



**SERVICE QUALITY OF ADMINISTRATIVE STAFF
FOR STUDENT SATISFACTION AT A
KZN UNIVERSITY OF TECHNOLOGY**

Submitted in fulfilment of the requirements of the degree of
Master of Management Sciences
Specialising in Public Management: Higher Education: Management
in the Faculty of Management Sciences at the
Durban University of Technology

LUTCHMEE NAIDU

OCTOBER 2021

PROFESSOR MS BAYAT
Supervisor

Signature

13 NOVEMBER 2021
Date

ABSTRACT

Customer satisfaction and service quality are essential concepts that industries and higher education institutions must consider to sustain a competitive edge. Berry, Zeithaml and Parasuraman (1985: 44) aptly cited, "Quality is essential when service is what is being sold". Assessing the needs and wants and knowing how to measure these from a consumer/student's point of view is just as important. Considering service quality may be an antecedent to student satisfaction, if the University is successful in attaining a high level of service quality, this can ultimately lead to satisfied students, the profitability of an institution, loyalty and retention. Globally, students' satisfaction and overall experience within an institution is a highly debated and complex topic in literature, with diverse views presented by various authors on student satisfaction within higher education.

Student support services, a division within higher education institutions, provide students with essential administrative support. Therefore, the primary objective of this empirical study is to assess the level of service quality by examining the gap between expectations and perceptions of support staff by gathering data from B-Tech full-time and part-time students registered at a University of technology in South Africa. The results of this study can provide management with reliable data, which can assist in placing intervention mechanisms to monitor, maintain and improve service quality.

This study adopted the quantitative data collection method and utilised an adapted SERVQUAL questionnaire designed and distributed to respondents selected using a purposive sampling technique. The SERVQUAL survey instrument was used to measure the gap between students' expectations of service quality and their perceptions of the actual services delivered by the support staff. Overall, the analysis of the data gathered found that the service quality perceived by students was dissatisfactory, meaning that students' expectations exceeded their perceptions.

The findings indicated that service quality performance dimensions (RATER) are significantly and positively integrated with overall student satisfaction. This study also provides results that the University can benchmark to prevent potential problems and improve results. It can also assist other higher education institutions on the corrective measures central to a University's significant growth. Identifying the gaps in the services offered by support staff can improve service quality delivery and result in a high level of student satisfaction while gaining the University a competitive edge.

Key words: Higher education, SERVQUAL, service quality, student satisfaction

DECLARATION

I declare that this dissertation is a representation of my work both in conception and execution. This work has not been submitted in any form for another degree at any University or institution of higher learning. All information cited from published or unpublished works has been acknowledged to the best of my ability.

LUTCHMEE NAIDU
Student Name

08 October 2021
Date

APPROVED FOR FINAL SUBMISSION

Supervisor (Prof MS Bayat: PhD)

13 NOVEMBER 2021
Date

DEDICATION

This dissertation is in memory of my wonderful and
deeply missed mom:

MRS M NAIDU

For the unconditional love and inspiration she continuously
bestowed upon me.

ACKNOWLEDGEMENTS

- ❖ Firstly, I would like to praise and thank Lord Shiva and Swami Sathya Sai Baba, who have granted me countless blessings, knowledge, opportunity and guidance to complete this dissertation.

- ❖ I want to express my deepest and sincerest gratitude and appreciation to my supervisor, Professor MS Bayat, who supported me with constructive feedback, motivation and believed in me. Without his guidance and support, this study would not have been complete.

- ❖ My special thanks to the respondents for answering the survey without whose contribution; this study would not have been possible.

- ❖ To my family and friends for their words of encouragement and kindness.

“Live as if you were to die tomorrow. Learn as if you were to live forever.”

Mahatma Gandhi

TABLE OF CONTENTS	PG
TITLE PAGE	i
ABSTRACT	ii
DECLARATION	iv
DEDICATION	v
ACKNOWLEDGEMENTS	vi
LIST OF FIGURES	xii
LIST OF TABLES	xiii
ABBREVIATIONS USED IN THIS STUDY	xiv
APPENDICES	xv
CHAPTER ONE: INTRODUCTION AND OVERVIEW	1
1.1 INTRODUCTION	1
1.2 BACKGROUND TO THE STUDY	4
1.3 RESEARCH PROBLEM	5
1.4 RESEARCH AIMS AND OBJECTIVES	6
1.5 RATIONALE OF THE STUDY	7
1.6 RESEARCH METHODOLOGY	9
1.7 LIMITATIONS AND DELIMITATIONS	9
1.8 ANONYMITY AND ETHICAL CONSIDERATIONS	10
1.9 DISSERTATION STRUCTURE	10
1.10 SUMMARY	11
CHAPTER TWO: LITERATURE REVIEW	13
2.1 INTRODUCTION	13
2.2 THEORETICAL FRAMEWORK OF STUDY	13
2.3 BRIEF OVERVIEW OF HIGHER EDUCATION IN SOUTH AFRICA	16

2.4	BRIEF HISTORY OF THE DURBAN UNIVERSITY OF TECHNOLOGY	19
2.4.1	The early years	19
2.4.2	Present day	20
2.5	SERVICE QUALITY	21
2.6	EXPECTATIONS vs PERCEPTIONS	22
2.6.1	Customer expectations of service quality	23
2.6.2	Customer perceptions of service quality	24
2.7	QUALITY AND QUALITY ASSURANCE IN HIGHER EDUCATION	26
2.8	SERVICE QUALITY IN HIGHER EDUCATION	27
2.8.1	General	27
2.8.2	International	29
2.8.3	South Africa	31
2.9	CUSTOMER SATISFACTION	32
2.10	STUDENT SATISFACTION IN HIGHER EDUCATION	33
2.11	THE RELATIONSHIP BETWEEN SERVICE QUALITY AND STUDENT	35
2.12	FACULTY SUPPORT AND THE STUDENT	38
2.13	IMPORTANCE OF CONDUCTING STUDENT SURVEYS	40
2.14	A REVIEW OF SERVICE QUALITY MODELS	44
2.14.1	Gronroos model of service quality	45
2.14.2	SERVPERF model	46
2.14.3	HEdPERF service quality model	48
2.14.4	SERVQUAL model of service quality	49
2.14.5	Justification for use of the SERVQUAL model	56
2.15	SUMMARY	57
CHAPTER THREE: RESEARCH METHODOLOGY		59
3.1	INTRODUCTION	59
3.2	AIM AND OBJECTIVES OF THE STUDY	59
3.3	RESEARCH PARADIGM	60
3.4	RESEARCH DESIGN	61
3.4.1	Qualitative research design	62
3.4.2	Quantitative research design	64

3.4.3 Mixed-Methods research design	67
3.5 SAMPLING	67
3.6 STUDY POPULATION	68
3.7 SAMPLING STRATEGY	69
3.7.1 Sampling design	71
3.7.2 Justification for the use of sampling technique	74
3.8 SOURCES OF DATA	75
3.9 DATA COLLECTION	76
3.9.1 Measuring instrument	77
3.9.2 Design of the questionnaire	78
3.9.3 Administration of the questionnaire	80
3.10 TESTING OF THE QUESTIONNAIRE	81
3.11 VALIDITY AND RELIABILITY OF THE QUESTIONNAIRE	82
3.11.1 Validity	82
3.11.2 Reliability	85
3.12 VARIABLES	87
3.12.1 Dependent variable	87
3.12.2 Independent variables	87
3.13 DATA ANALYSIS AND PROCESSING	88
3.13.1. Likert scale	89
3.13.2. Data measurement scales	90
3.13.3. Descriptive statistics	91
3.13.4. Inferential statistics	92
3.14 ETHICAL CONSIDERATIONS	95
3.15 ASSUMPTIONS, DELIMITATIONS AND LIMITATIONS	96
3.16 SUMMARY	97
CHAPTER FOUR: EMPIRICAL FINDINGS AND DISCUSSIONS	98
4.1 INTRODUCTION	98
4.2 QUANTITATIVE DATA	98
4.3 DEMOGRAPHIC CHARACTERISTICS of PARTICIPANTS	100
4.3.1 Age and Gender	100

4.3.2 Race	103
4.3.3 DUT qualification	103
4.4 EXPECTATIONS AND PERCEPTIONS	104
4.4.1 Reliability statistics	104
4.4.2 Inferential statistics: Factor Analysis	106
4.4.3 KMO and Bartlett's test	107
4.4.4 Rotated component matrix	108
4.5 DIMENSION ANALYSIS: EXPECTATIONS AND PERCEPTIONS	108
4.5.1 Reliability	111
4.5.2 Assurance	114
4.5.3 Tangibles	117
4.5.4 Empathy	119
4.5.5 Responsiveness	122
4.6 THE GAP SCORE ANALYSIS	126
4.7 GENERAL	127
4.7.1 Overall Satisfaction	127
4.7.2 Recommendation of the DUT	128
4.8 THE CHI SQUARE TEST	129
4.9 SUMMARY	131
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS	133
5.1 INTRODUCTION	133
5.2 SUMMARY OF THE STUDY	134
5.3 ACHIEVEMENT OF OBJECTIVES	135
5.3.1 Objective 1: To identify students' expectations of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model.	137
5.3.2 Objective 2: To identify students' perceptions of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model.	138
5.3.3 Objective 3: To identify gaps between students' expectations and perceptions of service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model.	139

5.3.4 Objective 4: To ascertain if students are satisfied with the service quality offered by the of the administrative staff of the Faculty of Management Sciences based on the gap analysis above.	140
5.4 LIMITATIONS OF THE STUDY	141
5.5 RECOMMENDATIONS	142
5.5.1 Recommendation: Reliability	144
5.5.2 Recommendation: Assurance	145
5.5.3 Recommendation: Tangibles	146
5.5.4 Recommendation: Empathy	147
5.5.5 Recommendation: Responsiveness	148
5.6 FURTHER RESEARCH	149
5.7 SUMMARY	150
REFERENCES	153
APPENDICES	185

LIST OF FIGURES

PG

Figure 2.1	: Gronroos Model of Service Quality	46
Figure 2.2	: SERVPERF Model	47
Figure 2.3	: HEdPERF Model	48
Figure 2.4	: RATER Model	50
Figure 2.5	: The Five-Gap Model of Service Quality	52
Figure 4.1	: Reliability and Validity.....	82
Figure 4.2	: Race	103
Figure 4.3	: Service quality dimensions	108
Figure 4.4	: Customer assessment of Service Quality	110
Figure 4.5	: Reliability dimension score	111
Figure 4.6	: Assurance dimension score	114
Figure 4.7	: Tangibles dimension score	117
Figure 4.8	: Empathy dimension score	120
Figure 4.9	: Responsiveness dimension score	123
Figure 4.10	: Overall student satisfaction	128
Figure 4.11	: Recommend DUT to prospective students	129
Figure 5.1	: Overall gap score of the five dimensions	136

