed up by research, which shows that feedback is vital to quality improvement and student satisfaction (Koni et al., 2013).

Besides, student satisfaction is now an important factor for educational institutions since satisfied students will recommend to others, which will improve their reputation among competitors (Jiewanto et al., 2012). Student satisfaction is a student's subjective assessment of educational outcomes and experiences. As a result, the respective experience level and perceived educational service performance are determined. Student satisfaction is a short-term

attitude that assesses students' educational experiences, services, and facilities (Elliott & Shin, 2002).

Furthermore, student satisfaction is the feeling after the experience and performance of the educational services throughout their learning journey (Mukhtar et al., 2015). Student satisfaction is also described as the overall feeling due to an assessment of an educational experience. In addition, student satisfaction refers to the positive attitude of student loyalty because of an educational system. Consistent with this, student satisfaction is student behavior due to assessing educational experiences and outcomes (Elliott & Shin, 2002).

Astin(1994)stated, "related overall satisfaction and the students' perceptions of quality will det ermine the retention of students." For this study, student satisfaction has been defined as a function of the level of experiences and perceived performance in educational service based on the five dimensions of service quality used in the SERVQUAL model.

2.5 Previous Local Studies

Local research has been conducted that assesses the service quality using the SERVQUAL model. This section is a summary of some of the local research conducted in Palestine and Jordan that proves the validity of using this model:

A study by Ashoor & El-Alabadlah, (2007) evaluated the service quality of the Islamic University of Gaza MBA program using the SERVQUAL model. Seventy-five students were targeted in the research, and 50 of them replied. The research found that the expected services were higher than the five dimensions perceived. All dimensions had a negative gap; the highest and the most minor service quality gaps were found for responsiveness, reliability, empathy, and tangibility, respectively. Another study by Barakat (2010) studied the service quality gaps between students' perceptions and expectations at Al-Quds Open University. The sample consisted of 215 students, and the study used SERVQUAL as a measurement tool.

Results revealed an insignificant positive difference between the student's perceptions and expectations for service quality in general. In addition, there were positive insignificant differences between students' perceptions and expectations in responsiveness, empathy, and assurance, and there was a negative insignificant negative gap in tangible and reliability.

Twaissi & Al-Kilani (2015) targeted the perceived service quality in a Jordanian university; a random sample of 841 students was targeted with a response rate of 68%. The results indicate that perceived service quality and the tangibility and assurance influence students' willingness to promote their university. Additionally, perceived service quality and the tangibility dimension influence students' inclinations to transfer to another university. The results also demonstrated that the two sexes evaluated the tangibility aspect of service quality differently, with males providing a higher rating. The study has yielded significant insights regarding service quality and future behavior in the sector of Higher Education.

In addition, Koni et al. (2012), in their study evaluates the service quality at two West Bank universities, utilizing SERVQUAL to measure student satisfaction and behavioral intentions. The study's findings suggest that student dissatisfaction with "service quality" is indicated by the findings. The reliability tests conducted by the researchers demonstrated that the SERVQUAL instruments might be utilized in the Palestinian higher education sector.

Furthermore, the study indicated that all constructs are vital to students, with Library Facilities and Computer Facilities being the most essential. Moreover, the investigation indicated that the five service aspects were negatively disconfirmed. The most unconfirmed items were "Computing Facilities" and "Learning, Teaching, and advising" were the most unconfirmed items. It is also noteworthy the research study by Calvo-Porral et al. (2013: 601-619), entitled "Higher education quality perception: an empirical study," where service quality and its dimensions are analyzed between public and private higher education institutions, using the SERVQUAL Model. The results showed that "tangibility" presents significant

differences between the two institutions. In this case, the public institution has a better appreciation for this dimension, and the private institution has better assessed the reliability, guarantee, and empathy dimensions.

In another study by Ammar & Saleh (2021) assessed the service quality of bulk water provision using the SERVEQUAL model, the result of the paper revealed a negative gap in all SERVQUAL dimensions and that all are significant. In addition, reliability, responsiveness, and empathy are the only significant SERVQUAL dimensions.

Barakey (2014) examined the quality of services provided by the management of Higher Education Institutions from the perspective of academic and administrative employees, utilizing the SERVQUAL model for gap analysis. The research population comprises of all Higher Education institutions' workers. A random sample of 491 candidates was chosen at random to answer the questionnaire, and 440 responses were analyzed. The analysis discovered a negative gap between the SERVQUAL model's five dimensions' expectations and perceptions. Furthermore, the study found statistically significant differences in quality perceptions and expectations related to the demographic variables "HEI Sector," "Classification of HEI," "Job Classification," "Gender," and "Qualification.".

The SERVQUAL gap analysis approach was used in a study by Alnaser et al. (2017) to examine how Bank of Palestine Ltd. clients rated the quality of services provided by the bank. The study also intended to ascertain the relative significance of quality standards used by bank customers to assess service quality. The study drew on a sample of 1249 bank customers from the bank's branches in the West Bank and Gaza Strip and other consumer sectors.

The research reveals that customers rated the actual service quality positively, despite falling short of their expectations, indicating that there is room for improvement and development in the bank's service quality. In addition, the study results reveal that customers place the greatest emphasis on dependability, followed by responsiveness, competence, security, and

tangibles. The study's findings also indicate that the number of transactions influences how customers evaluate the quality of service delivered. However, the years of use do not appear to influence customers' service quality evaluations.

Mahagneh (2021) in her master thesis paper at AAUP examined the quality of Bahri restaurant located in Umm -Alfahm using the SERVEQUAL model; results showed that perceived services were lower than customers' expectations in all service quality dimensions. Another master thesis paper by Al-Khalil (2020) employed the SERVQUAL model to assess the service quality of optical centers operating in the West Bank-Palestine and investigate its impact on customer satisfaction. The study found that the customers have higher service quality expectations than perceptions in all five dimensions of the SERVQUAL model. In addition, a thesis paper by Jayousi (2020) used the SERVQUAL model to test the quality of Non-Governmental Organizations Operating in Palestine. That also found that Non-Governmental Organizations have to narrow the gap between the perceived and expected services in the five dimensions. Although there are some studies on the perceived service quality for higher education, the perceived service quality of continuing education is not investigated yet in the literature. No similar studies were found in the Palestinian context.

Chapter Three

Methodology

3.1 Overview

This chapter covers the research design, approach, strategy, location and sources of data, data collection process, and methods of data processing and analyses.

3.2 Research Approach

Research approaches are the procedures and plans for formulating the assumptions, and collecting, analyzing, and interpreting the required data (Vanderstoep & Johnson, 2008). When we talk about the general plan and procedures for conducting research, there are three research approaches: inductive, deductive, and abductive. The difference is that the inductive aims to develop a theory, while the deductive seeks to test an existing theory. In contrast, the abductive approach is used to explain the 'incomplete observations' specified at the beginning of the study.

On the other hand, when analyzing and collecting the data needed for the research, there are three main research approaches: qualitative, quantitative, and mixed methods (Creswell, 2003; Creswell & Plano-Clark, 2007; Teddlie & Tashakkori, 2009).

The Qualitative Approach: In qualitative research, the research begins with an inductive technique to study a phenomenon. The researcher's primary data for this technique uses first-hand observation, interviews, questionnaires, focus groups, participant observation, recordings produced in natural settings, documents, and artifacts. However, the data is primarily non-numerical (Durrheim, 2006).

The Quantitative Approach: this approach is generally associated with a deductive approach. According to Creswell (2003), this approach deals with numbers, logic, and an

objective point of view. Quantitative research emphasizes numerical and static data and detailed, convergent reasoning rather than divergent reasoning.

Mixed Research Approach is a research method in which researchers collect and analyze quantitative and qualitative data in the same research (Creswell, 2003).

As this thesis involves collecting and analyzing quantitative data for testing an existing theory, a quantitative deductive approach is implemented to address the research questions. The explanation for the approach selection is based on the definition of each approach as discussed above. The steps in Figure 3-1 summarize the methodological framework for conducting this research.

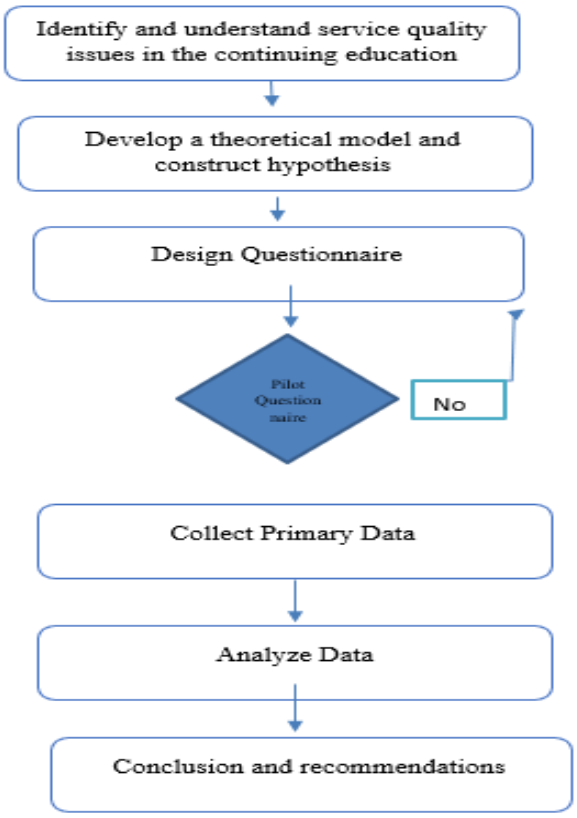


Figure 0-1 Methodological Framework

3.3 Research Design

The strategies used for collecting, analyzing, interpreting, and reporting data in research are referred to as research design. It is the overarching strategy for linking conceptual and

empirical research concerns. The study design, in particular, outlines how the necessary data will be collected and processed and how it will be utilized to answer the research question (Grey, 2014).

Research design has three forms; the difference between them relies on the purpose of the research area:

1- An exploratory research design*:* An experimental research design is used when there is no data or only a few studies. This research strategy is intended to determine the nature of the problem and assist the researcher in better understanding it. It looks for causes, explanations, and evidence to support or disprove an explanation or prediction. Exploratory research comprises reviewing secondary data, data from other surveys, observation of study objects, and views on a firm, product, or service.

2- Descriptive research: is used to describe the characteristics of a population or phenomenon. It is appropriate for a relatively new or unexplored study topic (Punch, 2005), and it cannot answer why or how but responds to the population's characteristics. A descriptive study aims to provide a picture of a situation or demonstrate how items are connected (Blumberg, Cooper, and Schindler, 2005); it doesn't explain why an event occurs.

3- Explanatory research: is a study design that investigates patterns and trends in current data that have not previously been explored to explain why something occurs when limited information is available. The distinction between explanatory and exploratory research is that the latter investigates a topic that has not been thoroughly investigated. It is carried out to uncover and describe specific correlations between various components of the phenomena under consideration.

This thesis work is descriptive-analytical research intended to assess the gap between customer expectation and perception of service quality and test for associations between the perceived quality dimensions and students' level of satisfaction.

3.4 Research Strategy

The research strategy is a step-by-step plan to achieve the research objective. An appropriate research strategy is essential in choosing the appropriate data collection and analysis methodology. There are many types of research strategies used in research that are followed in qualitative research:

- Experimental research strategy: is used to demonstrate cause-and-effect relationships between variables commonly used in physics, biology, chemistry, and medicine and investigate the effect of some of the variables on others (Vandersto ep and Johnson, 2008).
- The case study strategy: investigates a phenomenon within its real-life context. (Vanderstoep and Johnson, 2008).
- Correlational design strategy: non-experimental research strategy in which two variables are measured to understand and assess the statistical relationship (Vanderstoep and Johnson, 2008).
- Survey strategy: a strategy used in the quantitative approach to collect a sample reflecting a population and use standardized procedures to define the traits, attitudes, views, and trends of the entire population, resulting in the sample being generalized to the whole population. This strategy collects data using questionnaires and structured interview procedures (Creswell and Creswell, 2017).

This thesis is quantitative research work and employs a survey strategy using the questionnaire technique for data collection.

3.5 Research Location

The research was carried out in the CECs of five Palestinian universities in West Bank, as shown in Table 3-1.

Table 0-1 CEC Branch in West Bank

CEC Branch
Birzeit University
An Najah National University
Palestine Technical University – Kadoorie
Palestine Polytechnic University
Bethlehem University
Total of five continuing education centers

A group of students who benefited from CECs services between 1-1-2021 and 1-1-2022 was contacted via emails and printed versions. 113 students of the CECs' services have been reached using the convenient sampling non-probability technique.

3.6 Sources of Data

This research uses secondary data from the participating CECs, and the Ministry of Higher Education reports. Primary data was collected via an online questionnaire; the data employed is cross-sectional data collected from different areas in the West Bank simultaneously.

Sample size and Sampling Techniques

The population of the study is the complete set of subjects under investigation and events of interest to the researcher. In contrast, the study's sample is a subgroup of the whole population (Creswell & Creswell, 2017b)**.** Based on the definition above, the research population is all individuals who benefited from any training delivered at any of the CECs in one of the six universities in the last year of 2021-2022 in West Bank, Palestine.

The required sample size is calculated using the formula of Thompson (1987):

$$n = \frac{N \times p(1-p)}{([N-1 \times (d^2 \div z^2)] + p(1-p))}$$

where:

n: Sample size.

N: Population size (approximately 1310 as shown below).

z: Confidence level at 95% (1.96).

d: Error proportion (5%).

p: Probability of picking a choice (50%).

To know the population size N, the researcher contacted each center to know the number of its students. Based on introducing the thesis objective through interviews, the total number of students at each CEC is given in Table 3-2.

Hence, the sample size is 200 students who need to be surveyed to have a confidence level of 90% that the real value is within ±10 percentage of the estimated value. Unfortunately, only 113 students could be reached.

For the sampling techniques, a convenient sample is used. Convenient sampling occurs when data is collected from a conveniently available pool of respondents (Lavrakas, 2008).

Table 3.2 Average number of students at each branch

CEC Branch	Students 2020-2021	Notes
Birzeit University	200	
Arab American University	N/A	Although, the researcher tried to contact them several times but could not reach.
Palestine Technical University – Kadoorie	350	
Palestine Polytechnic University	260	
Al-Quds Open University	N/A	A meeting with the CEC director was conducted, and we were informed that CEC lacks the Alumni Database. Therefore, we couldn't reach any of the students’
Bethlehem University	500	
An Najah National University	N/A	
Total	**1310**	

3.7 Data Collection - Questionnaire Design

The research uses primary data through an online questionnaire designed for this purpose. The decision was made for convenience in reaching a wide variety of participants from all students of CECs across the west bank. The quantitative approach was chosen as the main research design; the best way to test our hypothesis was to gather data from participants using the SERVQUAL tool adapted from the literature. The tool consists of 22 items distributed into the following:

Part One:

It contains the five constructs measuring SERVQUAL because of the respondent's gap between expectation and perception of service qualities, as proposed by Parasuraman et al. (1988). This part consists of 22 different statements that are divided into five dimensions.

1. Tangibility: this construct consists of five statements that measure the appearance of the facilities, equipment, and communications materials.

2. Responsiveness: this construct consists of four statements that measure the disposition of the staff of the centers to help users and provide prompt service.

3. Reliability: this construct consists of five statements that measure consistency in rendering the service promised reliably and carefully.

4. Assurance: this construct consists of six statements that measure the employees' knowledge, attention, and skills that inspire credibility and trust.

5. Empathy: this construct consists of five statements that measure the effort to understand the user's perspective through individual attention.

Part two:

Questions that measure customer satisfaction levels are included in this section. It has six items in the construct.

Part Three:

This part aims to collect data on students' characteristics. Namely, it includes:

1. Gender: (two categories).

2. Age: (four categories).

3. Place of residence -Governorate: (nine categories)

4. The continuing education center you received the service in: (five categories).

5. Educational level (five categories)

The questionnaire uses closed questions on a five-point Likert scale; the scale measures the gap between the expected level of services and the performed services. Participants could rate the gap on a scale ranging from more than what we expected (score of 5) to not as expected (score of 1), as shown in Table 3-3.

The questionnaire was distributed using "Microsoft forms" due to its accessibility, usability, interface interactivity, and easily managed aesthetics and design elements. Additionally, "Microsoft forms" allows researchers to prototype the survey and get unlimited questions and answers at no cost. Finally, Microsoft forms could be easily converted to excel and imported into any other program for analysis.

Table 0-3 Sample of Likert Scale used in the questionnaire

Score	Responses
1	The perceived service is much below the expected
2	The perceived service is below the expected
3	The perceived service is exactly the same as expected
4	The perceived service is more than expected
5	The perceived service is much more than expected

The questionnaires were distributed using multiple platforms such as WhatsApp groups, CECs Facebook Pages, Emails, and SMS messages. In addition, a few questionnaires were distributed on the last day of the training workshops. The research questionnaire was developed based on the SERVQUAL tool tested in the literature for its validity and reliability. In addition, a pre-test for the questionnaire was conducted to ensure that the questions were

clear enough, the number of questions was fair, and if questions were encouraging enough to make students answer. A finalized English and Arabic questionnaire are available in Appendix A and B, respectively.

The data collection phase started in April 2022 and ended at the beginning of June 2022. The data elicited by the items were stored anonymously on the Microsoft forms database to be analyzed.

3.8 Unit of Analysis

Unit of Analysis is the level at which the primary data are collected and analyzed. It can be individuals, groups, countries, etc. (Sekaran & Bougie, 2016). In this research, the students benefited from CEC training at any CEC; therefore, each student is an individual data source.

3.9 Data Analysis Techniques

The collected data from the submitted questionnaires were raw, and processing is needed to turn the data into useful information. In this study, the gathered data were statistically analyzed. The frequency tests employed the Statistical Package for Social Sciences (SPSS) software to describe the respondents' demographic profiles.

Then, using Smart PLS, the PLS-SEM (Partial Least Squares Structural Equation Modelling) and PLS-SEM Path Models were used to assess the relationship between the variables. PLS-SEM is a prominent software used in this study to validate the proposed model; PLS is powerful in tackling several research problems. More specifically, it can be ideal if the sample size is small and the data distribution is skewed (Wong, 2013).

Chapter Four

Data Analysis and Results

4.1 Overview

The first section of this chapter addresses the descriptive statistics via analysis of the demographic profiles of the respondents. Then, descriptive analyses for the constructs are introduced. Finally, hypotheses are examined utilizing the PLS-SEM. Therefore, the effect of service quality on students' satisfaction is tested.

4.2 Demographic Information of the Respondents

A final sample of 113 responses was retrieved from distributed questionnaires to the participants. The questions asked about the demographic and background variable statistic focused on gender, age, educational level, and residency (Appendix 1). Each of these variables is presented below:

The age of the respondents was recorded into four age groups: 18-29 years, 30-39 years, 40-49 years, 50-60 years, and above. The study shows that the majority of the sample (56%) was 18-29 years old, followed by 33% of the age group 30-39 years. However, few respondents (9.7%) fell under the 40-49.9% age group from 40-50, as shown in Table 4-1.

The other demographic factor selected for the study was gender. Table 4-1 illustrates the almost equal participation of males and females. The females comprised 51% of the respondents, while 49% were males

Another demographic factor considered in the study was the residence of the respondents. Thus, most respondents (31%) resided in Ramallah, and 9% were from Jerusalem (in the middle of the West Bank). 21% of the respondents are from Hebron, and 9% are from Bethlehem (in the southern part of the West Bank). Finally, 11.0% from Jenin and 10% from Tukaram (in the northern part of the West Bank).

Most of the respondents (50%) hold a bachelor's degree (BA), followed by 25% who have a master's degree, and 11% hold a diploma, whereas 14% of respondents are educated in high schools (known as the Tawjihi level in Palestine).

Table 4-1 shows that 57% of the respondents received theoretical training, while 43% received practical training.

Table 4-1 Students Demographics Summary Table

Variable	Count	%
Gender		
Male	55	49
Female	58	51
Age*(years)*		
18 – 29	63	56
30 – 39	37	33
40 -49	11	9
50-59	1	1
60 or above	1	1
Place of Residence		
Ramallah	36	32
Hebron	25	22
Qalqilya	2	2
Jenin	12	11
Jerusalem	10	9
Bethlehem	10	9
Nablus	6	5
Salfit	0	0
Tubas	0	0
Tulkarem	11	10
Education Level		
Tawjihi Certificate	12	11
Diploma Certificate	16	14
Bachelor Degree	57	50
Master Degree	28	25
Ph.D.	0	0
Type of the received training		
Practical Training	49	43
Theoretical Training	64	57

4.3

4.4 Descriptive Analysis of the SERVAQUAL Statements

The SERVQUAL model examines five quality gap dimensions (tangibles, reliability, assurance responsiveness, and empathy). It comprises 22 statements to assess the gap between the expected and the perceived levels of service provision. This model is based on the expectancy-disconfirmation paradigm, which states that service quality is defined as how consumers' pre-purchase quality expectations are confirmed/disconfirmed by their actual perceptions of the service experience. In this model, the customer's perception is of utmost importance since the perceived quality value is calculated based on the customer's perception; therefore, customer satisfaction/dissatisfaction. Below is the gap analysis of the items and construct used in the research. A positive gap means that students believe that the service they received exceeds their expectations.

4.3.1 Tangibility

This section presents a descriptive analysis of the results based on the survey conducted for tangibility.

Tangibility Gap Analysis

The respondents were asked to rank statements about the tangibility of services with a comparison of what they received compared to what they expected. Thus, the following were the findings as shown in Table 4-2:

- Statement 1: CEC has modern-looking equipment; 43.4% of the respondents indicated their expectations were as perceived, while 20% indicated that the service perceived is more than expected. The average answer was 2.8, meaning students' perceived services are less than expected.
- Statement 2: CEC physical facilities are visually appealing: 41% of the respondents agreed that this indicator had met their expectations. In contrast, 22% reported the service

perceived is more than expected, and 37.1% reported that CEC physical facilities visually appearing are perceived as less than expected. The average answer was 2.8, which is below expectations.

- Statement 3: CEC employees appear neat: 50.4% agreed that their expectations met the reality, 43% reported that the service perceived is more than expected. Only 6.2% had an expectation more than perceived facing a negative gap. The average for this statement was 3.5, meaning we have reported that the service perceived is more than expected here.
- Statement 4: Availability of Training material: 34% of the respondents pointed out that the perceived value is more than expected which means they have reported that the service perceived is more than expected. In comparison, 36% agreed that there are zero gaps between expected and received. The average was three, meaning the perceived service met their expectations.
- Statement 5: Materials associated with the service are visually appealing at CEC; 39% reported that the services expected are equal to those perceived, while 34% reported that the service perceived is more than expected. The average was 3.1.

Table 4-2 Tangibility Descriptive Analysis

Tangibility Statements:	1	2	3	4	5	Average	STD
CEC has modern-looking equipment	6.2%	30.1%	43.4%	16.8%	3.5%	2.8	0.9
CEC's physical facilities are visually appealing.	4.4%	32.7%	40.7%	17.7%	4.4%	2.8	0.9
CEC employees appear neat.	0.9%	5.3%	50.4%	31.9%	11.5%	3.5	0.8
Availability of Training material	5.3%	23.9%	36.3%	26.5%	8.0%	3.1	1.1
Materials associated with the service are visually appealing at CEC.	5.3%	21.2%	38.9%	22.1%	12.4%	3.2	1.1

4.3.2 Reliability

This section presents a descriptive analysis of the results based on the survey conducted for reliability.

Reliability Gap Analysis

The respondents were asked to rank statements based on their expectations and perceived services. Thus, the following were the findings, as shown in Table 4-3.

- Statement 1 Educational services provided are consistent with the advertised: 40% of the respondents agreed that the expected service was the same as perceived. In comparison, 29% reported that the service perceived is more than expected, meaning their perceived services are much more than expected. The average for this statement was 3.1, which means that the average of the service expected is the same as perceived.
- Statement 2 CEC Employees provide services with accuracy (without Errors):42% of the respondents agreed that this indicator met their expectations, while 24% reported that their expectations were higher than perceived. On average, the service received was as the respondent expected, with a value of 3.1.
- Statement 3 CEC employees appear neat: 49% agreed that the services and procedures were implemented the first time correctly, not causing rework, and that was what they exactly expected, while 32% agreed that the CEC workers' accuracy was underestimated by their expectations, on the other hand, 18% reported that their expectations were higher than what was perceived.
- Statement 4 CEC has records for all students: 40% of the respondents agreed that this indicator met their expectations, while 31% exceeded their expectations; on the contrary, 16% reported that their expectations were higher than perceived.
- Statement 5 CEC performs the service right the first time: 36% of the respondents agreed that CEC performs the services right the first time, matching their expectations. In comparison, 40% reported that this indicator was above their expectations. The service received was slightly more than expected, with an average value of 3.2.

Table0-3 Reliability Descriptive Analysis

Reliability Statements	1	2	3	4	5	Average	STD
Educational services provided are consistent with the advertised	8%	24%	40%	18%	11%	3.1	1.1
CEC Employees provides services (with accuracy (without Errors)	8%	16%	42%	24%	10%	3.1	1
CEC provides its services at the time it promises to do so.	7%	12%	49%	21%	11%	3.2	1
CEC has records for all trainees	4%	12%	54%	21%	10%	3.2	1
CEC performs the service right the first time.	4%	20%	36%	26%	14%	3.2	1

4.3.3 Responsiveness

This section presents a descriptive analysis of the results based on the survey conducted to responsiveness.

Responsiveness Gap Analysis

The respondents were asked to rank statements to the responsiveness of services concerning the Gap between expectation and perceived services. Thus, the following were the findings, as shown in Table 4-4.

- Statement 1 Employees in CEC give you prompt service: 50% of the respondents agreed that the staff inform customers exactly when services will be executed, which matches their expectations; this 50% has no gap between expectation and perception.

  On the other hand, 18% reported that the service was below their expectations, which means that they experienced a negative gap. The average of the respondents' answers was 3.17, with a standard deviation of one.

- Statement 2, Employees in CEC are never too busy to respond to your request. 40% of the respondents agreed that Employees in CEC are never too busy to respond to your request, which matches their expectations, which means that expectations here are equal to perceived services. In contrast, 23% reported that the service was below their expectations (negative gap). The average of the respondents' answers was 3.3, with a standard deviation of one.

- Statement 3 Employees in CEC Company are always willing to help you: 42% of the respondents agreed that Employees in CEC are never too busy to respond to your request, which matches their expectations, while 13% reported that the service was below their expectations. The average of the respondents' answers was 3.35, with a standard deviation of 1.02.

- Statement 4 CEC keeps customers informed about when services will be performed: 50% of the respondents agreed that the Employees in CEC give prompt service, which matches their expectations. However, 17% reported that the service was below their expectations. The average of the respondents' answers was 3.29, with a standard deviation of 1.04.

Table 0-4 Responsiveness Descriptive Analysis

Responsiveness Statements:	1	2	3	4	5	Average	STD
Employees in CEC give you prompt service.	3%	15%	50%	21%	11%	3.17	1.00
Employees in CEC are never too busy to respond to your request.	9%	14%	42%	23%	12%	3.30	1.06
Employees in CEC Company are always willing to help you.	5%	6%	40%	32%	17%	3.35	1.02
CEC keeps customers informed about when services will be performed.	6%	11%	50%	20%	13%	3.29	1.04
Employees in CEC give you prompt service.	3%	15%	50%	21%	11%	3.17	1.00

4.3.4 Assurance

This section presents a descriptive analysis of the results based on the survey conducted about assurance.