LIST OF TABLES

PG

TABLE 4.1	: Age and Gender	101
TABLE 4.2	: DUT Qualification	104
TABLE 4.3	: Reliability Scores	104
TABLE 4.4	: KMO and Bartlett	107
TABLE 4.5	: Summary of quantitative analysis	125
TABLE 4.6	: Gap score analysis	126

ABBREVIATIONS USED IN THIS STUDY

B-TECH	:	Bachelor of Technology
CHE	:	Council on Higher Education
DHET	:	Department of Higher Education and Training
DIT	:	Durban Institute of Technology
DUT	:	Durban University of Technology
FoMS	:	Faculty of Management Sciences
HE	:	Higher Education
HEI	:	Higher Education Institution
HEdPERF	:	Higher Education PERFORMANCE
HESA	:	Higher Education Statistics Agency
IREC	:	Institutional Research Ethics Committee
IRIC	:	Institutional Research and Innovation Committee
KZN	:	Kwa-Zulu Natal
NSFAS	:	National Student Financial Aid Scheme
SA	:	South Africa
SERVPERF	:	Service Performance
SERVQUAL	:	Service Quality
SPSS	:	Statistical Package for Social Sciences
UNESCO	:	United Nations Educational, Scientific and Cultural Organisation
UoT	:	University of Technology

APPENDICES

- APPENDIX 1 : Research Committee Ethics checklist
- APPENDIX 2 : IRIC full approval
- APPENDIX 3 : IREC full approval
- APPENDIX 4 : IREC approval for online surveys
- APPENDIX 5 : Letter of information
- APPENDIX 6 : Covering letter to students
- APPENDIX 7 : Consent
- APPENDIX 8 : Survey instrument
- APPENDIX 9 : Rotated Component Matrix
- APPENDIX 10 : Pearson's Chi-square test
- APPENDIX 11 : Frequency table
- APPENDIX 12 : Exceptions vs Perceptions tables
- APPENDIX 13 : Turnitin Report

CHAPTER ONE: INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

This chapter introduces a brief background to the study and the reason for selecting this area of study. Deliberations are presented on the problem statement, aims, and objectives. Next, the research design is discussed, a brief overview of the SERVQUAL model is offered, and the delimitations and ethical considerations of the study conclude the first chapter.

Service quality in all industries, due to its unique and complex characteristics involving intangibility, has gained importance for more than a decade. Parasuraman, Zeithaml and Berry (1985: 41-42) so cogently noted, "Quality is an elusive and indistinct construct". Customer satisfaction and service quality are exclusive to the service industry and have also become a significant factor in the higher education (HE) sector. Service quality entails constant expectations of what customers anticipate from a service provider. Furthermore, because of increasing competition and significant changes in HE, management must understand what service implies from a student's perspective and recognise what influences superior service quality has as a means of competition in higher education institutions (HEIs). De Jager and Jan (2015: 87) and Tóth and Jónás (2014: 96) noted in their writings that HEIs ensure that students get what they expect due to the competition in global education markets and the decrease in government funding.

Offering a high service will ensure that students are satisfied with the education, thereby exiting the University feeling fulfilled and ready to take on the world. Universities have to make sure that they meet their numbers to remain sustainable, so satisfying students will encourage positive word of mouth advertising, and this can assist in achieving an increase in student numbers. Therefore, institutions need to know how to measure the

expectations and perceptions of the level of service quality received as students become more critical of the services rendered. Burgess, Senior and Moores (2018: 1) believed that the concept of student satisfaction remains poorly understood.

Allocation of resources in HE can be achieved constantly with student priorities to gain an advantage over other HEIs. This should be done by surveying the services rendered and then allocating resources accordingly. Surveys can also assist HEI's in finding their niche areas and focus on these to increase student numbers and funding. Student satisfaction feedback is the views of students about the services rendered by an institution. Razinka et al. (2018: 2) declared that international researchers agree that education quality can be improved by collecting student feedback. Student surveys can also highlight the areas of weaknesses, and this can alert management to the meaningful and timely measures of student satisfaction so that emphasis is focused on these challenges.

Blair and Noel (2014: 879) acknowledged this by maintaining that the evaluation system used by HEIs highlights strengths and weaknesses. Student satisfaction is emphasised by the level of service delivery offered, which focuses on the interaction between students and University staff. Furthermore, to ensure that the student's voice is heard, the quality of service delivery must be continuously assessed to maintain a good status quo. Students are not focused on the institutional hierarchy but rather on the quality of the services rendered. Hence it makes sense that all University staff need to work together to bring about student satisfaction in HE.

Increasing University costs, demographic changes, and private colleges' expansion forces universities to rethink their role in student satisfaction. Additionally, HEIs are operating in an intensely competitive marketplace, thus making student satisfaction more necessary than ever. These force institutions to examine their target market, understand their wants and needs,

and provide outstanding service quality to increase student satisfaction. Razinkina et al. (2018: 4) reiterated that the core element to measuring service quality is student satisfaction with educational services. University management tends to concentrate more on students working hard and completing their studies than if the student was satisfied during his/her studies. Higher enrolments can be achieved by positive word of mouth from gratified students that have exited the University feeling incredibly marketable and employable.

New competitors, in the form of private institutions, are continuously entering the higher education sector. Mohamedbhai (2017) confirmed that private HE is prominent in the United States and East Asia, recently showing added presence in Western Europe and most significant progression in developing countries like Africa, Latin American and South Asia. These competitors are offering degrees to rival public universities, and these include online offerings. The HE environment has changed drastically since the end of the apartheid era. Universities, therefore, need to be proactive in order to keep up with these continuous changes. Although student satisfaction in the administrative sector is not a new concept to HEI's, emphasis is placed on academic satisfaction, and student satisfaction is not being highlighted adequately enough. Universities that understand its challenges have a better chance of achieving their aims and objectives effectively. Student satisfaction must begin from the point of enrolment or initial student contact to the point of graduation. This will ensure a favourable repertoire between staff and students throughout the study life cycle of the student. HEI's need to recognise that satisfied students are necessary for an institution to achieve its aims. (Lacobucci *et al.*, 1995; Dabholkar *et al.* 2000; Yavas *et al.*, 2004; Carrillat *et al.*, 2007; Zeithaml *et al.*, 2008) cited in Annamdevula and Bellamkonda (2016: 449) reported, "Service quality is an antecedent to customer satisfaction". Therefore, by assessing service quality and recognising it as an antecedent, HEI's can align their aims and objectives to achieve institutional goals, vision and mission.

1.2 BACKGROUND TO THE STUDY

Therefore, this empirical study focuses on examining the views of one group, the students, who are among the stakeholders in the HE system. It examines the expectations and perceptions of one particular group of consumers of HE: the full-time and part-time Bachelor of Technology (B-Tech) students registered in the Faculty of Management Sciences (FoMS) at the Durban University of Technology (DUT). The research report explores gaps identified in service delivery quality and gauge students' satisfaction with the services rendered.

The level of quality in tertiary education has become most important once acknowledged that this is a significant economic driver in an increasingly competitive global economy. The majority of jobs demand a high level of skill and quality education from the workforce. This has a significant impact on universities and adds pressure to churn out students of a high calibre. As a service industry, education should be designed to meet the wants and needs of the students, as any other service industry does. Blair and Noel (2014: 881) indicated that student perspectives are used as a tool for change, and it confirms that the student's voice on service delivery is significantly heard. This means that the quality of service lies in the relationship between staff and students. The relationship must be of a nature that allows the student to feel comfortable and give him/her a sense of belonging to the institution. It accentuates the knowledge and skills of staff to deploy their services effectively to assist the student in any given situation. Students should feel content and at ease when dealing with staff within the education sector. Like other service industries, the primary focus should be satisfied stakeholders, which would help the University attain a competitive edge and a global standing. The institution should adopt a student-centred attitude to be more effective in its commitment towards service excellence and student satisfaction. This ultimately will determine the success or downfall of an institution.

Due to the diversity of students enrolled, HEI's must identify their needs and wants and make it their mission to satisfy them accordingly. Vnoučková, Urbancová and Smolová (2017: 109) observed that universities have changed with students now having a diverse profile and background compared to ten years ago. Global and local pressure forces institutions to be more student-oriented, thereby increasing funding to achieve institutional objectives. Not only should academic programs be of high quality, but so too should the service quality of administrative staff if universities want to retain a high reputation. Ong (2013: 12) reiterated that prospective students focus on service quality when deciding on enrolment at a University.

1.3 RESEARCH PROBLEM

Over the years, service delivery in many sectors, including education, is a topic that resonates across South Africa and Muswede (2017: 205) posited that education is an escape from the poverty trap. After extensive reading on literature about service quality by Singh (2016: 67), Prakash and Muhammed (2016: 4), Giannakis and Bullivant (2016: 63) and Akpoiroro and Okon (2015: 110), the value of student complaints have been highlighted. Therefore, against this backdrop, there is a specific need for research that incorporates the levels of service delivery as a critical factor that affects HEIs student satisfaction. Mwiya *et al.* (2017: 1045) articulated that universities can assess the quality of their academic and administrative services by receiving information and feedback from the necessary stakeholders. Students are the ultimate stakeholders. Institutions have a responsibility to equip them with academic and practical knowledge to create a new generation of the elite that enter the working world to alleviate paucity, transform society, curb rising unemployment and narrow the ever-widening digital divides.

Factors that comprise HE satisfaction include, but are not limited to, quality of academics, faculty support, and administration staff. This aligns with Sultan and Wong (2013: 77), who concurred that these are the three fundamental

aspects of service quality. The meeting between teacher and student constitutes service quality and the students' evaluation of other services that the University has to offer. Hanssen and Slovoll (2015: 754), who observed that the availability of resources and staff are some of the factors that influence student satisfaction, reiterate this.

The study will present empirical findings regarding the quality of service delivery of administrative staff to registered full-time and part-time B-Tech students in the FoMS from 2019 to 2020 at the DUT ML Sultan campus. It is envisaged that concerted attention within this area will significantly improve service quality and student satisfaction. Ultimately, the outcomes will improve the quality of services to students, thereby improving student satisfaction, credibility and image of the UoT. In determining the weaknesses of other UoTs, the DUT can provide the superior service quality that treats its students better than its competitors, thereby becoming the principal student-centred UoT in South Africa.

1.4 RESEARCH AIMS AND OBJECTIVES

This study's main aim is to assess administrative staff's service quality to enhance student satisfaction at a KZN University of Technology.

In order to achieve the aim stated above, the following objectives were addressed:

- To identify student's expectations of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model;
- To identify students' perceptions of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model;

- To identify gaps between student's expectations and perceptions of service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model;
- To ascertain if students are satisfied with the service quality offered by the administrative staff of the Faculty of Management Sciences based on the gap analysis above.

1.5 RATIONALE OF THE STUDY

This study enriches the knowledge of student satisfaction in HEIs by providing significant literature about the quality of service delivery correlated to student satisfaction. Green (2014: 131) defined service as an “intangible product delivered for consumption at the time or place of delivery”. The advent of the internet has globalised the HE marketplace immensely, thus forcing HEIs to conform. As this continues, competition for the best students will increase both nationally and internationally. Dursun, Oskaybaş and Gökmen (2013,1134) implied that the survival of a University depends on the quality of an intangible service offered to the students who have become more discerning in their selection of institution HEIs should develop strategies to satisfy the requirements by innovation and diversification.

According to Daniel, Liben and Adugna (2017: 111), service quality is a critical prerequisite for sustaining customer satisfaction. Consequently, the aptness of this study in ascertaining quality service delivery of administrative staff could be one of the most critical and influential initiatives to ensure that students leave the University feeling satisfied in that they are more knowledgeable and marketable to industry. Sultan and Wong (2013: 77) reiterated that academic and faculty support and administration staff play just as important in attaining student satisfaction. Identification of critical determinants of service quality will assist in improving quality and attaining satisfaction. This study aims to assess users' perceptions and expectations of service quality to enhance student satisfaction of faculty services and utilize the outcome to set standards and

procedures to correct the failures and inadequacies experienced. Tsinidou, Gerogiannis, and Fitsilis (2010), cited in Vnoučková, Urbancová and Smolová (2017: 110), emphasized that feedback from students on service quality of faculties is of primary importance for strategic decision-making.

Govender, Veerasamy and Noel (2014: 465) stipulated that a University's long-term sustainability and the key to set itself apart from the competition lies in providing a quality service. HE services quality, although a daunting challenge, is consistent with the principle of student satisfaction. Hence, the service of front line staff, which are critical to students and represent the organisation, directly affects service quality and student satisfaction. In today's competitive HE environment, where attaining the highest standard of service delivery seems elusive both locally and globally, enhancing service quality and student satisfaction will ensure that the University is the centre of academic excellence and gain a competitive edge over other institutions. Likewise, Khosravi *et al.* (2013: 580) posited that addressing the needs of students is imperative for HE institutions if they want to be sustainable, credible, successful and competitive.

The further rationale behind this study is that, with the evolution of HE, the support departments must take cognisance of inefficiencies and determine which dimensions of service quality require further development. Lekhanya (2014: 300) cogently noted, "Service quality provided by UoT's are still unknown and surrounded by assumptions." It is anticipated that processes can then be put in place. It benefits students in gaining their full academic potential to graduate with high levels of employable skills and successfully compete in the industry while simultaneously ensuring that the integrity and reputation of the DUT are cultivated. Satisfied students can be a marketing strategy via word of mouth and a competitive advantage for educational institutions.

1.6 RESEARCH METHODOLOGY

Kumar (2014: 170) described quantitative research design as being recognised, specific and tested for validity and reliability, while qualitative research design is less specific, less precise, and the study design is given little attention. A quantitative research design was adopted for this study as surveys are suitable to collect data to ascertain the level of satisfaction of service delivery offered by administrative departments, and it is statistical. The study's target population comprised 355 full-time and part-time B-Tech students registered in the Faculty of Management Sciences. A sample size of 185 respondents was drawn, as represented in the table provided by Krejcie and Morgan (1970) cited in Sekaran and Bougie (2016: 263).

The measuring instrument for primary data collection is an adapted SERVQUAL questionnaire consisting of closed-ended questions that would assist in achieving the aims and objectives of this study and for which the reliability and validity were well established. The questionnaire will be scrutinised by an academic (research supervisor) in the field, a practitioner and a statistician. A pre-test will be administered to a small group of students to determine any ambiguities or misunderstandings in the questionnaire. The Cronbach Alpha test will be used to assess reliability. Questionnaires will be distributed to students online during the lecture period following strict COVID-19 protocols after garnering permission from relevant lecturers and collected immediately afterwards. A statistician will perform data analysis using the SPSS (Statistical Package for the Social Sciences) (version 25) software.

1.7 LIMITATIONS AND DELIMITATIONS

This study was limited to full time and part-time B-Tech students registered in the FoMS at the DUT, ML Sultan campus in the Kwazulu Natal (KZN) province. This study cannot be generalised to the population, as the sampling design selected was purposive sampling.

1.8 ANONYMITY AND ETHICAL CONSIDERATIONS

Following DUT's Research Ethics policy guidelines, DUT (2013) ensures anonymity and confidentiality. The identity of the respondents will not be revealed to ensure confidentiality and no victimization of students. An ethical issues checklist (Appendix 1) was completed and approved. Participation in completing the survey was voluntary. A covering letter (Appendix 6) accompanied each questionnaire explaining the nature of the study and assured students that all information provided was kept confidential during and after completion of the project. Sekaran and Bougie (2016: 159) and Salkind (2014: 85) unanimously agreed, "The self-esteem and self-respect of the subjects should never be violated". Human beings must be treated in a way whereby dignity is maintained despite the nature of the research or its outcome. Discussion of the research design and methodology follows in further detail in chapter three of this study.

1.9 DISSERTATION STRUCTURE

Chapter one presented the introduction to the study. The study's overall purpose was to ascertain the student's perceptions and expectations of the service quality of administrative staff to enhance student satisfaction. The problem statement and the research aims and objectives are highlighted. Furthermore, the discussion involved the rationale and scope of the study and the research design and methodology implemented.

Chapter two constitutes a literature review of service delivery quality and student satisfaction. It covers previous/related literature carried out internationally, nationally and locally on concepts and viewpoints of service delivery quality and student satisfaction. In addition, relationships between service quality and satisfaction are conferred and advantages of conducting student satisfaction surveys. An explanation of the Gap Model of service quality as the theoretical framework of this study is included, emphasising the

importance of Gap 5 as defined by the SERVQUAL model. Furthermore, advantages and disadvantages compared to other models and their use in the education sector are highlighted.

Chapter three detailed the research methodology adopted in the study, explaining the quantitative research design and the reason for selecting the said design. Specification of the target population, sampling method and sampling technique is provided. The measuring instrument, data collection method, validity, reliability, and data analysis are discussed. The ethics applied to the study is validated with Appendices included in the dissertation.

Chapter four discusses the results of this empirical study in which data analysis is achieved using the Statistical Package for Social Sciences (SPSS) to make it possible to interpret the information gathered. Results are presented in a visual form using tables and graphs representing the results from the research.

Chapter five summarises the study, concludes the research findings, and recommends innovative and creative strategies to enhance service delivery quality that brings about student satisfaction within the faculty services, including recommendations for further research.

1.10 SUMMARY

Chapter one presented a brief background to the study with the research context, aim and objectives, design and methodology, ethical considerations and the dissertation structure is discussed. The chapter briefly highlighted the purpose of this empirical study, which entails ascertaining students' perceptions and expectations of service quality of administrative staff at a Kwa-Zulu Natal HEI. This study also recognises the need for continuous improvement in the quality of service to students in the higher education industry.

Accordingly, interpreted results from the survey could afford the institution's management invaluable insights into the prevailing state of service quality and highlight niche areas to enhance student satisfaction. Ultimately, providing an extraordinary service quality will see growth in student enrolment and funding. These insights can also provide the UoT with a competitive edge to establish itself globally in the education sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

Chapter one defined the scope and rationale, identified the problem statement, the objectives and the research methodology for the study. This chapter presents seminal reviews on service quality in HE and its relation to student satisfaction. Different perceptions of both service quality and student satisfaction are discussed as well as advantages of attaining them. This research will be extensive arguments from global and local authors on the importance of service delivery and student satisfaction and its impact on a student's lifecycle and a University's image and stature. Further deliberation was on the essential roles of support staff administering quality service that leads to student satisfaction.

A discussion follows on the role of SERVQUAL as an assessment instrument. Findings approving and negating the use of SERVQUAL is presented in an empirical setting, and reasons are highlighted for the researcher's preference for this particular assessment instrument. This review expressed that despite SERVQUAL being used mainly in industry settings, numerous authors have satisfied its use in the education sector.

2.2 THEORETICAL FRAMEWORK OF STUDY

Higher education definition: “all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent state authorities.” (World Declaration on Higher Education adopted by the World Conference on Higher Education in 1998 cited in 2000: para. 1 line1).

The HE landscape constitutes both private and public institutions offering undergraduate and postgraduate certificates, diplomas and degrees. Mohamedbhai (2017) wrote that private HE is prominent in the United States and East Asia, recently showing added presence in Western Europe and most significant progression in developing countries like Africa, Latin American and South Asia. The South African HE landscape, as per the South African Department of Higher Education and Training (2013: 27), comprises traditional and comprehensive Universities, Universities of technology, and registered private HE institutions.

The HE landscape is a multifaceted concept facing numerous challenges globally due to population growth, commercialisation and funding. Therefore, countries continuously have to reassess their strategies in order to keep abreast of these changes. Speckman and Mandew (2014: 47) discussed the radical changes in the political arena, stating that it was inevitable that South African HE would endure significant changes. Considering this phenomenon, HEI's are compelled to exceed student satisfaction by enforcing service quality as the dominant element. Significantly, Martirosyan (2015: 188) declared that public institutions must emphasise assessing their services to students.

The quality of the HE sector is worth examining as it has a significant effect on the country's economic growth. While respected and considered by all, HE encounters enormous challenges due to political, global, and competitive concerns. The objective of HEIs is to educate the future generation of the country's leaders, which can be reflected as a panacea to developing countries. Previous studies focused primarily on academic service quality that impacts student satisfaction; however, encompassing administrative staff service quality within the core business of HEIs is imperative. Due to global diversification and modernisation, continuous changes in service quality necessitates that institutions reposition themselves to address these variations.

According to the strategic plan document of the DUT (2015-2019: 12), management acknowledges that the University must have measures against which to evaluate its performance. Mohamedbhai (2018) has noted that many African countries have recognised the importance of service quality and have thus established quality assurance procedures. By analysing service quality, the University will have a benchmark against which it can accomplish this critical goal of attaining HE success.