Assurance Gap Analysis

The respondents were asked to rank statements about assurance of services concerning expectations. Thus, the following were the findings, as shown in Table 4-5.

- Statement 1 CEC staff are trustworthy: 44% of the respondents agreed that the CEC staff is trustworthy and matches their expectations; 41% reported that the service was more than expected, having an average value of 3.41.
- Statement 2 the behavior of employees instills confidence in you: 44% of the respondents agreed that employees' behavior instills confidence in you, matching their expectations. Only 9% reported that the service received was below their expectations, with an average of 3.51 and a standard deviation of 0.91.
- Statement 3 Staff is courteous: 42% of the respondents agreed that the staff is courteous and matches their expectations.8percentage reported that the service received was below their expectations, with an average of 3.48 and a standard deviation of 0.88.
- Statement 4 CEC maintains the confidentiality of information: 49% of the respondents agreed that the Trainers have adequate knowledge to answer students' questions. On the other hand, 10% reported that their expectation was higher than the perceived service. The average answer was 3.41, with a standard deviation of 0.97.
- Statement 5 CEC Trainers have the knowledge to answer your questions: 37% of the respondents agreed that the Trainers have adequate knowledge to answer customer questions. On the other hand, 15% reported that their expectation was higher than the perceived service. The average answer was 3.4, with a standard deviation of 1.02.
- Statement 6 CEC Staff has the knowledge to answer your questions: 43% of the respondents agreed that CEC maintains the confidentiality of information. While 42% reported that, the perceived service was higher than expected. The average of the respondents was 3.4, with a standard deviation of 1.02

Table 4-0-5 Assurance Descriptive Analysis

Assurance Statements:	1	2	3	4	5	Average	STD
CEC staff is trustworthy.	6%	9%	44%	23%	18%	3.41	1.02
The behavior of employees instills confidence in you	4%	7%	44%	29%	16%	3.51	0.91
Staff is courteous	1%	7%	42%	35%	15%	3.48	0.88
CEC maintains the confidentiality of information	3%	7%	49%	30%	12%	3.41	0.97
CEC Trainers have the knowledge to answer your questions.	5%	10%	37%	31%	17%	3.40	1.02

4.3.5 Empathy Analysis

This section presents a descriptive analysis of the results based on the survey conducted about assurance.

Empathy Gap Analysis

Table 4-6 describes the Empathy descriptive analysis.

- Statement 1 CEC has your best interests at heart: 50% of the respondents agreed that CEC has your best interests. In addition, that matches their expectations. 30% reported that the service was higher than expected. On average, the responses were 3.3 with a standard deviation of 1
- Statement 2 CEC Staff Acts with love and respect: 39% of the respondents agreed that CEC Staff acts with love and respect, matching their expectations. Only 8% reported that the perceived service was below their expectation. The average for this statement was 3.5, meaning the service delivered was higher than expected.
- Statement 3 CEC Staff shows Empathy: 40% of the respondents agreed that they show empathy and match their expectations.42% reported that the service perceived is more than expected. The average was 3.4 with STD 1.
- Statement 4 CEC Staff understands your specific needs: 46% of the respondents agreed that CEC Staff understands your particular needs. However, 15% reported a negative gap

for this statement, and 39% reported that the service perceived is more than expected. The average was 3.2, with an STD of one.

- Statement 5 CECs have convenient operating hours for all their customers: 53% of the respondents agreed that CECs have convenient operating hours to all their customers. 28% reported that the service perceived is more than expected, and only 19% reported a negative gap. The average was 3.5 with an STD 1, which means that participants perceived service was higher than expected.

Table 4-6 Empathy Descriptive Analysis

Assurance Statements:	1	2	3	4	5	Average	STD
CEC has your best interests at heart.	6%	14%	50%	20%	10%	3.3	1.0
CEC Staff Acts with love and respect	3%	5%	39%	38%	15%	3.5	1.0
CEC Staff shows Empathy	4%	13%	40%	27%	15%	3.4	1.0
CEC Staff understands your specific needs.	2%	13%	46%	22%	17%	3.2	1.0
CEC has operating hours that are convenient to all its customers.	5%	14%	53%	19%	9%	3.5	1.1

4.5 Descriptive Statistics for the Five Quality Constructs

This section presents the descriptive statistics for the five constructs based on the data collected:

4.4.1 Tangibility

Tangibility had a mean value of 3.1 and a standard deviation of 0.76, indicating that the gap spread is not far from the mean. The distribution is approximately symmetric with a skewness of 0.28. The kurtosis value is 0.11, so there is no clustering from the mean. The mean value of 3.1 means neither a positive nor a negative gap in the service between expected and perceived. According to the histogram, it can be noted that the peak is three, which means that this is the most frequent value. Figure 4-1 show that the tangibility construct is not normally distributed because of the p-value <0.05.

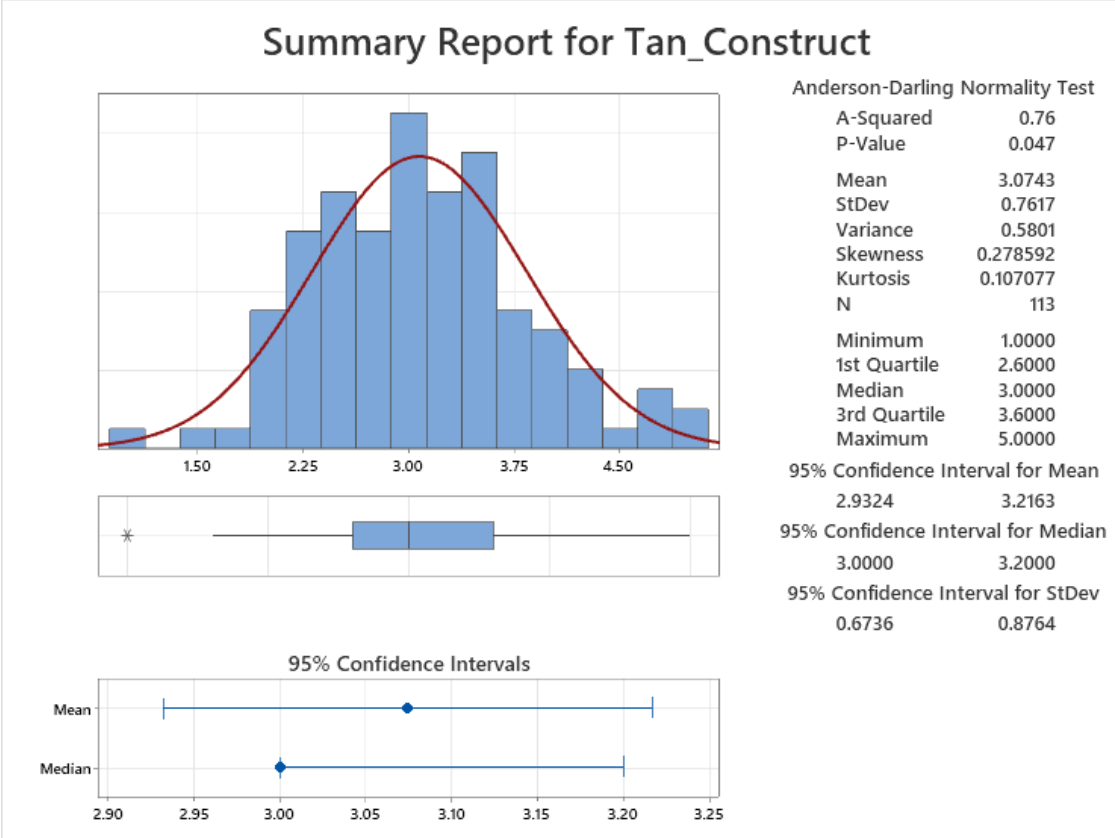


Figure 0-1 Tangibility construct summary report

4.4.2 Reliability

The mean for the reliability construct is 3.2, which means that students are relatively satisfied with the quality of services as to the reliability dimension. The standard deviation is 0.88, which means no gaps from the mean. The distribution is approximately symmetric with a skewness of -0.22. The kurtosis value is 0.16, so there is no clustering from the mean. Figures 4-2 show that the reliability construct is not normally distributed because of the p-value < 0.05.

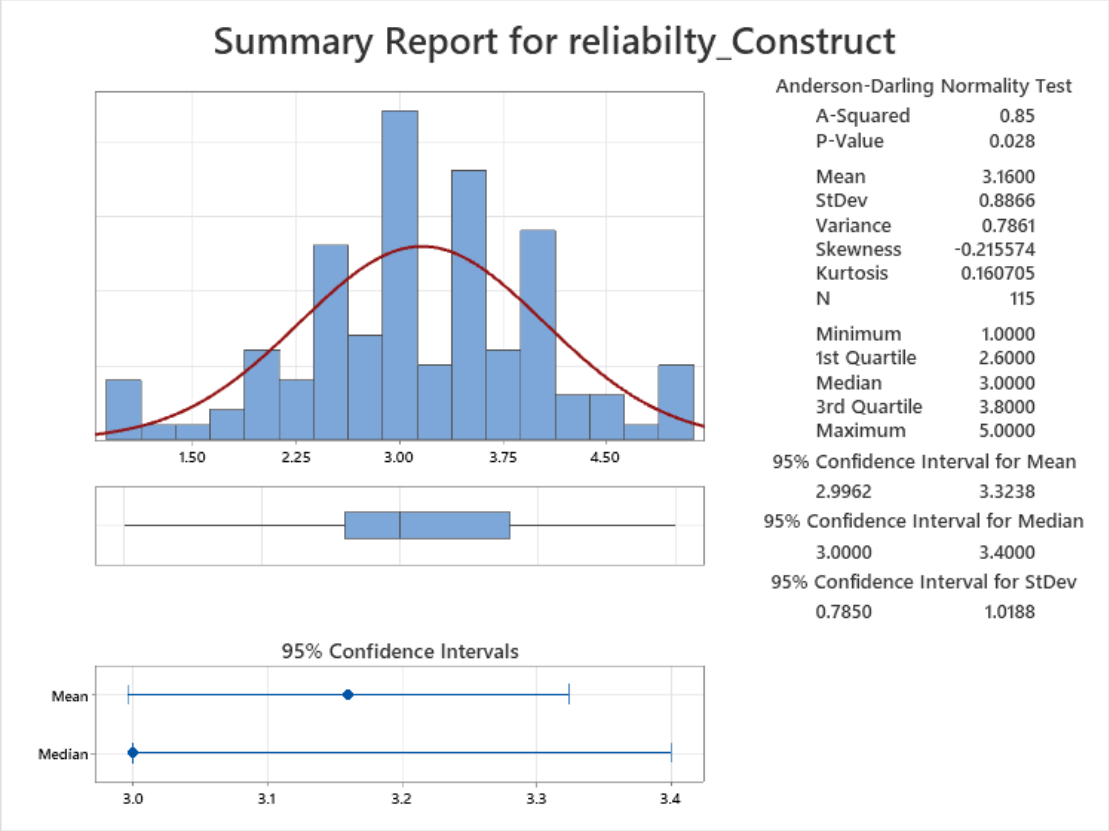


Figure 0-2 Reliability construct a summary report

4.4.3 Responsiveness

The mean for responsiveness was 3.27, with a standard deviation of 0.85. The variation is to the left with a negative skewness of -0.132. Figures 4-3 shows that the responsiveness construct is not normally distributed because of the p-value <0.05.

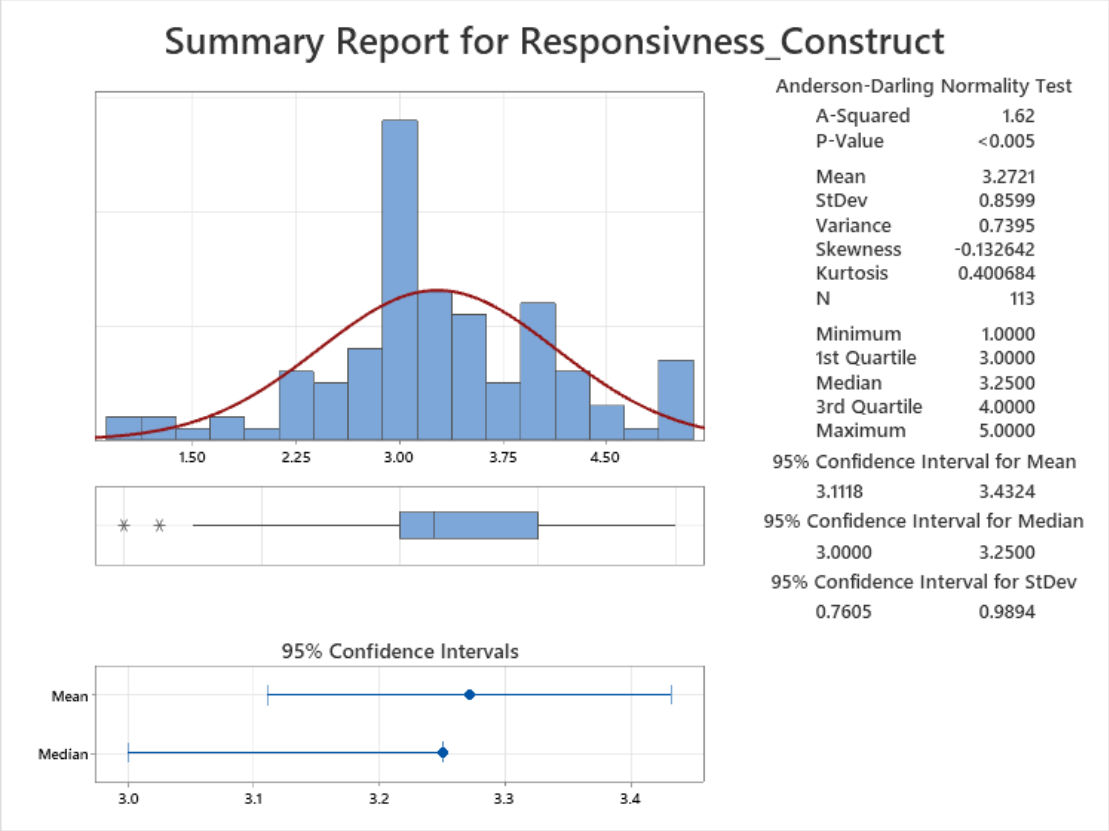


Figure 0-3 Responsiveness' Construct a summary report

4.4.4 Assurance

The assurance construct mean was 3.4, with a standard deviation of 0.9, showing slight variation from the mean, spreading slightly towards the left as the distribution is negatively skewed with a value of -0.22. This construct is not normally distributed. as summarized in Figure 4-4.