Hence, this study was initiated to examine the students' insights into service quality that contributes to student satisfaction of faculty administrative services using the DUT as an empirical setting. Ciobanu (2013: 172) believed that if administrative staff were more knowledgeable, this would influence how services are delivered. The DUT faces increased competition from many other SA UoTs in attracting and retaining students. This is reiterated by Guilbault (2018: 296) and Meling *et al.* (2013: 11), all of whom establish that retention is more expensive and a challenge for all institutions.

A lack of student awareness among University staff has become a common drawback for many institutions. Yusoff, McLeay, and Woodruffe-Burton (2015: 87) maintained that providing a superior service and understanding students' needs could assist institutions in developing and implementing strategies to satisfy student needs and improve the status of a University.

In understanding the factors that underwrite student satisfaction, it is essential to grasp the intricacies of the learning experience. This has prompted an assessment of the quality of service delivery that governs student satisfaction. HEIs should take cognisance of service quality from a student's perspective, which is significant for student satisfaction and retention. Students' evaluation of service quality incorporates numerous elements that bring about satisfaction holistically, thereby influencing students to acquire the right skills for employment.

This study seeks to evaluate the quality of service delivery to enhance student satisfaction of non-academic services of the DUT in KZN. It is envisaged that understanding students' expectations and perceptions of service quality will assist in making recommendations that will afford students a more rewarding teaching and learning experience, attain a high index of satisfaction and improve the credibility and stature of the institution. The research methodology is quantitative, and the survey instrument is a questionnaire. The population is the full-time and part-time B-Tech students registered in the FoMS at the DUT ML Sultan campus. The sampling method is non-probability purposive sampling due to time and financial constraints.

2.3 BRIEF OVERVIEW OF HIGHER EDUCATION IN SOUTH AFRICA

The objective in SA is to increase post-education access to the disadvantaged and ensure quality thereof is of an acceptable standard globally. Colonial education in South Africa saw a racially segregated higher education system consisting of traditional black and white universities. Pioneering works of (Boucher, Murray and Phillips (cited in Strydom 2016: 62) discusses the establishment of HEIs from its inception in South Africa. On a similar note but within the last century, works by Brookes, Pelzer and Rautenbach, Currey. Finally, Thom (cited in Strydom 2016: 63) discussed University executives, University policies, and language barriers finances, among other prevalent issues in HEIs.

Tsoaledi recounted (2013: 1) on an inferior Bantu education system formed by the then Minister of Native Affairs, Mr Hendrick Verwoed for Blacks from 1953-1992. The current curriculum does not reflect the cultural and racial diversity of South Africa. Additionally, the author postulated that the education systems designed for Indians and Coloureds were inferior to the white education but still better than that set out for the Blacks. The Tomlinson Commission of 1995 sought to make education separate and unequal all time.

Various movements were formed to abolish Bantu Education across the country, with young and old fighting against separate education for people of colour. The long term goal of this revolution was to depose the minority government. Tsoaledi (2013: 4) argued that black people's lack of decent education meant they were unknowledgeable about unemployment, health issues, and malnutrition and therefore lived in abject poverty. During 1950-1994, the different viewpoints of various political movements argued that education should be for all, despite the race, colour or creed of the people and Tsoaledi's (2013: 7) table outlined the change in curriculum according to these viewpoints.

The Apartheid era categorised the races (White, Coloured/Indian and Blacks), and different universities were built for the "non-whites" with the "black" universities in the most rural part of the country. Ironically, out of these universities, the resistance movement was formed to fight the struggle against Apartheid and Tsoaledi (2013: 3) reported that liberal movements in 1970-1980 pursued ways to counteract the Bantu education system. According to Bawa and Herwitz (2008: 12), some white universities opposed the state accepting people of colour. It was at the University of Natal that the Black Conscious movement of Steve Biko was created. Over the years, UoTs were formed through various mergers and challenges, registration of students of colour increased rapidly, and students of high calibre are produced that are recognised worldwide.

Before the 1994 elections, one of the struggles of the disadvantaged was to transform the higher education sector to ensure equality in higher education. This involved taking a brave stance against the apartheid regime. Various committees were formed to engage stakeholders, institutions, and government in restructuring higher education to redress the historical inequalities forced upon the "non-whites" during the apartheid era. Hay and Monnapula-Mapesela (2009: 3) espoused that "since the dawn of a new democratic era in 1994, the history and development of South African higher

education received intense attention and was embraced by many South African scholars”.

According to the Higher Education Statistics Agency (HESA) (2014:1) participation of “non-whites” in HE was grossly skewed, with females being under-represented and marginalised. Tsoaledi (2013: 10) further emphasised this point by stating that one of the “devastating effects of the Apartheid curriculum was gender inequalities where Black females were viewed as the weaker species” in all aspects of South African life. To date, this has not changed much. Strand and Britz (2018: 372) discussed the effect of apartheid on library services and mentioned the complex evolution to democracy and challenges faced as apartheid ended. The past inequities were to be transformed to contribute to the country's social, economic, and political development and support fundamental human rights to education for all despite race, gender, creed or class. These amendments were then to be aligned with higher education globally. Hay and Monnapula-Mapesela (2009: 19) further maintained that the primary roles of HEIs were to build knowledge bases, to impart and maintain said knowledge according to societal needs, industry, employers, individuals and communities expectations.

The HE sector, namely the universities, was to educate a new generation where the post-apartheid vision was seen to encourage new knowledge and steer its course through difficulties and mammoth changes. Bawa and Herwitz (2008: 11-14) wrote about the significant changes of South African universities, about the atrocities brought on by the apartheid government on “non-whites”. They highlighted the difficulties involved in the disadvantaged gaining access to higher education. The writers further expounded on the transformation in all facets of University life during the early transition to democracy, ranging from curriculum development to policies and procedures and included diversification of faculty and staff. These procedures were set to make the post-apartheid landscape more relevant to the global needs of the economy and drive transformation. The transformation has backfired slightly

due to pressure placed on universities to solve too much too quickly. “Apartheid had produced the most inefficient educational system possible by designing inequality through separation,” observed Bawa and Herwitz (2008: 14). SA has gained recognition globally, both positively and negatively, but the fight against Apartheid continues daily, especially at the University level.

2.4 BRIEF HISTORY OF THE DURBAN UNIVERSITY OF TECHNOLOGY

2.4.1 The early years

“The Higher Education landscape changed in South Africa in 2002 when ML Sultan and Technikon Natal merged to form the Durban Institute of Technology on 1 April 2002.” (DUT 2008: 2). The Technikons had now become Universities that offer optimal teaching and learning to align themselves against global benchmarks. The University went on to produce the calibre of students that left an indelible mark in the history of HE in SA thus changing the HE landscape by contributing immensely to the previously disadvantaged of the country. Against a backdrop of racism, the ML Sultan Technikon was founded to then become the leading HE provider in SA. With the assistance of various sectors and volunteers, Indians were able to educate themselves by attending evening classes. With the numbers growing rapidly, further premises were sought and diversification into other courses attracted even more students. In 1941, DUT Corporate Affairs Dept. (2008: 5), with the generous contribution of £33 000 from Hajee Malukmahomed Lappa Sultan, saw the rise of the ML Sultan Technical College and this changed the non-white education sector dramatically. In May 1979, the ML Sultan Technical College officially became the ML Sultan Technikon (DUT Corporate Affairs Dept. (2008:6)).

Dr Samuel George Campbell (DUT Corporate Affairs Dept. (2008: 9) founded Technikon Natal, formerly known as Durban Technical College, in 1907. Through the years and the war, the college expanded and trained women and

men for war and later peace. It took fifty years for apprentices to train the college and provide higher education in various sectors. After that, “Bantu”, “Coloured”, and “Indian” was ignored in favour of “white” education. The college gained the name of Technikon Natal in 1979 (DUT Corporate Affairs Dept. (2008: 11)), and by offering higher diplomas, the institution was on par academically with universities. The year 1982 saw the birth of the Berea Campus, and within 10 years, incredible changes were made despite increasing inflation and having to endure the struggle for higher subsidies. A period of significant change leading up to and including 1994 saw political instability, and the education sector was not spared. In 1995 (DUT Corporate Affairs Dept. (2008: 13)), there was a significant increase in student numbers, of which 40% was “non-white”. 1996 brought about the first black Vice-Chancellor, Professor Bennie Khoapa, and this was also the year in which talks around the merger of ML Sultan Technikon and Technikon Natal emerged.

2.4.2 Present day

The official merger of ML Sultan Technikon and Technikon Natal (DUT Corporate Affairs Dept. (2008: 15)), South Africa’s first merger of HEI’s, was on 1 April 2002, resulting in the formation of The Durban Institute of Technology (DIT). The reason for this was due to the racial segregation and wasteful expenditure of two Technikons. According to the DUT corporate affairs report (2008: 16), more than 5000 students graduated in 2003 from the DIT. DIT then changed to The Durban University of Technology (DUT) in 2005 (DUT Corporate Affairs Dept. (2008: 17)) to identify itself more as a University of Technology with a vision and mission statement as well as strategic plans in place for the next five years. DUT Corporate Affairs report (2008: 17) mentioned that the year 2005 saw the rise of GOOT (Grow Our Own Timber), and 2006 focused on Women in Research and community engagement. The expectation was that by 2012, to prioritise the teaching and learning quality, all

academic staff must have a minimum qualification of a Master's Degree (DUT Corporate Affairs Dept. (2008: 20)).

The development of The Midlands Campus was not a result of structured plans. It was conceived by offering part-time lectures to students that could not attend the Durban campuses (DUT Corporate Affairs Dept. (2008: 14)). Thoughts of permanency of staff and students were "put on hold" pending the admission of students over a period. However, driven by the needs of students from surrounding areas, this resulted in the evolution of The Midlands Campus, which superseded management's original ideas. Over the years, due to the increase in the number of students, the staff has also increased considerably.

Over the years, the institution has undergone vital changes. By the end of 2007, the DUT had to re-orientate, redefine and reshape itself as a recognisable UoT after facing some difficult years, including being placed under administration. To be considered relevant and viable within the community, the institution must liaise with industry and consider public considerations. Some goals set for the institution's future (DUT Corporate Affairs Dept. (2008: 20)) are that senior management provides inspirational and ethical leadership, ensure sustainability and recognise transformation, and produce quality graduates worthy of uplifting the economy of the country. Integrated into this should be the vision of service quality.

2.5 SERVICE QUALITY

Service quality entails constant expectations of what customers anticipate from a service provider. Parasuraman, Zeithaml and Berry (1985: 41-42) defined quality as "an elusive and indistinct construct". Companies in a highly competitive environment must have a greater level of service quality as a survival and success strategy. By understanding customers' expectations and perceptions, companies can have a distinct advantage over their competitors.

This will provide superior service quality that eventually leads to a high level of customer satisfaction.

2.6 EXPECTATIONS vs PERCEPTIONS

It is essential to understand customers' needs and provide quality services that meet their expectations better than their competitors. Expectations, based on past experiences, or word of mouth via other consumers and an institutions marketing strategy, are usually derived before purchasing a service. It involves consumers' assumptions of what institutions services will be like or the probability of future services. Govender, Veerasamy and Noel (2014: 467) implied that expectations and perceptions of service quality of the traditional student have changed, are changing and will continue to change. Perceptions, which are subjective and founded on personal experiences, are formed after the service has been rendered based on emotional and physical determinants, including reliability, courtesy, accessibility, responsiveness, and competence.

Wilson, Zeithaml, Bitner and Gremler (2016: 72) defined satisfaction as “a customer’s evaluation of a service or product in terms of whether said service or product has met the customer’s expectations and needs also resulting in fulfilment”. If the service quality meets the expectations of the consumer, it results in satisfaction. However, if there exists a gap between the expectation and perceptions of the consumer, it leads to dissatisfaction. Previous literature by Gupta and Kaushik (2018: 580); Saleem, Husain and Ahmad (2017: 172); Anwowie, Amoako, Abrefa (2015: 148) and Naidoo (2014: 202) used the SERVQUAL model to conduct the gap analysis between expectations and perceptions of service quality in HE. Even if the service delivery is identical, expectations and perceptions between two individuals are not necessarily the same. Perceptions can be identified as a judgement of how one perceives things that can be problematic as perception is not fixed and is reflective of an individual’s present mindset. This can shift from favourable to unfavourable over time or vice-versa. Differences between expected and perceived

performances bring about either positive or negative disconfirmation. Grimmelikhuisen and Porumbescu (2017: 1272) described disconfirmation as the difference between expectation and perception and that this affects customer satisfaction.

2.6.1 Customer expectations of service quality

According to the Oxford dictionary (2014), the expectation is “a strong belief that something will happen....”

A customer will usually have four levels of expectations as per Miller (1997 cited in Churchill and Surprenant 1992: 492) ideal, expected, minimum tolerable and desirable. Parasumaran, Zeithaml and Berry (1994: 204) defined expectations as “the level of service that a customer *should* get from a service provider”, while Churchill and Surprenant’s (1992: 492) description is that of a customer’s reflection of anticipated performance. Tolerance zones for each customer vary depending on the importance of the factor in question. A company can stay ahead by meeting customer expectations better than the competitor does.

Customer satisfaction is when a service has met the customer’s expectations by using a service evaluation process. Expectations influence service quality and customer satisfaction. However, in many scenarios, customer expectations are not met, thus leading to customer dissatisfaction. HEIs tend to focus more on the need for students to complete their education and not whether a student felt satisfied during the process. It is essential to understand what the student expects to identify gaps in the delivery of a good level of service quality. Thai (2015: 146) posited that service quality involved customer expectations and perceptions. When perceived service is more significant than expected, it signifies customer satisfaction. Thus, HEIs should strive to fulfil students’ expectations in all aspects of their University life. The importance of expectations should not be ignored despite the difficulty in

measurement as it plays an essential role in satisfaction and service quality. Wilson, Zeithaml, Bitner and Gremler (2016: 93) emphasised that critical to delivering service quality is “closing the gap between what customers expect and what they perceive”.

In order to be successful in the competitive world of HE, an institution would need to understand and fulfil students’ expectations to the best of its ability. They are exceeding student expectations in terms of service delivery results in student satisfaction. On the other hand, when a student expects superior services but is not fulfilled, it is a dissatisfied student. This disadvantage results in several adverse effects such as negative word of mouth and distorted image; hence institutions should strive to offer exceptional service. A student who registers in a reputed University has heard of the high quality of education and services rendered. Hence, the student expects the same manner during his/her University life. Their expectations concerning what an institution should possess and what performance level can be expected are of great significance to its success.

2.6.2 Customer perceptions of service quality

According to Wilson, Zeithaml, Bitner and Gremler (2016: 71), “Perceived service quality is a component of customer satisfaction”. The Oxford dictionary (2014) defined perception as “How something is regarded, understood, or interpreted”. Perceptions, which entails a customer’s overall view of the quality of service, varies from one individual to the next and Parasuraman, Zeithaml and Berry (1985: 42) proclaimed that the service being availed is intangible perishable hence making it a challenge to ascertain its quality. Although intangible, service quality can be assessed based on reliability and performance. Parasuraman, Zeithaml and Berry (1985: 46) elucidated that a gap exists between what a customer expects and what the customer receives. The more significant the gap, the more dissatisfied the customer is. It is therefore beneficial to the institution to ensure that this gap is as narrow as

possible in order to be able to fulfil the students' expectations. Govender, Veerasamy and Noel (2014: 466) noted that the perceived service impacts the student's choice of an HEI. If an institution cannot offer the best possible service delivery quality, this can be catastrophic to future enrolments. Measuring customer perception of an intangible service is difficult but necessary for any organization because the customers' views are important and need to be assessed.

Berry, Zeithaml and Parasuraman (1994: 33) concluded, "Consumer perceptions of service quality are the experience of the service and the result of comparing expectations preceding the service". Service quality involves each student's role when assessing the administrative services provided and therefore cannot be what most students recognise as quality service. It can be deduced that the level of service quality is the students' overall impression of the service provided when the students' perceptions and expectations are considered.

Naidoo (2014: 199) concurred that understanding student perceptions is complex as they have different insights on how services are offered at a University. Once this has been gauged, the institution can determine where to focus their student experience improvement efforts to bridge gaps between expectations and perceptions. Thai (2015: 150) established, "A deep awareness of customer perception cannot be obtained without identifying customer expectations". It is essential to understand customers' perceptions of service quality because managers have different views than customers. The concept of quality in education is adapted from the industry. In the HE sector, perceptions of service quality are complex and challenging to analyse due to intangibility and the absence of physical evidence.

2.7 QUALITY AND QUALITY ASSURANCE IN HIGHER EDUCATION

A pertinent quote by (Leo Tolstoy cited in Ryan 2015: 1) stated, “What is important in knowledge is not quantity, but quality. It is important to know what knowledge is significant, what is less so, and what is trivial” profoundly sums up the importance of quality and quality assurance in HE.

Quality assurance in HE constitutes planned and measured processes, policies, and actions through which quality is maintained and developed. It can be defined as the level at which the education meets the student’s desires and demands, thereby recognising their needs as the core of activities. The University itself determines this since it is the concern of the establishment. The Council on Higher Education (CHE) (2011: 16), in its consultation document, declared that quality, which necessitates different levels of accountability and responsibility, is a primary obligation of the institution. When HEIs do an internal evaluation, this allows them to assess their performance of quality delivered. In particular, the weaknesses and strengths are identified, the performance conveyed to students and the efficient use of resources. Therefore, it can be deduced that internal evaluations are an indispensable administration tool for management to integrate organisational decision-making and quality assurance in HE. Continuous quality assurance evaluation warrants HEIs to define their objectives clearly and involve students in decision-making processes to assess performance levels. Chinomona (2013: 653) proclaimed that quality in the SA HE system needs significant improvement to be up to standard and relevant to all SA citizens. When all stakeholders with different views are consulted and acknowledged, this will ensure that an institution provides a service of high quality that ensures graduates are employable and sustainable globally and can thereby enhance the country's economy.

2.8 SERVICE QUALITY IN HIGHER EDUCATION

2.8.1 General

Service quality or quality assurance was initially developed in the manufacturing or industry sector and later adapted to the public service sector, including education, maintained Vijaya (2016: 1092). Previous literature (Napitupulu *et al.*: 2018; Prakash: 2018; Stander and Herman: 2017; Saleem, Husain and Ahmed: 2017; Teeroovengadum, Kamalanabhan and Seebaluck: 2016; Randheer: 2015; Alhabeeb: 2015 and Zajda: 2014) indicated that much interest had been drawn by service quality in the context of HE. Parasuraman, Zeithaml and Berry (1985: 41) proclaimed that few researchers have focused and endeavoured to define and model service quality due to barriers in measuring the construct.

The quality of service applied to universities differentiates them from their public counterparts. Green (2014: 131) maintained that the concept of quality is difficult to define because it is an intangible service delivered for consumption at the time or place of delivery. It refers to a customer's attitude towards an organisation's performance over a long-term evaluation. Satisfying customers' requests signifies a successful relationship, and these can evolve depending on technology, political or financial situations. Wilson, Zeithaml, Bitner and Gremler (2016: 71) further advocated that customer satisfaction is influenced by the quality of service, product, perceptions and price. This suggests that a customer's perception of the quality of service directly relates to customer satisfaction.

The economic success can be determined by the quality of their educational system, namely the HE system. Uiso and Magali (2017: 79) confirmed, "Service quality is important for any academic institution". One of these factors is human capital skilled with knowledge and creative abilities that can be the economic apparatus of a developing country. Tertiary education is being

recognised globally as a significant driver of economic viability in an ever-increasing competitive market. International and financial pressure and new competitors entering the market forced HEIs to re-examine their policies, procedures, and marketing direction to ensure quality in education be distinguished, recognised, and viable.

Using quantitative surveys, an institution can analyse students' satisfaction with the quality of service of various aspects of University life. This data can then be analysed to enhance the problematic domains, which necessitates changes to meet the needs of the institution's stakeholders, namely the students. The economic development of a population can be encouraged through tertiary qualifications; hence, pressure is increased globally by governments on HE to play a prolific role in increasing and sustaining the economic growth of the country. Napitupulu *et al.* (2018: 2) reiterated that the government was aware of the importance of a continuous qualitative education system that will contribute to a superior quality of a country's human capital.

Various authors' (Berry, Zeithaml and Parasuraman, 1985:46; Grönroos, 1984:36; Zeithaml, Parasuraman & Berry, 1990:2) definition of service quality in the current literature focuses predominantly on meeting customers' requirements and needs and on how well the service that was delivered met customers' expectations. Quality implemented in HE is a way to ensure that institutions performed well and that the customers on the receiving end of this education were aided to the best of the institution's ability. Institutions use various indicators to assess and achieve quality in HE. Personal communication between students and staff within the educational setting determined the level of service delivery and customer satisfaction. This aligns with Sultan and Wong (2013: 77), who concurred that the three core aspects of service quality in higher education includes, but is not limited to, quality of academics, faculty support and administration staff. Students were not interested in the hierarchical organisation of an institution but in the service delivery and quality experienced. Therefore the interaction between staff and

students was of utmost importance. Therefore, it can be deduced that quality leading to student satisfaction was constituted as one of the significant decisions impacted on a student's choice of HE organisation to attend.