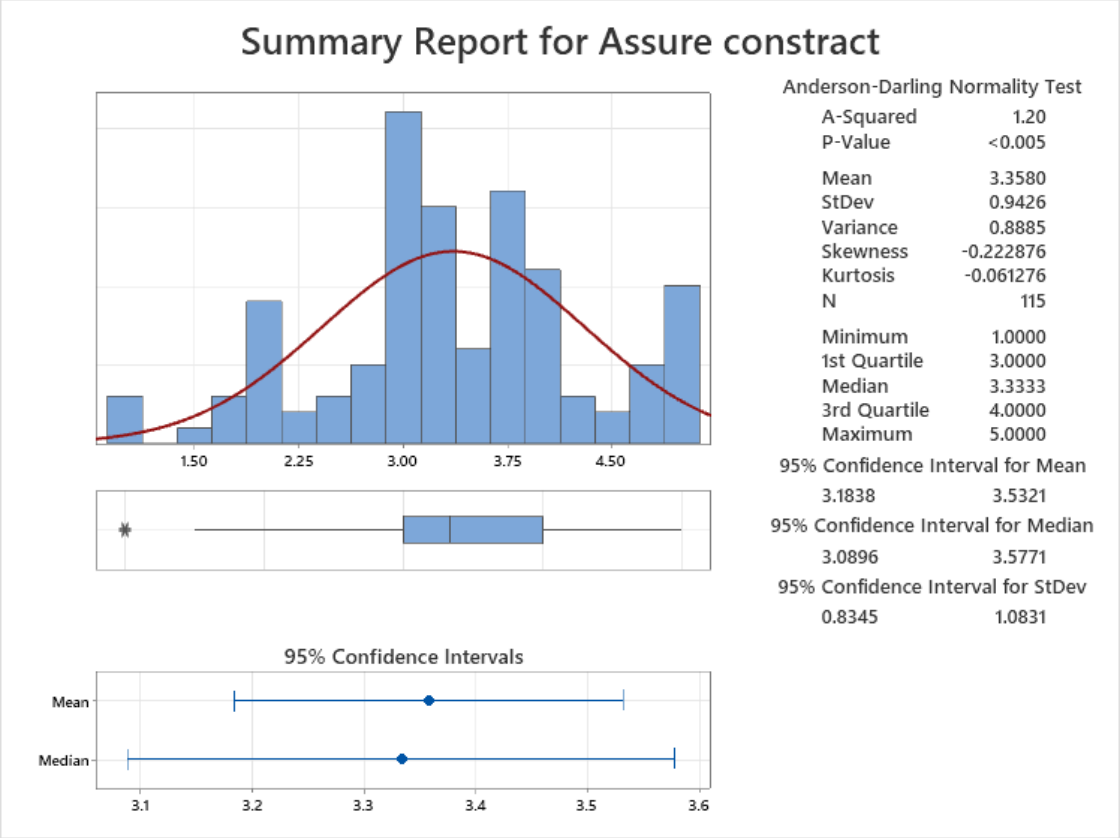


Figure 0-4 Assurance construct a summary report

4.4.5 Empathy

The mean for the empathy construct was 3.2, with a standard deviation of 0.9, which means that the gaps deviated from the mean but not very much. However, they have deviated to the left because the distribution is negatively skewed with a value of -0.24 and not clustered from the mean since the kurtosis value is 0.1. Figures 4-5 shows that the empathy construct is not normally distributed because of the p-value <0.05.

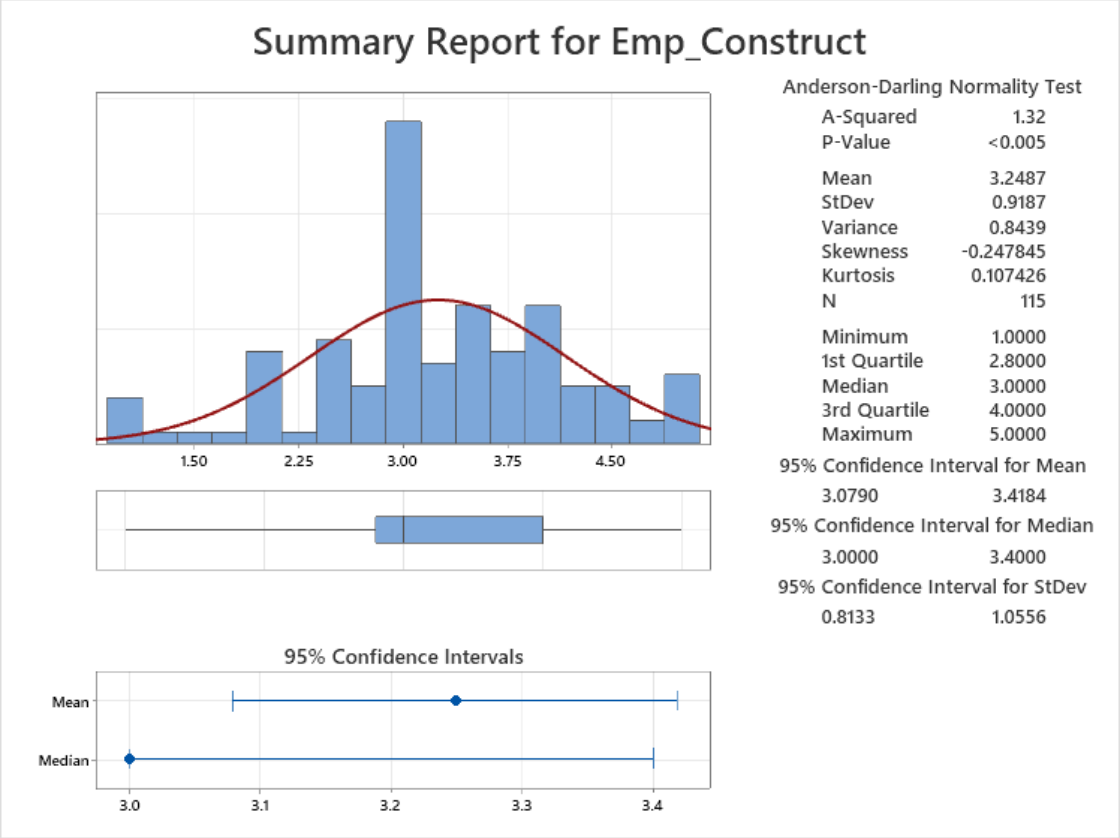


Figure 0-5 Empathy construct a summary report

4.4.6 Summary of the SERVEQUAL Dimensions

The results indicate that the overall quality of continuing education services in the West Bank, Palestine ranges between 3.24±0.9 as shown in Table 4-7, so nearly 68 % of continuing education students perceive that CEC's overall quality of services ranges between 2.3 (Somewhat Low) and 4.1 (High). More specifically, assurance, responsiveness, and administration are the dimensions with the highest levels of service quality among the five dimensions.

Table 0-7 Descriptive Statistics for Dimensions of Service Quality

Dimensions'	Mean	Std. Deviation
Tangibility	3.1	0.76
Reliability	3.2	0.88
Responsiveness	3.3	0.85
Assurance	3.4	0.9
Empathy	3.2	0.9
Total Dimensions	3.24	0.9

4.4.7 Customer Satisfaction

Figure 4-6 shows that customers are satisfied with a mean of 3.8, with a standard deviation of one. The deviation is to the left because the distribution is negatively skewed with a value of -0.6 and clustered around away from the mean. The kurtosis value is -0.45. Customer satisfaction is not normally distributed.

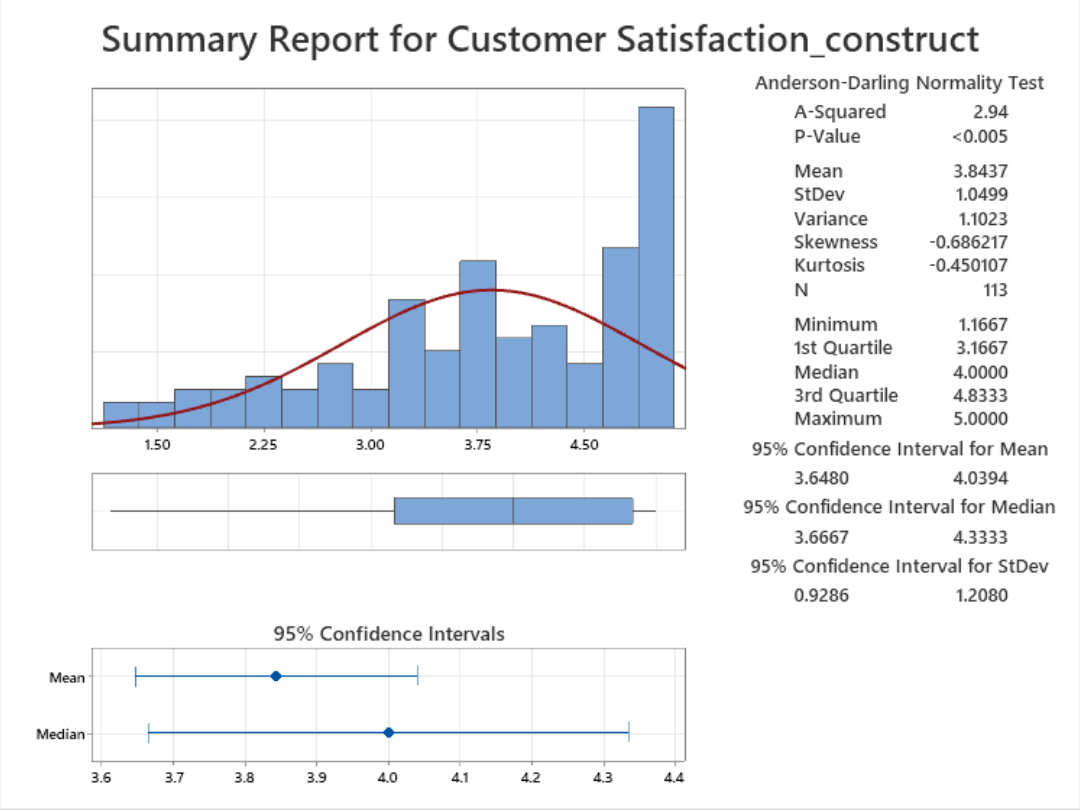


Figure 0-6 Customer Satisfaction construct a summary report

4.6 The PLS-SEM Analyses

In this part of the research, the measurement and the estimated structural models are evaluated, and the hypothesis are tested using the PLS-SEM techniques. The PLS-SEM techniques are because the data is not normally distributed and the sample size is small.

4.5.1 Measurement Model Evaluation

Some tests should be conducted to ensure reliability and validity in evaluating the measurement model. Validity is the extent to which a concept is accurately measured in quantitative design, while reliability is the consistency of the measurements. To what level will the implementation produce the same results under the same circumstances every time it is used? Reliability adds to the honesty of the results because it proves the methodology if the results are reproducible (Heale & Twycross, 2015).

Ensuring these two aspects is a fundamental requisite. While reliability shows the need for a study produces results that will be affirmed consistently by subsequent similar studies, the validity or honesty of an investigation requires that the tool be applied correctly to obtain the type of data meant to be gathered. To guarantee an objectively and diligently process, the following applicable scientific tests were followed; these tests should be done in order.

These tests are carried out in stage one for the lower-order constructs to ensure their validity and reliability; the convergent and discriminant validity are evaluated since the measures in this stage are reflective. The scores of the lower-order components are used in the second stage as manifest variables in the higher-order component (HOC) measurement model. Convergent validity, discriminant validity, collinearity, and item weights are used in the evaluation of the second stage of the measurement model

First Stage of Measurement Model

Indicator Reliability- Internal consistency reliability

Indicator reliability is a term used to examine how much of each indicator's variance is explained by its construct; indicator loading is the test used. The best values for the indicator loadings are above 0.70, and it should be noted that indicators that lie between 0.4 and 0.7 should not be eliminated automatically unless deleting the indicator leads to an increase in convergent validity or internal consistency reliability. However, items with factor loadings less than 0.40 should automatically be deleted (Hair et al., 2021).

Based on the loading test conducted all item loading values are 0.7 and above as shown in Table 4-7.

Composite Reliability

After testing the individual indicator reliability, the composite reliability is estimated to evaluate the internal consistency. Composite reliability is accepted when it has a value of more than 0.7 (Hair et al., 2011). Based on the composite reliability test, all Items with each construct have CR > 0.7 as shown in Table 4-7.

Convergent Validity

The third step is to assess the convergent validity of each construct. Convergent validity is the extent to which the construct converges to explain its indicators' variance. The test used here is the average variance extracted (AVE). The minimum acceptable AVE is 0.50 – an AVE of 0.50 or higher indicates the construct explains 50 % of the variance. The average variance extracted is more than 0.5 for all constructs, as shown in Table 4-7.