2.8.2 International

Papantymou and Darra's (2017: 132) writings reveal that there was increased interest in quality management and that HEIs solve problems and propose solutions by meeting the expectations of their students, thereby differentiating themselves from their competitors, assuring long-term sustainability. This is imperative, as HEIs are accountable to various stakeholders. Ganguly (2015) proclaimed that quality had become one of the essential components and a strong point globally with HEI's. Thus, HEI's should maintain a system that continuously improves the service quality offered to its students by eliminating inefficiencies to enhance customer satisfaction.

Although service quality is an institution's domain, how a customer reacts to the services offered will determine their level of satisfaction. Seminal articles by Parasuraman, Ziethaml and Berry (1985-1991) indicated "the higher the level of service quality, the higher the level of satisfaction". Okogbaa (2016: 142) declared that most researchers define HE quality as "efficiency, high standards, excellence, value for money, and fitness for purpose and/or customer-focused". If quality is of an exceptionally high standard, students acquire valued talents and knowledge. They are better educated for the world of work, and employers are prepared to pay more for educated workers, increasing productivity.

Martins (2018: 211) discussed challenges faced in Kenyan higher education and students' employability where they are criticised for lack of innovation, critical thinking and independence. Kenyan HEIs have therefore begun to adopt quality assurance procedures to bridge this gap. Kogovsek & Kogovsek

(2013: 2041) indicated that the goal of HEIs was to educate students to enable them to develop and perform at their full potential. The views on quality differ between students and staff, where students usually relate quality to employability and being provided with a superior education. Nell and Cant's (2014: 84) research established that the students felt that staff did not have their best interest at heart; neither did they understand their needs. Staff views on quality incorporate academic assessments, teaching and good institutional reputation as well competency of administrative staff. Hence perception versus expectations gap occurs. Martins (2018: 76) concurred by stating that various universities defined the concept of quality differently and related to the institution's stakeholders. The intents were to enhance University rankings' stature, whilst others contributed to transformation or improved academic outcomes. Martins (2018: 197) additionally implied that the essence of an institution's quality culture is represented by the student-centeredness it exhibits.

The overall experience in terms of quality significantly impacts the successful outcomes of the programmes delivered. Koen and Bester (2009: 283-304) discussed how HE has affected their lives professionally and personally and talk about a journey through their study life cycle. The authors further accentuate the quality of education received and how this has shaped their future and helped them eventually attain success as professionals in the academic sector in HE. Koen (2009: 287) believed enrolling in HE studies helped acquire new skills and knowledge aside from influencing perceptions and beliefs.

Blair and Noel (2014: 879) emphasised that students voices in HEI both nationally and internationally highlight the importance of quality service delivery in enhancing student satisfaction. The intangible service of the education system has more importance in that it affects the future of the student and the evolution of a country. HEI's should work towards tailoring

their services to cater to student needs; however, it is not as simple to understand student needs.

2.8.3 South Africa

Papanthymou and Darra (2017: 138) revealed that many countries, including South Africa, have contributed to quality management from 2006 to 2016. Anim & Mensah (2015:27) concurred by maintaining that African governments emphasise service quality in education to achieve global economic integration. This would then contribute to HEIs developing models to ensure the quality of service and would have a distinct advantage over their competitors both locally and internationally. The University of the Free State in South Africa (Martins 2018: 62) views quality as a necessary perception for transformation in post-apartheid South Africa.

Due to an increase in student intake and a decrease in government subsidies where only a base formula funding is provided (Hay and Monnapula-Mapesela 2009: 10), institutions of higher learning have to do more with less money, which in turn impacts the quality of service delivery received. HE is essential in the socio-economic factors, especially in under-developed countries where education can determine the well-being to lead a fulfilled and meaningful life. Vnoučková, Urbancová and Smolová H (2017: 109) emphasized that HE forms the essential basis for sustainable growth in an under-developed economy. The South African Department of Higher Education and Training (DHET) (2013: 8) acknowledges in the white paper that the quality of education at HEIs are less than satisfactory despite SA having many excellent institutions of higher learning. Producing students of a high calibre who will eventually contribute to the country's economy is one of the reasons governments are willing to pledge vast amounts of money into education. However, with this comes questions about the quality of students produced and if they are recognised globally.

Economic forces, global competitiveness, reduction in government subsidies, “the University sector is underfunded” (Pouris and Inglesi-Lotz 2014: 1), and emerging competitors result in HE being the student’s perception of education imparted; as opposed to only society’s perception of the skills and abilities attained. In turn, the rules and regulations of the government that all universities must adhere to have seen a decline in grants and an increase in student fees. (DHET) (2013: 8) states that funding is a concern where some students do not qualify for National Student Financial Aid Scheme (NSFAS) funding or private loans. Considering all these factors, which affects an institution's ability to remain viable and sustainable, competition for students intensified.

Because education is an intangible and heterogeneous service, its value should be measured by evaluating its effect on students. The ultimate goal of quality service was student satisfaction and producing students capable of competing in the global market. Garraway (2009: 230) attested that universities are compelled to produce students proficient in responding to the needs of society in the world of works.

If student satisfaction was a determinant of student expectations and perceptions of quality, then the higher the quality of service, the more satisfied the student. Positive word of mouth flows when students are delighted when the service provided within an HEI was more than expected or are just satisfied when it merely met their expectations. Contrary to this, when students were dissatisfied, they tended to convey negative characteristics of an institution.

2.9 CUSTOMER SATISFACTION

“Everyone knows what satisfaction is until asked to give a definition. Then, it seems, nobody knows,” claims Richard L. Oliver (cited in Wilson, Zeithaml, Bitner and Gremler 2016: 72). Customer satisfaction is the satisfaction with a

particular product or service after the service has been rendered. This helps establishments optimise their service quality, focus their resources effectively, and strengthen relationships with customers. Kotler and Keller (2012: 128) described satisfaction as a term derived when comparing perceived performance to expectations, which results in either pleasure or disappointment. Razinkina *et al.* (2017: 3) implied that “satisfaction is derived from a set of factors that included a combination of the measured object and the quality of its measurer”.

Further, Churchill and Surprenant (1992: 493) defined satisfaction as an attitude that can be assessed with the various product or service attributes. Customer satisfaction is based on an encounter with a service provider and the outcome of that encounter. Hence, customers must be satisfied, and this can be achieved in different ways. One of which is gauging the customer’s expectations and perceptions of the service offered, thereby assessing service quality and customer satisfaction.

2.10 STUDENT SATISFACTION IN HIGHER EDUCATION

Albeit students are at the core of any academic institution, little consideration is given to their satisfaction with services. Evaluating and monitoring student satisfaction is of paramount importance to an HEI as it summarises the personal feelings of either pleasure or disappointment of services rendered. Hence, measuring students’ perception versus students’ expectations should be continuous, and the shortfalls managed efficiently to ensure student satisfaction with service quality rendered by an institution’s staff members. Satisfaction breeds loyalty and positive word of mouth for the UoT, resulting in sustainability. An analysis of empirical literature reviews by Azam (2018: 275), Prakash (2018: 259), Uiso, and Magali (2017: 71) and Rouf, Rahman and Uddin (2016: 376) defined the impact of student satisfaction in HE and found that service quality influences student satisfaction.

Further, HEIs are striving to meet students' expectations and are gaining central attention. Students view the success of future employability as being based on the education process comprising various facets of quality. Higher priority should be placed on service quality as this eventually leads to student satisfaction, which leads to positive word of mouth promotion and a sustainable enterprise.

Students' values and preferences must be taken into consideration when providing quality service leading to student satisfaction. Burgess, Senior and Moores (2018: 1) implied that the concept of student satisfaction remains misunderstood. Monitoring quality service should begin from the time the student has registered and end with his/her graduation. The student expects service of high quality, and when this is not achieved, it affects various stages in the student University life cycle. This further tarnishes the image of the UoT, resulting in negative word of mouth advertising.

Universities face severe challenges due to the growth of the global HE sector, and competition within the HE is solid and is continuously increasing both locally and globally. To ensure that the DUT has a competitive edge, the UoT must improve negative feedback from student surveys regarding the quality of service rendered by administrative staff. As a predecessor to student satisfaction, service quality is crucial to attaining success in the HEI environment. Okogbaa (2016: 141) articulated that student satisfaction is an indicator of quality in higher education, and quality is measured by whether a student is satisfied or not. With a range of public and private universities available, the DUT is forced to search for methods to exceed student expectations and provide unique services of exceptional quality. In order to survive, philosophies and strategies must be re-examined to ensure that they meet students' expectations. To remain sustainable, the institution must ensure a viable student turnover, which will generate the income necessary to remain in the market. Guaranteeing service of an exceptional quality leads to high student satisfaction, which will ensure sustainability and the long-term

survival of the DUT. Kotler and Keller (2012: 128) succinctly hinted, “Wise firms measure customer satisfaction regularly because it is one key to customer retention”. Elaborating on this statement, it will be prudent for the DUT to continuously measure student satisfaction to remain globally competitive, sustainable and relevant within the ever-changing HE environment. Management needs to keep in mind that prospective students gather information regarding an HEI of interest from the current student’s perspective, contacting the HEIs alumni, the University’s website and social media platforms.

Burgess, Senior and Moores (2018: 3) indicated that the needs and expectations of student satisfaction could be achieved by implementing quality assurance mechanisms. However, this may also present a myriad of challenges for HEI management. Students should be treated with sensitivity and sympathy, and both academic and non-academic staff should assist when needed.

2.11 THE RELATIONSHIP BETWEEN SERVICE QUALITY AND STUDENT SATISFACTION

Churchill and Surprenant (1992: 491) were among the first researchers to establish a connection between service quality and satisfaction. The authors stated that satisfaction emerged as early as the 1970s. Elements of quality in HE are adapting to global changes, producing skilled and knowledgeable students who can compete in international markets, and contributing to the country’s economy. Various stakeholders in HE view service quality differently according to their individual needs. However, students being the primary consumers of HE were the focus of this paper.

Nevertheless, other stakeholders should not be disregarded, as their views are considered necessary as well. Parasuraman, Berry and Zeithaml (1991: 39)

declared that special service delivery comes from understanding a customer's expectations, where the customer compares the perception of service quality with expectations when evaluating services rendered. Similarly, in HE, a service is rendered, albeit intangible. Students can compare their perception of actual delivery to expectations delivered to assess the level of service quality received, which eventually leads to student satisfaction. The concept of satisfaction includes the HE sector, so service delivery must be measured to ensure that quality is prevalent. Yusof and Ghouri (2013: 43) reiterated, "Effective service delivery is the determination of customer satisfaction".