Table 4-7 shows the results for the model we are testing; as we can see, Item loading, composite reliability, and AVE are all in the acceptable range. To summarize, the results from Table 4-7 indicate the following:

First: all items that capture the different constructs are ensured to have factor loadings according to the criteria before the structural equation model is estimated. Secondly, the results indicate that each of the different constructs has an AVE value >0.5. Finally, each of the different constructs has CR >0.7. The convergent validity of the first stage of the measurement model is established according to the above three criteria.

Table 0-8: Reflective Constructs Measurement Properties

Reflective Variable	Construct Items	Item Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Tangibility	Tang_1	0.827	**0.904**	**0.655**
	Tang_2	0.79		
	Tang_3	0.699		
	Tang_4	0.867		
	Tang_5	0.846		
Reliability	Reliab_1	0.851	**0.916**	**0.686**
	Reliab_2	.0.859		
	Reliab_3	0.822		
	Reliab_4	0.736		
	Reliab_5	0.867		
Responsiveness	Respon_1	0.871	**0.913**	**0.724**
	Respon_2	0.836		
	Respon_3	0.847		
	Respon_4	0.850		
Assurance	Assur_1	0.866	**0.937**	**0.71**
	Assur_2	0.883		
	Assure_3	0.8		
	Assure_4	0.783		
	Assure_5	0.852		
	Assure_6	0.876		
Empathy	Emp_1	0.873	**0.931**	**0.731**
	Emp_2	0.879		
	Emp_3	0.921		
	Emp_4	0.726		
Customer Satisfaction	Sat_1	0.873	**0.943**	**0.734**
	Sat_2	0.878		
	Sat_3	0.92		
	Sat_4	0.854		
	Sat_5	0.699		
	Sat_6	0.898		

Discriminant Validity

Discriminant validity is the degree to which items differentiate among constructs by examining the correlation between different constructs and construct themselves (Diamantopoulos et al., 2012). Three criteria are applied to evaluate the discriminant validity

Fornell-Larcker criterion

This criterion is used to assess the degree of shared variance between the construct's items of the model. This criterion compares the square root of AVE values to the correlations between constructs. In particular, the square root of each construct's AVE should exceed its highest correlation with any other construct. To pass this criterion, the indicator's outer loading on the construct should be greater than all of its loadings on other constructs. Table 4-8 is the cross-loading Fornell-Larcker test; as we can see, the square root of each construct's AVE is larger than its correlation with other constructs.

Cross-Loading Test

Cross loading is when a variable is discovered to have more than one significant loading. This makes labeling all the elements that share the same variable challenging, as those factors must be distinct and reflect independent concepts. The cross-loadings criterion requires the loadings of an item on its assigned construct to be higher than its loadings on all other constructs in the model. Only one item has to be deleted –Assur_1- since it was loaded on more than one construct. It should be noted, that according to Hair et al (2011) that only items that improves the results are deleted otherwise the items are not removed. Table 4-10 summarizes the cross-loading results.

Table 0-9: Discriminant Validity (Using Fornell-Larcker criterion)

	Assurance	Customer Satisfaction	Empathy	Reliability	esponsiveness	Tangibility
Assurance	**0.798**					
Customer Satisfaction	0.642	**0.843**				
Empathy	0.742	0.653	**0.817**			
Reliability	0.774	0.681	0.684	**0.775**		
Responsiveness	0.734	0.549	0772	0.685	**0.811**	
Tangibility	0.539	0.641	0.508	0.702	0.475	**0.754**

Table 0-10 Discriminant Validity- Cross Loading

Item	Assurance	Customer Satisfaction	Empathy	Reliability	Responsiveness	Tangibility
Assur_2	**0.797**	0.479	0665	0.580	0.687	0.414
Assure_3	**0.765**	0.474	0.600	0.513	0.508	0.307
Assure_4	**0.730**	0.353	0.529	0.549	0.462	0.242
Assure_5	**0.846**	0.632	0.535	0.701	0.591	0.576
Assure_6	**0.844**	0.558	0.64	0.7090	0.658	0.519
Emp_1	0.574	0.536	**0.835**	0.598	0.675	0.442
Emp_2	0.664	0.565	**0.866**	0589	0.704	0.416
Emp_3	0.661	0497	**0.829**	0.548	0.625	0.378
Emp_4	0.681	0.628	**0.898**	0.668	0.707	0.487
Reliab_1	0.587	0.633	0.555	**0.808**	0.541	0.658
Reliab_2	0.667	0.607	0.608	**0.842**	0.599	0.664
Reliab_3	0.565	0.381	0.487	**0.737**	0.444	0.495
Reliab_4	0.463	0.328	0.416	**0.602**	0.421	0.336
Reliab_5	0.680	0.571	0.545	**0.838**	0.600	0.460
Respon_1	0.650	0.518	0.659	0.620	**0.853**	0.442
Respon_2	0.516	0.374	0.619	0.449	**0.805**	0.380
Respon_3	0.596	0.402	0.602	0.471	**0.809**	0.307
Respon_4	0.599	0.461	0.618	0.643	**0.773**	0.396
Sat_1	0.592	**0.869**	0.694	0.611	0.588	0.528
Sat_2	0.598	**0.872**	0.608	0.536	0.447	0.508
Sat_3	0.561	**0.904**	0.516	0.655	0.447	0.660
Sat_4	0.543	**0.847**	0.486	0.614	0.467	0.587
Sat_5	0.357	**0.651**	0.373	0.397	0.296	0.450
Sat_6	0.559	**0.886**	0.590	0.596	0.495	0.497
Tang_1	0.383	0.474	0.330	0.484	0.327	**0.781**
Tang_2	0.322	0.348	0.246	0.422	0.319	**0.714**
Tang_3	0.149	0.250	0.198	0.25	0.065	**0.544**
Tang_4	0.485	0.527	0.431	0.637	0.406	**0.847**
Tang_5	0.546	0.556	0.695	0.512	0.665	**0.842**

Heterotrait-Monotrait ratio of correlations (HTMT)

The Heterotrait-Monotrait ratio of correlations (HTMT) is proposed to measure the similarity between the constructs (Henseler et al., 2015). The value should be less than one. Table 4-10 shows the HTHT values.

Table 0-11 Discriminant Validity- Heterotrait-Monotrait Ratio (HTMT)

	Assurance	Customer Satisfaction	Empathy	Reliability	Responsiveness	Tangibility
Assurance						
Customer Satisfaction	0.699					
Empathy	0.859	0.722				
Reliability	0.90	0.744	0.788			
Responsiveness	0.857	0.616	0.889	0.802		
Tangibility	0.587	0.699	0.559	0.786	0.525	

To conclude, the convergent and discriminant validities of the measurement model's first stage are established. Accordingly, the discriminant validity of the research model is established. The results of the first stage of the measurement model are shown in Figure 4-12.

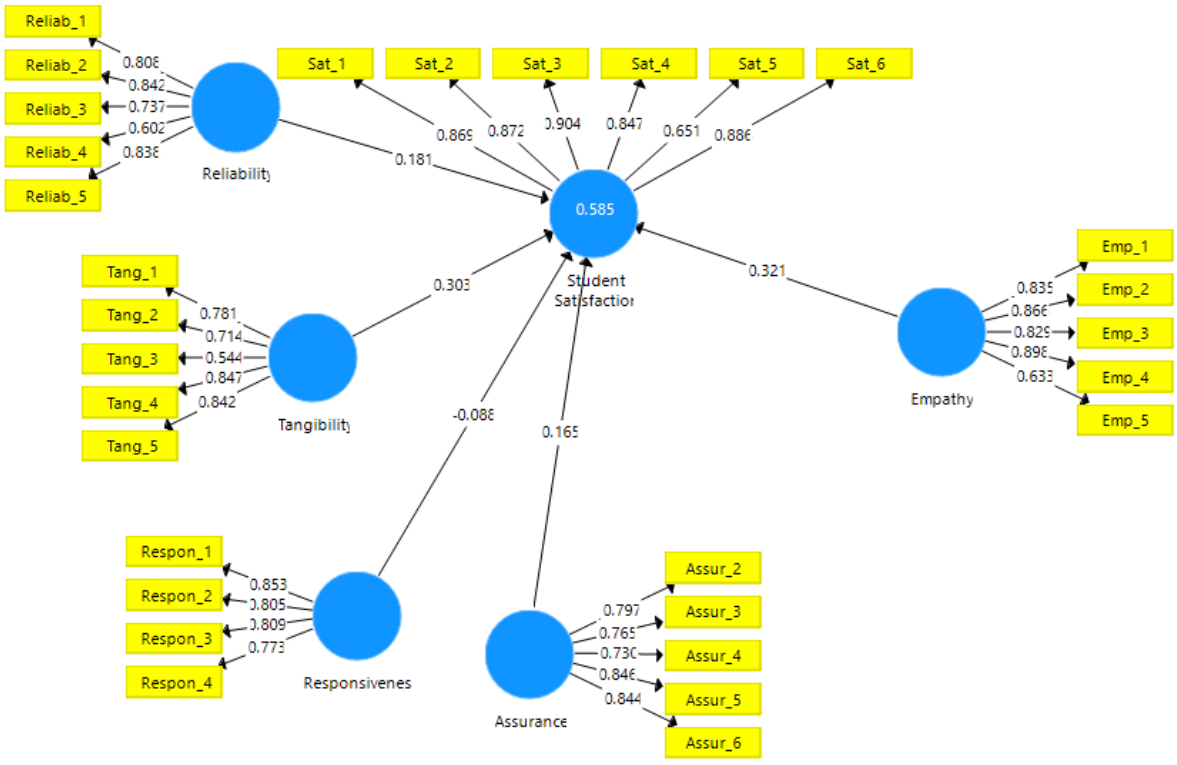


Figure 0-7 Results of First Stage of Measurement Model

Second Stage of Measurement Model

In the second stage, the higher-order component (HOC) measurement model uses the scores of the lower-order components (LOCs), previously acquired, as manifest variables.

The following pages demonstrate how the second stage of the measurement model is evaluated using convergent validity, discriminant validity, collinearity, and item weights.

Convergent Validity

The convergent validity evaluation of the second stage of the measurement model is shown in Table 4-11. The results show that all items that capture the different constructs have factor loadings according to the previously-mentioned criteria before the structural equation model are estimated. In addition, the results indicate that service quality has an AVE of 0.734, which is acceptable. In addition, the Customer Satisfaction construct has composite reliability of 0.943.

Table 0-12: Convergent Validity of Second Stage of Measurement Model

Construct	Items	Item Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Service Quality	**Tangibility**	0.726		
	Reliability	0.894		
	Responsiveness	0.846		
	Assurance	0.883		
	Empathy	0.867		
Customer Satisfaction	Sat_1	0.873	**0.943**	**0.734**
	Sat_2	0.878		
	Sat_3	0.92		
	Sat_4	0.854		
	Sat_5	0.699		
	Sat_6	0.898		

Discriminant Validity

The discriminant validity evaluation of the second stage of the measurement model using cross-loadings is shown in Table 4-12.

Table 0-13: Cross Loadings of Second Stage of Measurement Model

Item	Customer Satisfaction	Service Quality
Tangibility	0.603	**0.726**
Reliability	0.666	**0.894**
Responsiveness	0.543	**0.846**
Assurance	0.624	**0.883**
Empathy	0645	**0.867**
Sat_1	**0.892**	0.699
Sat_2	**0.890**	0.63
Sat_3	**0.902**	0.650
Sat_4	**0.838**	0.616
Sat_5	**0.699**	0.651
Sat_6	**0.887**	0.0.632

The discriminant validity evaluation of the second stage of the measurement model using the Fornell-Larcker criterion is shown in Table 4-14.

Table 4-14: Discriminant Validity (Using Fornell-Larcker criterion)

	Customer Satisfaction	Service Quality
Customer Satisfaction	**0.843**	**0.751**
Service Quality		

To conclude, the convergent and discriminant validities of the measurement model's first stage are established. Accordingly, the discriminant validity of the research model is established. The results of the first stage of the measurement model are shown in Figure 4-13.

Collinearity Assessment

Formative measurement models need to be evaluated in terms of collinearity. We evaluate collinearity using the variance inflation factor (VIF). A VIF of 5 and above signifies potential

collinearity (Hair et al., 2011). The collinearity evaluation of the formative measure of the second stage of the measurement model using the VIF is shown in Table 4-14. The results show that all of the items that capture higher education service quality (i.e. formative measure) have values of VIF that are well below 5. Therefore, it is concluded that there is no collinearity problem in the second stage of the measurement model.

Table 4-15 Collinearity Assessment of Formative Measure

Item	VIF	Result
	Service Quality	
Tangibility	1.821	Acceptable
Reliability	3.369	Acceptable
Responsiveness	2.877	Acceptable
Assurance	3.370	Acceptable
Empathy	3.067	Acceptable

Item Weights

Item weights are used to examine if a dimension contributes to forming a given measure or not. Item weights of CEC service quality are evaluated as shown in Table 4-16.

Table 4-16: Item Weights of CEC Service Quality

	Original Sample	Sample Mean	Standard Deviation	T-statistics	P-value Result
Tangibility → Service Quality	0.408	0.396	0.129	3.16	0.002
Reliability → Service Quality	0.244	0.232	0.176	1.388	0.166
Responsiveness→ Service Quality	-0.093	-0.100	0.166	0.562	0.574
Assurance→ Service Quality	0.186	0.191	0.204	0.916	0.360
Empathy→ Service Quality	0.429	0.434	0.178	2.408	0.016

The results indicate that empathy and tangibility have significant weights at the 0.05 level, which means that they are important in forming the CEC service quality construct, while responsiveness and assurance are not important in forming the CEC service quality construct.