Abdullah (2006: 41) explained some of the determinants of service quality in HE as "program issues, academic and non-academic as well as access and reputation". Although service quality and student satisfaction are fundamentally different concepts, ensuring the highest service quality will result in student satisfaction. The repeated experiences of student campus life shape the student's level of satisfaction. The advantage of satisfied students is that positive word of mouth advertising to the HEI will appeal to new and future University students. Several studies debate service quality and student satisfaction with diverse conclusions at numerous HEIs worldwide. Internationally, an examination by Khoo, Ha and McGregor (2017: 436) in Singapore, Duong's (2016: 32) in Vietnam, Saif's (2014: 177) in Jordan, Uka's (2014: 10) in Albania and Wilkins and Balakrishnan's (2013: 146) at a United Arab Emirates University revealed satisfaction levels as high, moderate, stable or low.

Prakash and Muhammed (2016: 74) and Sultan and Wong (2013: 86) believed that "service quality is an antecedent to student satisfaction". Previous research by authors (Cronin & Taylor, 1992; Dion et al., 1998 and Lee et al., 2000 cited in Prakash and Muhammed 2016: 74) supports this theory with empirical evidence. Sultan and Wong's (2013: 70) study further established that student satisfaction directly relates to perceived service quality. Monitoring the quality of service delivery enables management better to understand students' attitudes towards the education environment and thus

derive the level of student satisfaction required. A key benchmark of a successful HEI is quality leading to the utmost satisfaction, thereby nurturing the skills and expertise necessary for University graduates to succeed in the world of work. Quality is the core element of measuring student satisfaction with educational services, and management must exceed students' expectations.

Mandal and Gupta (2018: 353) strongly cited service quality as strategic to satisfaction between front line staff and customers. Numerous researchers believe that a relationship exists between customer satisfaction and service quality. HE service quality, albeit a daunting challenge, is consistent with the principle of student satisfaction. Hence, the service of front line staff, which are critical to students and represent the organisation, directly impacts service quality, improving student satisfaction. Allocating resources to refining these elements to expand service quality to attain satisfaction and improve institutional performance can fill identified gaps. Wilkins and Balakrishnan (2013: 145) discounted arguments that student satisfaction is determined solely by academic experiences. Additionally, this coincides with Hanssen and Solvoll (2015: 745), who emphasized that other factors are now showing equal or more important than academic fulfilment.

Azoury, Daou and Khoury (2014: 3) indicated that marketers perceive service quality as "the level of service needed to make it acceptable in the marketplace while customers perceive service quality as the level of service required to satisfy their needs". When a customer's expectations are met to the fullest, and they feel that they got what was expected for the monetary value paid, this indicates satisfaction. Satisfaction could be regarded as one of the most important factors for positive word of mouth advertising, future enrolments and brand imaging.

2.12 FACULTY SUPPORT AND THE STUDENT

HE is an increasingly competitive market; therefore, student satisfaction is an essential constituent in attracting and retaining achievers, who, in turn, can expand the HEI's ratings and reputation. Provision of a quality of service that meets or exceeds students expectations and needs in all University segments can increase satisfaction ratings.

In most HEI's, student satisfaction is measured through overall services rendered and not on individual University segments. Sultan (2013: 77) stipulated that academic and faculty support and administration staff play just as crucial in attaining student satisfaction. Institutions must identify individual indicators that can be utilized to review and gauge the perceived service quality and concentrate on those that the students perceive that bring about the least satisfaction. It is also crucial that HE managers create a supportive learning environment in accessing knowledgeable student support services that help students complete their studies successfully. Kogovsek & Kogovsek (2013: 2041) clearly stated that the efficiency of both academic and administrative functions are tremendously important. This is further accentuated by Kara, Tanui and Kalai's (2016: 45) study, which reflected administrative service quality, amongst others, as being important determinants of student satisfaction in public universities.

Seeking out students to ascertain their satisfaction requirements rather than only when a complaint is received ensures that they are being assisted in advancing their studies and indicates that the University is proactive. Teeroovengadum, Kamalanabhan and Seebaluck (2016: 250-251) discussed the factors of administrative staff's level of service quality that influence student satisfaction. Support staff should have an environment where students can acclimatize because their uniqueness and culture is respected. There are departments dedicated to providing students with support services, but whether they meet student expectations or not. Are they treating students as an imposition on their work and ignoring their calls and emails? Are the hours

conducive to the students or the support staff? These questions and many more have defined a need for this study to ascertain student satisfaction with the level of service delivery of support staff at the DUT as students expect service quality from their institution. Berry, Zeithaml and Parasuram (1994: 32) declared, "Service is a key component of the value that drives any company's success". The authors further explained that excellent service is a profit strategy that retains existing customers and gains new customers.

Student support is an institution that should assist in promoting student involvement and providing an out-of-class learning experience that contributes significantly to a student's academic career. Ngaaso and Abbam (2016: 169) emphasized that the credibility and reputation of any institution could be affected by student satisfaction with support services. Therefore, HEI's have to ensure that they provide a reliable and efficient support system that is student centred on enhancing the student University life. Therefore, it is crucial to form a trajectory, sustain, and improve the educational quality of services offered by support staff to understand how students think to perceive this quality. For most HEIs across the globe, a key concern should be whether students are satisfied with their learning experience or not. A sustainable strategy for HEIs to invest and develop further in a very competitive local market is having student services that satisfy students and meet their needs and wants.

In the interest of student services being student centred, it is crucial to recognise the impact that the quality of service has on the student by focusing on their needs and satisfying them. Another essential point in understanding student experiences is enhancing student satisfaction by offering quality in service delivery. It makes sense that a high level of satisfaction will lead to successful and gratified students. HEIs must recognise that it is not only what services are provided by student support but also how they are rendered.

Students face numerous challenges in higher education, namely, academically, financially, and psychologically; hence, they need support from academic and administrative staff to enhance students' experience and development to provide a more rewarding educational experience. Schreiber (2013: 1) described student support as providing services and development to students while developing policies and practices with academic and other administrative staff. Challenges in the face of HE in the form of demographics, technology and economic conditions and various other factors can be detrimental to support services if the University sees these changes as threatening. However, if these changes are perceived as opportunities, then support services can be strategic and align these changes with institutional goals and missions.

Considering the importance of the quality of student services in HEIs, this study aims to evaluate the service quality of the administrative staff of the FoMS for student satisfaction at the DUT. As per the DUT website (2019: 1), the University constitutes six faculties, namely, Faculty of Account and Informatics, Faculty of Applied Sciences, Faculty of Arts and Designs, Faculty of Engineering and the Built Environment, Faculty of Health Sciences and Faculty of Management Sciences. This study focused on the FoMS that offers programs in the following fields: Hospitality Management, Tourism, Operations and Quality Management, Public Relations, Marketing, Business Management, Human Resource Management, Entrepreneurial Studies and Governmental Studies. Due to the number of students registered in this faculty, this study aimed to ascertain service quality administered to the full-time and part-time B-Tech students registered in this faculty.

2.13 IMPORTANCE OF CONDUCTING STUDENT SURVEYS

It is imperative for HEIs to continuously assess the quality of service delivery and commit themselves to improvements of such services. Randheer (2015: 29) enunciated that "service quality is in itself a differentiator which cannot be

produced at one time; rather it needs a continuous practice". HEIs being a student-orientated industry means that students should be the centre of attention, and customer satisfaction should be a distinctive factor. Wilson, Zeithaml, Bitner and Gremler (2016: 72) emphasised that satisfaction is influenced by various factors and may evolve, albeit measured at a particular point in time. It remains dynamic and can transition over time.

Martin (2018: 19) explained that there had been mounting scrutiny about the quality of service in HEI's. To continuously strive to improve the quality of student experience, the UoT needs to understand where and how to focus its efforts. Adil, Ghaswyneh and Albkour (2013: 65) advocated, "Quality does not improve unless it is measured". One method to ascertain the broader student experience is by conducting student surveys of services rendered. These surveys can be used as screening instruments to ascertain discrepancies in various practices and processes, thereby enhancing the services in these areas.

Martin (2018: 47, 58, 70, 282) and Prakash (2018: 251) posited student satisfaction surveys as the most frequently used tools in the teaching and learning domain for both academic and administrative staff to assess service quality and student satisfaction of the broader student experience. Students' perceptions are recently regarded as crucial to the practical observation of quality in HEIs. Okogbaa (2016: 139) reiterated that students' opinions are essential and should be involved in the robust discussions regarding service quality in HE. Thus, high quality and student satisfaction can be attained by setting dynamic quality issues derived from the feedback processes received. Klemenčič and Chirikov (2015: 376) observed that the "Rise of big data on students will make institutional research more complex and challenging". Some institutions have become reasonably skilled in collecting rich satisfaction data, but it becomes cumbersome and complex to make sense of the data.

Klemenčič and Chirikov (2015: 362-364) further mentioned that in order to ascertain student experiences in HE, universities must make use of student surveys whose origins were to evaluate teaching and learning but now include institutional support and technology services. These tools can acquire much-needed data to help in formulating University decisions and form part of institutional research. Furthermore, as noted by Radwin (2009) in Klemenčič and Chirikov (2015: 362), "...the use of surveys is one of the fastest-growing and most pervasive trends on campuses". However, the authors also implied that the issue of the validity and reliability of student surveys as a method of data collection is raised.

Herdlein et al. (2015: 6) mentioned that University experience is not just about preparing a student career-wise. It is also a place for a student to develop socially, emotionally, intellectually and spiritually. This should alert an institution as to how crucial a sense of belonging is to a student. Conducting surveys to gather information will alert a University's management on the areas lacking in service quality and student satisfaction. Razinkina *et al.* (2017: 2) further reiterated that international researchers agree that continuous education quality can be improved by collecting student feedback. The DUT is a student-centred University that aims to treat its students better than its competition by providing superior education and quality of service. The University needs to understand the weaknesses of its competition, and together with high student satisfaction, these factors can be used to the UoT's benefit. There is a need for HEIs to regularly measure service quality to improve their services, as posited by Teeroovengadum, Kamalanabhan and Seebaluck (2016: 245).

Student satisfaction surveys are essential in understanding what current students think, what prospective students need to know, and what will be necessary. Schreiber (2013: 2) indicated, "The changed higher education landscape requires a re-examination of the explicit notions about students". The DUT can provide prospective students with accurate information. Management can identify potential problems and work to address them before

they become more significant issues, and the data collected can influence decisions and initiate changes in perspectives. Continuous student assessments should monitor peculiarities and perspectives of students, commented Ngaaso and Abbam (2016: 172). The different opinions obtained from students can be highlighted and brought to management's attention to understand the importance of students' feedback in the decision-making process.