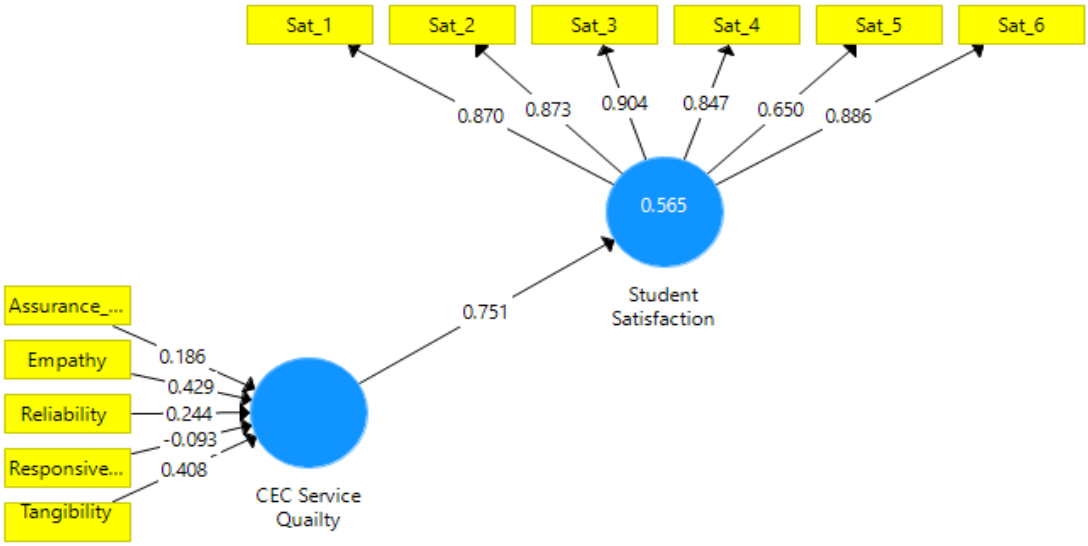


Figure 0-8 Results of the Second Stage of the Measurement Model

4.5.2 Hypothesis Testing

Recall that the main hypotheses to be tested are:

"The more the perceived quality, the more students of CECs services are satisfied."

The PLS-SEM is run by drawing 500 bootstrap samples to test the above hypotheses. The output is shown in Table 4-17.

Table 4-16 Path Analysis

Path	STD Beta	STD Error	T-Value	P-value	
Service Quality→Students Satisfaction	0.724	0.04	18.154	0.000	Accepted

Table 4-16 indicates that the path coefficient between continuing education service quality and students satisfaction is 0.724. This coefficient is significant at the 0.05 level. In addition, the coefficient has a positive sign, meaning that continuing education service quality positively affects students' satisfaction. Thus, the hypothesis that the service quality of continuing services in the West Bank, Palestine, positively affects students' satisfaction is supported.

The impact of service quality on customer satisfaction

A path analysis was carried to test the following sub-hypotheses:

H1: The better the perceived quality of the tangibles in the Palestinian CECs, the greater the level of students' satisfaction will be.

H2: The better the perceived reliability of services in the Palestinian CECs, the greater the level of students' satisfaction will be.

H3: The better the perceived level of responsiveness in the Palestinian CECs, the greater the level of students' satisfaction will be.

H4: The greater the level of assurance provided by the Palestinian CECs, the greater will be the level of students' satisfaction.

H5: The better the perceived level of empathy in the Palestinian CECs, the greater will be the level of students' satisfaction.

A Sub-hypothesis testing were carried out. The results in Table 4-17 indicate that tangibility and empathy only directly affect the students' satisfaction, while other dimensions are not significant. Now Table 4-18 summarizes the results for the Sub Hypothesis testing:

Table 0-18 Path Analysis

Path	STD Beta	STD Error	T-Value	P-value	Result
Assurance→Students Satisfaction	0.165	0,137	1.2	0.22	Not supported
Empathy→Students Satisfaction	0.321	0.333	2.38	0.017	Supported
Reliability→Students Satisfaction	0.181	0.181	1.41	0.156	Not supported
Responsiveness→Students Satisfaction	-.888	-0.087	0.702	0.483	Not supported
Tangibility→Students Satisfaction	0.303	0,092	3.292	0.001	Supported

4.5.3 Evaluation of Structural Model

The Coefficient of Determination (R^2)

This coefficient measures the percentage of dependent variable variance explained by one or more independent variables (Hair et al., 2010). According to Cohen (1988), R^2 values of dependent variables are assessed as follows: R^2 values below 0.25 are considered weak, R^2 values from 0.25 to 0.5 are considered moderate, and the R^2 values from 0.50 to 0.75 are considered substantial. Table 4-18 below indicates that students' satisfaction has an R^2 value of 0.52. This means that around 52% of the variation in students' satisfaction is explained by the independent variable (CEC service quality). Table 4-19 summarizes the R^2 results.

Table 0-19: R^2 Evaluation

Dependent Variable	R Square	R Square Adjusted	Result
Students' satisfaction	0.524	0.518	Substantial

f-Square Test

The F-square test shows the relative effect of a particular independent variable on the dependent variable due to variations in the R^2(Chin, 2001). f^2 values above 0.35 are considered large effect size; f^2 values ranging from 0.15 to 0.35 are medium effect size, f^2 values between 0.02 to 0.15 are small effect size, and f^2 values less than 0.02 are considered to have no effect size. The effect size f^2 is estimated and illustrated in Table 4-20.

Table 0-20: Effect Size f^2 (Model- 1)

Path	f^2	Result
Service quality → Students' satisfaction	1.10	Large

Results of Table 4-19 indicate that CEC service quality has a large effect size of 1.10 on students' satisfaction.

Predictive Relevance (Q^2)

Predictive Relevance (Q^2) is the third test for assessing the structural model; if Q^2 values of the constructs are more than zero, this confirms the model's predictive relevance for these constructs. Table 4-21 demonstrates the Q^2 value. Since the Q^2 values exceed zero, the estimated PLS-SEM has predictive relevance.

Table 0-21 Q^2 Evaluation

Path	SSO	SSE	Q^2 (1–SSE/SSO)
Service quality → Students' satisfaction	91	44.2	0.5

Chapter 5
Conclusions, Discussions, and Recommendations

5.1 Overview

In this chapter, conclusions and discussion of the study are presented, the necessary recommendations are given, future research directions are discussed, and finally, the limitations of the study are stated.

5.2 Discussion

This research work in the form of a master's thesis tackles a vital topic concerning the continuously increasing rate of unemployed university graduates in the Palestinian context. By definition, Continuing Education Centers (CECs) in the universities, besides training and educating students from outside the university, provide training programs to bridge the market-university gap. Therefore, investigating the perceived quality of service provision among the Palestinian CECs is very important. This research effort's generated information may shed light on the strengths and weaknesses of CECs' performance and uncover potential for improvements.

The SERVQUAL proved to be a model that can assess the service quality of CECs in the West Bank. Factor analysis was conducted to test the SERVQUAL framework based on the data collected from students of five CECs in the West Bank. The results revealed that all items fall under the same factor load into one factor, which means that the SERVQUAL model was valid for the study. In addition, the SERVQUAL model provided a satisfactory level of overall reliability based on the loading test conducted. All item-loading values are 0.7 and above, indicating no problems with the questionnaire, and it was an appropriate data collection tool for the designed survey. This result agrees with other studies, such as (Hasan et al, 2008; Saadati, 2012; Seymour, 1992; Twaissi & Al-Kilani, 2015; Akhlaghi et al., 2012)

The gap analysis shows that the overall average gap score is 3.24 for all five constructs. Thus, this score indicates that expectation and perception are almost equal, meaning that service quality at the concerned CEC is satisfactory. Although the difference is not wide, customers' perceived services exceed their expectations. The observed gap shows that, somehow, customers are satisfied with the quality of service they receive from the CECs.

All dimensions had slightly positive gap items between perceived and excepted values. However, among the statements that formed the tangible dimension, the item "Modern Looking Equipment" and "CEC physical facilities are visually appealing" of the Tangible dimension had the most significant negative gap between the expectation and perception of the respondent toward the service. In contrast, the item "availability of training material" had the smallest gap between the expectation and perception of the respondent toward the service.

To sum up, students expect higher levels of CECs performance concerning tangibles than other dimensions. The overall quality of CEC services in the West Bank ranges between 3.24±0.9. This means that 68% of the students perceive service quality in Palestinian continuing education between 2.3 (Somewhat Low) and 4.1 (High). More specifically, assurance, responsiveness, reliability, and empathy are the dimensions with the highest levels of service quality among the five dimensions. However, tangibility has the lowest level of service quality, with an average of 3.1 ±0.76.

Empathy and tangibility constructs significantly contribute to forming the CEC service quality in the West Bank. On the other hand, responsiveness, assurance, and reliability are not significant in the CEC service quality in the West Bank as I have an experience of more than ten years as a training programs officer at Birzeit continuing education center. It is factual to admit that students care most about the appearance of the facilities, equipment, and communications materials, the way they are treated and the individual attention they receive. The quality is undermined when the empathy and tangibility are below their expectations.

The research also revealed a significant positive relationship between service quality and customer satisfaction with an R2=0.54. This means that the model explains 54% of the fitted data in the regression model and that around 52% of the variation in students' satisfaction is explained by the independent variable CEC service quality, which is considered a substantial value in the social sciences. In addition, CEC service quality has a large effect size of 1.10 on students' satisfaction with an $f^2=1.10$, which means that there is an association between perceived quality and students' satisfaction in CECs. Tangibility was the least impactful construct, as shown by a correlation coefficient of 0.74. However, the most attributing element was that the CEC employees appeared neat. This conclusion is the same as those of many previous studies that confirmed the existence of direct positive impact of higher education service quality on students' satisfaction (e.g. Annamdevula & Bellamkonda, 2016; Ham & Hayduk ,2003, Akhlaghi et al., ,2012, Hasan et al. ,2008, Goumairi, Ouissal; Aoula, Es-Saâdia; Ben Souda, Souad,2020).

Customers of the CECs are satisfied with the perceived value with a mean of 3.8, with a standard deviation of one. The deviation is to the left because the distribution is negatively skewed with a value of -0.6 and clustered around a value other than the mean. The findings in this study suggest that perceived tangibility and empathy significantly influence overall customer satisfaction in CECs in the West Bank. The comprehensive multiple regression model shows that tangibility is the most significant predictor of satisfaction.

5.3 Conclusions

The key conclusions are summarized below:

1- The SERVQUAL proved to be a model that can be used to assess the service quality of CECs in the West Bank.

2- The gap analysis shows that the overall average gap score is 3.24 for all five constructs which means that the quality of services perceived is somehow the same as expected.

3- Tangibility and empathy constructs have a significant relationship and contribute to forming the CEC service quality in the West Bank. On the other hand, responsiveness, assurance, and reliability are not significant in the CEC service quality in the West Bank.

4- There is a positive significant relationship between service quality and customer satisfaction with an R2=0.54. This means that the service quality dimensions explain 54% of variation in students' satisfaction.

5- Students of the CECs are satisfied with the perceived value with a mean of 3.8, with a standard deviation of one. The deviation is to the left because the distribution is negatively skewed with a value of -0.6 and clustered around a value other than the mean

6- CEC's service quality in the West Bank positively affects students' satisfaction.

7- Tangibility and empathy are found to have a correlation with customer satisfaction. On the other hand, there is no correlation between reliability, responsiveness and assurance with customer satisfaction.

5.4 Recommendations

- There were areas of dissatisfaction identified in this study, specifically in the tangibility dimension. Therefore, efforts must be made to ensure that CECs meet students' needs.
- Student satisfaction questionnaires should be conducted regularly to uncover performance weaknesses and overcome possible gaps when providing quality services.

- CECs should upgrade the equipment and the visual appeal of the physical facilities since this dimension has the lowest quality levels.
- CECs should improve their services to exceed expectations, not only to meet expectations.

5.5 Research Limitations and Future Research

As part of the thesis and during the data collection phase, using different tools, i.e., questionnaires and discussions with the students, some challenges appeared:

1- Lack of alumni database: While contacting different continuous education centers in various Palestinian universities, a lack of an alumni database was realized. Meaning a considerable number of centers do not have any contact information for their previous students. Based on this, the researcher could not reach any of these centers' students for data collection.

2- Communication difficulties with Universities: The response received was limited throughout the data collection process and contacting center directors and coordinators. Furthermore, some did not respond to the frequent requests for meetings despite the continuous attempts to reach them.

3- Communication difficulties with students: students were not responsive and were unaware of the process's importance. Unfortunately, the expected number of students to be interviewed was 200, but the final reach was 110 respondents; however, there were many encouraging attempts. This may affect the data quality and results, limiting responses, experiences, and generalization diversity.

4- The Gaza Strip is excluded due to the geographical separation between the West Bank and Gaza Strip.

The above challenges slowed the data collection process and decreased the sample size, which delayed the whole process and collected data quality.

5.6 Future Research Directions

1- Future researchers are recommended to assess the quality of CEC's services from the viewpoints of administration, employees, and other stakeholders.

2- Qualitative data may help better understand the needs of students of CECs. Focus groups and semi-structured interviews may suit such future research projects.

3- Other important dimensions could be tested, such as training content, trainers' experiences, and mentoring services.

4- Continuing Education Centers in Gaza Strip serve a population of about two million and could be included in future studies by Palestinian researchers in Gaza.

References

Abdullah, F. (2006). The development of HEdPERF: A new measuring instrument of service quality for the higher education sector. International Journal of Consumer Studies, 30(6), 569–581. https://doi.org/10.1111/j.1470-6431.2005.00480.x

Abukari, A. (2005). Conceptualising lifelong learning: A reflection on lifelong learning at Lund University (Sweden) and Middlesex University (UK). European Journal of Education, 40(2), 143–154. https://doi.org/10.1111/j.1465-3435.2004.00216.x

Akhlaghi, E., Amini, S., & Akhlaghi, H. (2012). Evaluating Educational Service Quality in Technical and Vocational Colleges using SERVQUAL Model. Procedia - Social and Behavioral Sciences, 46, 5285–5289. https://doi.org/10.1016/j.sbspro.2012.06.424

Alexandris, K., Dimitriadis, N., & Markata, D. (2002). Can perceptions of service quality predict behavioral intentions? An exploratory study in the hotel sector in Greece. Managing Service Quality: An International Journal.

Al-Khalil,R. (2020). Using the SERVQUAL Model to Assess Service Quality of Optical Centers in the West Bank, Palestine [unpublished master dissertation] AAUP.

Arslan, M.M. (2008). Structure and Functions of the Continuing Education Centers at Turkish Universities. *The Turkish Online Journal of Distance Education*, *9*, 138-148.

Anderson, C. R., & Zeithaml, C. P. (1984). Stage of the product life cycle, business strategy, and business performance. Academy of Management Journal, 27(1), 5–24.

Angell, R. J., Heffernan, T. W., & Megicks, P. (2008). Service quality in postgraduate education. Quality Assurance in Education.

Bigné, E., Moliner, M. A., Sánchez, J., Bigne, E., & Sa, J. (2012). Perceived quality and satisfaction in multiservice organisations : the case of Spanish public services. https://doi.org/10.1108/08876040310482801

Budiyanti, H., Siolemba Patiro, S. P., Djajadi, M., & Astuty, S. (2020). Does Service Quality in Education and Training Process Matters? Study of Government's Human Resource Agencies in

Indonesia. Journal on Efficiency and Responsibility in Education and Science, 13(1), 41–55.

Brochado, A. (2009). Comparing alternative instruments to measure service quality in higher education. Quality Assurance in Education.

Buttle, F. (1996). SERVQUAL: review, critique, research agenda. European Journal of Marketing, 30(1), 8–32. https://doi.org/10.1108/03090569610105762

Cengiz, R., & Remzi, Y. (2014). Evaluating the continuing education centers in terms of life long learning. Procedia - Social and Behavioral Sciences, 116, 1756–1762. https://doi.org/10.1016/j.sbspro.2014.01.468

Chin, W. W. (2001). PLS-Graph user's guide. CT Bauer College of Business, University of Houston, USA, 15, 1–16.

Creswell, J. W. (2003). A framework for design. Research design: Qualitative, Quantitative, and Mixed Methods Approaches, 9-11.

Creswell, J. W., & Creswell, J. D. (2017a). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.

Creswell, J. W., & Creswell, J. D. (2017b). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.

Crosby,P.B.(1979). Quality is free: The art of making quality certain. New York:McGraw-hill

Deming, W. E. (1981). Improvement of quality and productivity through action by management. Global Business and Organizational Excellence, 1(1), 12-22.

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: a predictive validity perspective. Journal of the Academy of Marketing Science, 40(3), 434–449.

Does Service Quality in Education and Training Process Matters ? Study of Government ' S Human Resource Agencies in Indonesia. (2015). 13(1), 41–55.

Durrheim, K. (2006). Research design. Research in practice: Applied Methods for the Social Sciences, 2, 33-59.

Duţă, N., & Rafailă, E. (2014). Importance of the Lifelong Learning for Professional Development of

University Teachers – Needs and Practical Implications. Procedia - Social and Behavioral Sciences, 127, 801–806. https://doi.org/10.1016/j.sbspro.2014.03.358

Education, Jordan. D. of N.-F. Education. D. of G. (2008). The national report on adult education in Jordan.

el Ansari, W., & Oskrochi, R. (2006). What matters most? Predictors of student satisfaction in public health educational courses. Public Health, 120(5), 462–473.

Elliott, K. M., & Shin, D. (2002). Student Satisfaction: An alternative approach to assessing this important concept. Journal of Higher Education Policy and Management, 24(2), 197–209. https://doi.org/10.1080/1360080022000013518

Farris, P. W., Bendle, N., Pfeifer, P. E., & Reibstein, D. (2010). Marketing metrics: The definitive guide to measuring marketing performance. Pearson Education.

Garvin, D. A. (1984). Product quality: An important strategic weapon. Business Horizons, 27(3), 40–43. https://doi.org/https://doi.org/10.1016/0007-6813(84)90024-7

Ginsberg, M. B. (1991). Understanding educational reforms in global context. Garland, New York, NY: Economy, Ideology and the State.

Goumairi, O. (2020). Application of the SERVQUAL Model for the Evaluation of the Service Quality in Moroccan Higher Education : Public Engineering School as a Case Study. 9(5), 223–229. https://doi.org/10.5430/ijhe.v9n5p223

Gounaris, S. P., Stathakopoulos, V., & Athanassopoulos, A. D. (2003). Antecedents to perceived service quality: An exploratory study in the banking industry. International Journal of Bank Marketing, 21(4), 168–190. https://doi.org/10.1108/02652320310479178

Grönroos, C. (2001). The perceived service quality concept - A mistake? Managing Service Quality, 11, 150–152. https://doi.org/10.1108/09604520110393386

Gupta, A., McDaniel, J. C., & Herath, S. K. (2005). Quality management in service firms: sustaining structures of total quality service. Managing Service Quality: An International Journal.

Hair, J. F., Hult, G. T. M., Ringle, C., Sarstedt, M., Danks, N., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook. In Springer.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. Journal of Marketing Theory and Practice, 19(2), 139–152.

Ham, L., & Hayduk, S. (2003). Gaining competitive advantages in higher education: analyzing the gap between expectations and perceptions of service quality. International Journal of Value-Based Management, 16(3), 223–242.

Harvey, L. (2004). Analytic quality glossary, quality research international. Http://Www. Qualityresearchinternational. Com/Glossary.

Hasan, H. F. A., Ilias, A., Rahman, R. A., & Razak, M. Z. A. (2008). Service quality and student satisfaction: A case study at private higher education institutions. International Business Research, 1(3), 163–175.

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. Evidence-Based Nursing, 18(3), 66–67. https://doi.org/10.1136/eb-2015-102129

Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and managing student loyalty: An approach based on the concept of relationship quality. Journal of Service Research, 3(4), 331–344.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43(1), 115–135.

Iacobucci, D., Ostrom, A., & Grayson, K. (1995). Distinguishing Service Quality and Customer Satisfaction: The Voice of the Consumer. Journal of Consumer Psychology, 4(3), 277–303. https://doi.org/10.1207/s15327663jcp0403_04

Jayousi, Sh. (2020). Quality Assessment of Non-Governmental Organizations Operating in Palestine Using SERVQUAL Model [unpublished master dissertation] AAUP.

Jewel, S. (1996). Marketing contiuning education .pdf. 187.

Jiewanto, A., Laurens, C., & Nelloh, L. (2012). Influence of service quality, university image, and student satisfaction toward WOM intention: A case study on Universitas Pelita Harapan Surabaya. Procedia-Social and Behavioral Sciences, 40, 16–23.

Kallen, D. (2002). Lifelong learning revisited. International Perspectives on Lifelong Learning: From Recurrent Education to the Knowledge Society, 32–38.

Khan, M. M., Ahmed, I., & Nawaz, M. M. (2011). Student's perspective of service quality in higher learning institutions; An evidence based approach. International Journal of Business and Social Science, 2(11).

Khatib, I. A., & Tsipouri, L. (2013). Innovation in Palestinian Industries : A Necessity for Surviving the Abnormal. 492–510. https://doi.org/10.1007/s13132-012-0093-8

Kitchroen, K. (2004). Literature review: Service quality in educational institutions. ABAC Journal, 24(2).

Koni, A., Zainal, K., & Ibrahim, M. (2013). An Assessment of the Services Quality of Palestine Higher Education. 6(2), 33–48. https://doi.org/10.5539/ies.v6n2p33

Kotler, P., & Connor Jr, R. A. (1977). Marketing professional services. Journal of marketing, 41(1), 71-76.

Kotler, P., Armstrong, G., Saunders, J., Wong, V., Miquel, S., Bigné, E., & Cámara, D. (2000). Introducción al marketing. Pearson Prentice Hall.

Krejcie, R. V, & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30(3), 607–610.

Kuo, Y.-K., & Ye, K.-D. (2009). The causal relationship between service quality, corporate image and adults' learning satisfaction and loyalty: A study of professional training programmes in a Taiwanese vocational institute. Total Quality Management & Business Excellence, 20(7), 749–762. https://doi.org/10.1080/14783360903037085

Laal, M., Laal, A., & Aliramaei, A. (2014). Continuing education; lifelong learning. Procedia-Social and Behavioral Sciences, 116, 4052–4056.

Lavrakas, P. J. (2008). Encyclopedia of survey research methods (Vols. 1-0). Thousand Oaks, CA: Sage Publications, Inc. doi: 10.4135/9781412963947

Lien, C. H., Wu, J. J., Chen, Y. H., & Wang, C. J. (2014). Trust transfer and the effect of service quality on trust in the healthcare industry. Managing Service Quality, 24(4), 399–416.

https://doi.org/10.1108/MSQ-11-2013-0255

Magagneh, D. (2022). Assessing the Service Quality of Bahri Restaurant Using SERVQUAL and Kano Models [unpublished master dissertation] AAUP.

Mclean, S. (2007). Forum / Tribune. 33(2), 65–86.

Milner, R., & Furnham, A. (2017). Measuring Customer Feedback, Response and Satisfaction. Psychology, 08(03), 350–362. https://doi.org/10.4236/psych.2017.83021

Ministry of Education and Higher Education. (2017). Education Sector Strategic Plan 2017-2022. June 2017. http://www.mineduc.gov.rw/IMG/pdf_pdf_ESSP_2008-2012_July_2008_Final-3-3.pdf

Mukhtar, U., Anwar, S., Ahmed, U., & Baloch, M. A. (2015). Factors effecting the service quality of public and private sector universities comparatively: an empirical investigation. Researchers World, 6(3), 132.

Munteanu, C., Ceobanu, C., Bobâlcă, C., & Anton, O. (2010). An analysis of customer satisfaction in a higher education context. International Journal of Public Sector Management, 23(2), 124–140. https://doi.org/10.1108/09513551011022483

Mwiya, B., Bwalya, J., Siachinji, B., Sikombe, S., Chanda, H., & Chawala, M. (2017). Higher education quality and student satisfaction nexus: evidence from Zambia. Creative Education, 8(7), 1044–1068.

Nooripoor, M., Sharifi, Z., Univer-, Y., & Development, A. (2020). Assessment of the Quality of Academic Services at Yasouj University: Application of SERVQUAL Model. 5852.

O'Neill, M. A., & Palmer, A. (2004). Importance- performance analysis: a useful tool for directing continuous quality improvement in higher education. Quality Assurance in Education, 12(1), 39–52. https://doi.org/10.1108/09684880410517423

Parasuramam, A., Zeithaml, V. A., & Berry, L. L. (1985). 17. Mohammad, AAS and SYM Alhamadani, 2011. A conceptual model of service quality and its Service quality perspectives and Customer implications for future research. Journal of Marketing, Satisfaction in Commercial Banks Working in Jordan, 49, 41–50.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. Journal of Marketing, 49(4), 41–50.

Pedro, E., & Lourenço, L. (2009). PERCEIVED SERVICE QUALITY AND STUDENTS ' SATISFACTION IN HIGHER EDUCATION : THE INFLUENCE OF. 12(1), 165–192.

Philip Crosby - Management Guru. (2021, Mar 13). Retrieved from https://proessays.net/essays/philip-crosby

Prof, A., & Metin, M. (2008). STRUCTURE AND FUNCTIONS OF THE CONTINUING. July, 138–148.

Psomas, E., & Antony, J. (2017). Total quality management elements and results in higher education institutions: The Greek case. Quality Assurance in Education, 25(2), 206–223. https://doi.org/10.1108/QAE-08-2015-0033

Rasyida, D. R., Ulkhaq, M. M., Setiowati, P. R., & Setyorini, N. A. (2016). Assessing Service Quality : A Combination of SERVPERF and Importance- Performance Analysis. 03, 6–10.

Reeves, C. A., & Bednar, D. A. (1994). Defining quality: alternatives and implications. Academy of Management Review, 19(3), 419–445.

Review Reviewed Work (s): What Matters in College ? Four Critical Years Revisited . by Alexander W . Astin Review by : Kenneth A . Feldman Source : The Journal of Higher Education , Vol . 65 , No . 5 (Sep . - Oct ., 1994), pp . 615-622 Stable URL : ht. (2018). 65(5), 615–622.

Roy, S. K., & Ganguli, S. (2008). Service quality and customer satisfaction: An empirical investigation in Indian mobile Telecommunications services. Marketing Management Journal, 18(2), 119–144.

Schejbal, D., & Wilson, D. (2008). The Value of Continuing Education. 72, 32–43.

Schleicher, A. (2012). OECD Skills Strategy: The pathway of choice. Organisation for Economic Cooperation and Development. The OECD Observer, 290/291, 43.

Sekaran, U., & Bougie, R. (2016). Research methods for business: A skill building approach. john wiley & sons.

Shank, M. D., Walker, M., & Hayes, T. (1996). Understanding professional service expectations: do

we know what our students expect in a quality education? Journal of Professional Services Marketing, 13(1), 71–89.

Shen, J., & Tang, C. (2018). How does training improve customer service quality? The roles of transfer of training and job satisfaction. European Management Journal, 36(6), 708–716. https://doi.org/10.1016/j.emj.2018.02.002

Silvestri, C., Aquilani, B., & Ruggieri, A. (2017). Service quality and customer satisfaction in thermal tourism. The TQM Journal.

Sultan, P., & Wong, H. Y. (2010). Performance-based service quality model: An empirical study on Japanese universities. Quality Assurance in Education, 18, 126–143. https://doi.org/10.1108/09684881011035349

Tamilselvi, P. (2016). Service Quality – Customer Satisfaction. 29–31.

Thomas, S. (2011). What Drives Student Loyalty in Universities: An Empirical Model from India. International Business Research, 4(2). https://doi.org/10.5539/ibr.v4n2p183

Thompson, S. K. (1987). Sample size for estimating multinomial proportions. The American Statistician, 41(1), 42-46.

Tissot, P., & professionnelle, C. européen pour le développement de la formation. (2004). Terminology of vocational training policy: a multilingual glossary for an enlarged Europe. Office for official publications of the European Communities Luxembourg.

Tuijnman, A., & Boström, A.-K. (2002). Changing notions of lifelong education and lifelong learning. International Review of Education, 48(1), 93–110.

Twaissi, N. M., & Al-Kilani, M. H. (2015). The Impact of Perceived Service Quality on Students' Intentions in Higher Education in a Jordanian Governmental University. International Business Research, 8(5), 81.

Vanderstoep, S. W., & Johnson, D. D. (2008). Research methods for everyday life: Blending qualitative and quantitative approaches (Vol. 32). John Wiley & Sons.

Venables, P. (2005). 20. The Open University and the future of continuing education. World Yearbook of Education: Recurrent Education and Lifelong Learning, 271.

West, M. S., & Marchand, M. (2001). LIFELONG LEARNING AND LOCAL ECONOMIC DEVELOPMENT. February 1996.

Wilson, A., Zeithaml, V., Bitner, M. J., & Gremler, D. (2016). EBOOK: Services Marketing: Integrating Customer Focus Across the Firm. McGraw Hill.

Wong, K. K.-K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. Marketing Bulletin, 24(1), 1–32.

Yin, X. (1997). Optical air mass: Daily integration and its applications. In Meteorology and Atmospheric Physics (Vol. 63, Issues 3–4). https://doi.org/10.1007/BF01027387

Young, J. A., & Varble, D. L. (1997). Purchasing's performance as seen by its internal customers: a study in a service organization. International Journal of Purchasing and Materials Management, 33(2), 36–41.

Yusof, A., Hassan, Z., Rahman, S., & Ghouri, A. M. (2012). Educational service quality at public higher educational institutions: A proposed framework and importance of the sub-dimensions. International Journal of Economics Business and Management Studies, 1(2), 36–49.

Zammuto, R. F., Keaveney, S. M., & Connor, E. J. O. (2008). Journal of Marketing for Higher Education Rethinking Student Services : Assessing and Improving Service Quality. March 2015, 37–41. https://doi.org/10.1300/J050v07n01

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1988). Communication and Control Processes in the Delivery of Service Quality. 52(April), 35–48.

Appendix

Appendix A: Questionnaire-English

PART One:

This part consists of five constructs measuring SERVQUAL in the view of the respondent's gap between expectation and perception of service qualities. I ask you kindly to evaluate the level of your agreement with the following statements according to a five-point scale:

Score	Responses
1	The perceived service is much below the expected
2	The perceived service is below the expected
3	The perceived service is exactly the same as expected
4	The perceived service is more than expected
5	The perceived service is much more than expected

First Construct: Tangibility this construct consists of five statements that measure the appearance of the facilities, equipment, and communications materials.

NO	Statement	Degree of Agreement				
1	CEC has modern-looking equipment	1	2	3	4	5
2	CEC's physical facilities are visually appealing.	1	2	3	4	5
3	CEC employees appear neat.	1	2	3	4	5
4	Availability of Training material	1	2	3	4	5
5	Materials associated with the service are visually appealing at CEC.	1	2	3	4	5

Second Construct: Reliability this construct consists of five statements that measure consistency in rendering the service promised reliably and carefully.

NO	Statement	Degree of Agreement				
1	Educational services provided are consistent with the advertised	1	2	3	4	5
2	CEC Employees provides services (with accuracy (without Errors)	1	2	3	4	5
3	CEC provides its services at the time it promises to do so.	1	2	3	4	5

4	CEC has records for all trainees	1	2	3	4	5
5	CEC performs the service right the first time.	1	2	3	4	5

Responsiveness:this construct consists of four statements that measure the disposition of the staff of the centers to help users and provide prompt service.

NO	Question	Degree of Agreement				
1	Employees in CEC give you prompt service.	1	2	3	4	5
2	Employees in CEC are never too busy to respond to your request.	1	2	3	4	5
3	Employees in CEC Company are always willing to help you.	1	2	3	4	5
4	CEC keeps customers informed about when services will be performed.	1	2	3	4	5

Fourth Construct: Assurance this construct consists of six statements that measure the employees' knowledge, attention, and skills that inspire credibility and trust.

NO	Statement	Degree of Agreement				
1	CEC staff is trustworthy.	1	2	3	4	5
2	The behavior of employees instills confidence in you	1	2	3	4	5
3	Staff is courteous	1	2	3	4	5
4	CEC maintains the confidentiality of information	1	2	3	4	5
5	CEC Trainers have the knowledge to answer your questions.	1	2	3	4	5

Fifth Construct: Empathy this construct consists of five statements that measure the effort to understand the user's perspective through individual attention.

NO	Statement	Degree of Agreement				
1	CEC has your best interests at heart.	1	2	3	4	5
2	CEC Staff Acts with love and respect	1	2	3	4	5

3	CEC Staff shows Empathy	1	2	3	4	5
4	CEC Staff understands your specific needs.	1	2	3	4	5
5	CEC has operating hours that are convenient to all its customers.	1	2	3	4	5

Part Two: Student Satisfaction

Questions that measure customer satisfaction levels are included in this section. It has six Items in the construct.

NO	Statement	Degree of Agreement				
1	I am happy with my decision for attending this training	1	2	3	4	5
2	I will re-enroll in other training courses at CEC	1	2	3	4	5
3	In general, I am satisfied with the training quality	1	2	3	4	5
4	In general, I am satisfied with the trainers' quality	1	2	3	4	5
5	In general, I am satisfied with money value of the training	1	2	3	4	5
6	I will recommend the training services for my collogues and friends	1	2	3	4	5

Part Three: Respondents' Demographic Data

Gender

□Male □Female

Age

□18-30 □ 30-40

□ 40-50 □ 50-60

□ More than 60

Governance

□Hebron □ Bethlehem

□ Jerusalem □ Ramallah

□ Jericho □ Nablus

□ Salfeet □ Qalqelyeh

□ Tulkarem □ Jenin

CEC enrolled in:

9 Al Quds Open University.

10 Arab American University.

11 Birzeit University.

12 Palestine Technical University – Kadoorie

13 An-Najah National University

14 Bethlehem University.

15 Palestinian Ahliya university

16 Palestine Polytechnic University.

Type of training received

1- Practical training 2- Theoretical training

PART One:

This part consists of five constructs measuring SERVQUAL in the view of the respondent's gap between expectation and perception of service qualities. I ask you kindly to evaluate the level of your agreement with the following statements according to a five-point scale:

Score	**Responses**
1	The perceived service is much below the expected
2	The perceived service is below the expected
3	The perceived service is exactly the same as expected
4	The perceived service is more than expected
5	The perceived service is much more than expected

First Construct: Tangibility this construct consists of five statements that measure the appearance of the facilities, equipment, and communications materials.

NO	Statement	Degree of Agreement				
1	CEC has modern-looking equipment	1	2	3	4	5
2	CEC's physical facilities are visually appealing.	1	2	3	4	5
3	CEC employees appear neat.	1	2	3	4	5
4	Availability of Training material	1	2	3	4	5
5	Materials associated with the service are visually appealing at CEC.	1	2	3	4	5

Second Construct: Reliability this construct consists of five statements that measure consistency in rendering the service promised reliably and carefully.

NO	Statement	Degree of Agreement				
1	Educational services provided are consistent with the advertised	1	2	3	4	5
2	CEC Employees provides services (with accuracy (without Errors)	1	2	3	4	5
3	CEC provides its services at the time it promises to do so.	1	2	3	4	5
4	CEC has records for all trainees	1	2	3	4	5
5	CEC performs the service right the first time.	1	2	3	4	5

Responsiveness:this construct consists of four statements that measure the disposition of the staff of the centers to help users and provide prompt service.

NO	Question	Degree of Agreement				
1	Employees in CEC give you prompt service.	1	2	3	4	5
2	Employees in CEC are never too busy to respond to your request.	1	2	3	4	5
3	Employees in CEC Company are always willing to help you.	1	2	3	4	5
4	CEC keeps customers informed about when services will be performed.	1	2	3	4	5

Fourth Construct: Assurance this construct consists of six statements that measure the employees' knowledge, attention, and skills that inspire credibility and trust.

NO	Statement	Degree of Agreement				
1	CEC staff is trustworthy.	1	2	3	4	5
2	The behavior of employees instills confidence in you	1	2	3	4	5
3	Staff is courteous	1	2	3	4	5
4	CEC maintains the confidentiality of information	1	2	3	4	5
5	CEC Trainers have the knowledge to answer your questions.	1	2	3	4	5

Fifth Construct: Empathy this construct consists of five statements that measure the effort to understand the user's perspective through individual attention.

NO	Statement	Degree of Agreement				
1	CEC has your best interests at heart.	1	2	3	4	5
2	CEC Staff Acts with love and respect	1	2	3	4	5
3	CEC Staff shows Empathy	1	2	3	4	5
4	CEC Staff understands your specific needs.	1	2	3	4	5
5	CEC has operating hours that are convenient to all its customers.	1	2	3	4	5

Part Two: Student Satisfaction

Questions that measure customer satisfaction levels are included in this section. It has six Items in the construct.

NO	Statement	Degree of Agreement				
1	I am happy with my decision for attending this training	1	2	3	4	5
2	I will re-enroll in other training courses at CEC	1	2	3	4	5
3	In general, I am satisfied with the training quality	1	2	3	4	5
4	In general, I am satisfied with the trainers’ quality	1	2	3	4	5

5	In general, I am satisfied with money value of the training	1	2	3	4	5
6	I will recommend the training services for my collogues and friends	1	2	3	4	5

Part Three: Respondents' Demographic Data

Gender

□Male □Female

Age

□18-30 □ 30-40

□ 40-50 □ 50-60

□ More than 60

Governance

□Hebron □ Bethlehem

□ Jerusalem □ Ramallah

□ Jericho □ Nablus

□ Salfeet □ Qalqelyeh

□ Tulkarem □ Jenin

CEC enrolled in:

17 Al Quds Open University.

18 Arab American University.

19 Birzeit University.

20 Palestine Technical University – Kadoorie

21 An-Najah National University

22 Bethlehem University.

23 Palestinian Ahliya university

24 Palestine Polytechnic University.

Type of training received

2- Practical training 2- Theoretical training

الملخص

يهدف البحث الى التعرف على واقع جودة الخدمات المقدمة لمستفيدي/ات برامج التعليم المستمر في الجامعات في الضفة الغربية، فلسطين. توظف الدراسة نموذج"SERVEQUAL" ، وهو نموذج مستخدم في الأدبيات لتقييم الفجوات المحتملة في أداء مراكز التعليم المستمر في الجامعات. كما عمدت الدراسة الى فحص مدى امكانية تطبيق نموذج ال "SERVEQUAL" كأداة لقياس تأثير جودة الخدمات المدركة للطلبة على رضاهم عن مراكز التعليم المستمر في الضفة الغربية، فلسطين.

تم جمع البيانات الأولية من خلال استبيان عبر الإنترنت من عينة من 113 مشاركًا حضروا برنامجًا تدريبيًا / دبلومًا في أحد مراكز التعليم المستمر في الضفة الغربية، فلسطين. يتكون الاستبيان من ثلاثة أجزاء. يجمع الجزء الأول بيانات عن جودة الخدمة المتصورة للطلاب، بينما يجمع الجزء الثاني بيانات عن رضا الطلاب، ويجمع الجزء الثالث بيانات عن خصائص الديمغرافية الطلاب. تم استخدام مقياس ليكرت المكون من خمس نقاط في الاستبيان لتسجيل ردهم. ومن ثم تحليل البيانات باستخدام Excelو Minitabو Smart-PLS.

اثبتت الدراسة أن نموذج ال "SERVEQUAL" لقياس جودة الخدمة نموذج يمكن استخدامه لتقييم جودة الخدمات المفدمة في مراكز التعليم المستمر في الضفة الغربية. كما تظهر النتائج أن الجودة الإجمالية لخدمات مراكز التعليم المستمر في الضفة الغربية تتراوح بين 3.24 ± 0.9؛ هذا يعني أن 68٪ من المستفيدين يرون أن جودة الخدمة في التعليم الفلسطيني المستمر بين 2.3 (منخفضة إلى حد ما) و4.1 (عالية). بالإضافة إلى ذلك، أوضحت الدراسة أن محوري التعاطف والاشياء الملموسة لهما علاقة كبيرة ويساهم في تشكيل جودة خدمات مراكز التعليم المستمر في الضفة الغربية. وبشكل غير متوقع، فإن الاستجابة والضمان والموثوقية ليست مؤشرات مهمة على جودة خدمات مراكز التعليم المستمر في الضفة الغربية. نظرًا لأن الإدراك يعتمد على مدى توفر المعلومات للمستفيدين حيث ان من الممكن أن يكون المستفيدين من الخدمات أقل إلمامًا بهذه الأبعاد عندما يتقدمون للحصول على دورة تدريبية، أو مهتمون بالامور الملموسة والتعاطف أكثر من الأبعاد الأخرى لجودة الخدمة. اما فيما يتعلق بتأثير جودة الخدمة على رضا العملاء، وجدت الدراسة أن هناك علاقة إيجابية ذات دلالة إحصائية بين جودة الخدمة ورضا العملاء بـــ($R^2 = 0.54$) .