By evaluating the efficacy of service quality leading to student satisfaction, resources can be reallocated depending on student surveys, thus saving the institution money. Collecting and analysing data from students can assist in making informed decisions regarding the institution's financial goals and strategies. Klemenčič and Chirikov (2015: 365) believed that a collection of student experiences has important implications for quality enhancement and institutional sustainability. Global competition amongst HEIs, both private and public, is rife, so institutions must ensure that they do their utmost to attract and retain students. Olufunke (2015: 57) proclaimed that the financial viability of institutions could be a challenge if adequate levels of enrolment are not maintained, and the author's survey of students in a Nigerian University (2015: 62) further revealed that faculty has a significant impact on student satisfaction.

Martins (2018: 247) noted that although most quality assurance tools are directed at teaching and learning, "specific tools are aimed at management and administrative staff to assess the quality of service delivery". This data must be assessed along different platforms to gain advantage and produce strategic methods to enhance service quality and student satisfaction. Student surveys that provide students' perspectives can be an invaluable source of information to HEIs senior management to monitor and review the level of services rendered to ensure continuous quality improvement processes, emphasized Okogbaa (2016: 140).

HEI's must follow an external evaluation procedure to assess their quality academically; however, no such evaluation procedure exists for support/administrative staff. The primary responsibility of providing quality service lies with the institution; hence, a balance between institutional values and the services provided to the students must be found. Therefore, institutions should be encouraged to become more sensitive towards students' needs and expectations and listen to students to know that they have a voice on campus. These can only be understood by conducting surveys. Organisations should strive to evaluate the services rendered and give more attention to service and users' satisfaction, which depends on several other factors besides academics. Klemenčič and Chirikov (2015: 368-369) provided an informative table on various student engagement and survey designs used globally.

2.14 A REVIEW OF SERVICE QUALITY MODELS

The phenomenon of service quality has compelled researchers to develop models to better describe and conceptualise quality for a better understanding. Literature, over the years, has developed various models, with each adding some value to the service quality concept by one building one another. For this study, four models are introduced; however, greater emphasis was given to Parasuraman, Zeithaml and Berry (1988) since this served as the core model for this research.

Identifying quality problems using conceptual models developed over the years empowers management to plan quality improvement programs to enhance an organisation's overall performance, profitability, and efficiency. People are becoming more critical and discerning of quality; hence greater emphasis is being placed on understanding customers' expectations of service experience.

Service quality measurement models began in mid-1980 where various researchers have constructed theoretical models, such as the Perceived Service Quality model by Grönroos (1984), the GAP model (SERVQUAL) by Parasuraman, Zeithaml and Berry (1988), SERVPERF by Cronin and Taylor's (1992) and HEdPERF by Abdullah (2006) to explain the relationship between service quality and customer satisfaction. Substantial literature reviewed by Uiso and Magali (2018: 71) shows that SERVQUAL was used to assess satisfaction globally. Furthermore, Khattab (2018: 24), Onditi and Wechuli: (2017: 328); Jain and Aggarwal (2015: 126), Randheer (2015: 29) and Adil, Ghaswyneh and Albkour (2013: 65) provided elucidative reviews on various models to measure service quality and have offered invaluable insight into these models. Adil, Ghaswyneh and Albkour carried the argument further and posited that the two most prominent scales to measure service quality in multiple sectors are SERVQUAL and SERVPERF. Gupta (2018: 580) established SERVQUAL as the most prominent model to assess the quality of service in HE.

2.14.1 Gronroos model of service quality

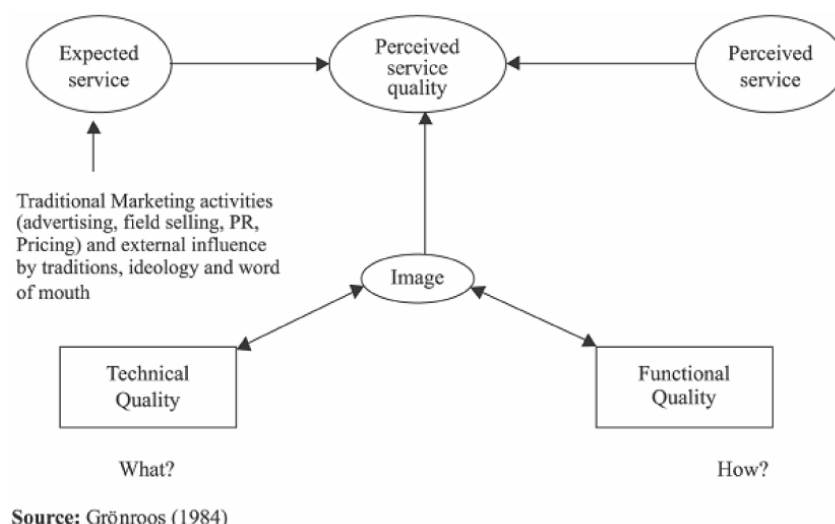


Figure 2.1: Gronroos Model of Service Quality

Source: Gronroos's (1984)

Gronroos (1984: 36) believed that to construct a service-marketing tool. One had to know what customers were looking for and what they were evaluating. The main feature of Gronroos's service quality model is the customer's perceptions of service quality and the determinants of what influences service quality. Dimensions of the Gronroos and SERVQUAL models are alike, but the prominence of the former place on the simplicity of services accessed and on the capacity of the establishment's response to customer grievances. The author identified three service qualities, i.e. technical, functional and image (as per Figure 1 above). The technical quality is based on what the customer receives when interacting with a company. At the same time, the functional quality is the communication of the service to the customer. The image of the company is based on the technical and functional accomplishments of a company.

2.14.2 SERVPERF model

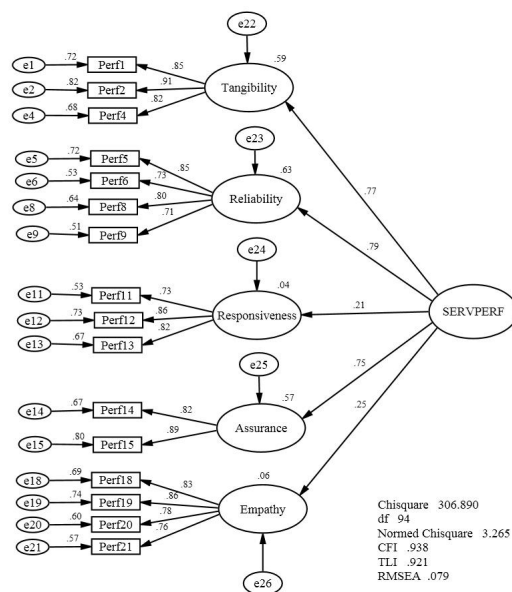


Figure 2.2: SERVPERF Model

Source: Cronin and Taylor's (1992) SERVPERF model

Cronin and Taylor (1992: 58) argued on the backdrop of Parasuraman, Zeithaml and Berry's (1988) model to form the SERVPERF model, consisting of 22 items, which measures only perceptions of customer service and not expectations; hence it is seen as a performance only model. The authors formulated that a better predictor for service quality is not the relationship between expected and experienced quality but perceptions only. Furthermore, Cronin and Taylor (1994: 125) stipulated, "performance-minus-expectations is an inappropriate basis in measuring service quality", meaning that it is not a proper approach to quality assessment and argued that SERVPERF performed better than any other model. SERVPERF, a modification of SERVQUAL, measures quality not as satisfaction but as an attitude.

Adil, Ghaswyneh and Albkour's (2013: 65) pragmatic view for assessing service quality is that SERVPERF outperforms SERVQUAL when selecting a developing country's most efficient service quality model. However, further modification of the SERVPERF model (involving perceptions and not expectations) to measure the quality of services in HE resulted in the HEdPERF model (Randheer, 2015).

2.14.3 HEdPERF service quality model

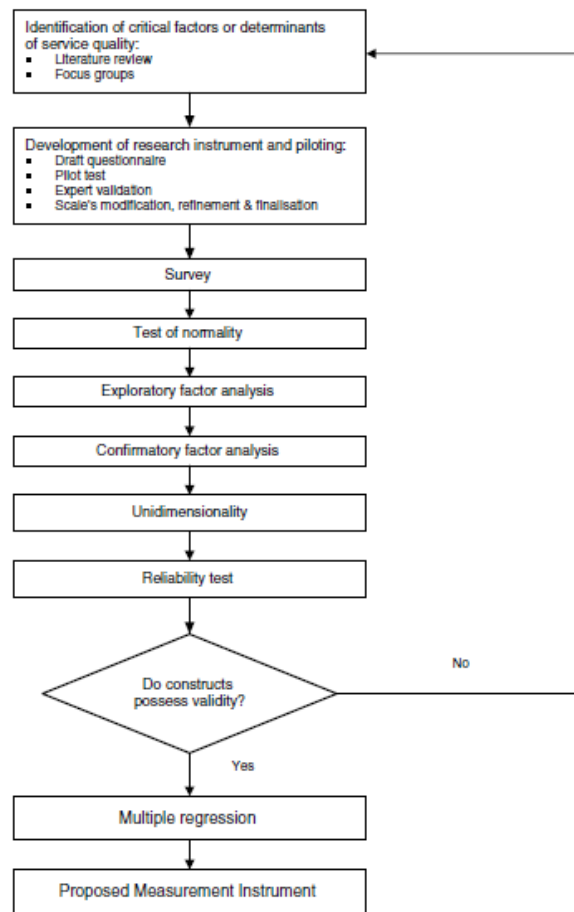


Figure 2.3: HEdPERF Model

Source: Abdullah (2006: 572)

Another model developed for assessing quality, HEdPERF, and based on performance was by Abdullah (2006: 569) precisely to measure the service quality in the HE sector. This model aims to capture the accurate determinants of service quality level within the HE sector. Gholian, Bagherzadeh and Abbasi (2016: 82) described HEdPERF as an assessment model consisting of a 41 items measurement tool, including 13 items taken from the SERVPERF model. This model based on six determinants, i.e. non-academic aspects, access, academic aspects, clear understanding, reputation, and programme issues, was empirically tested for validity, reliability and uni-dimensionality. This incorporated almost all aspects of HE, including non-academic aspects. This

model measures service quality and how the different dimensions affect service quality, and it is critically from a student's point of view. Onditi and Wechuli (2017: 334) commented on the disadvantage of HEdPERF. It was mainly tested in Asian countries, so to be validated in Africa, it must be tested in more African HEIs.

2.14.4 SERVQUAL model of service quality

Parasuraman, Zeithaml and Berry (1988), after extensive investigative exploration of quality in service businesses, developed a model of service quality. The expectations format of SERVQUAL is what the customer expects **will** happen, the other half what **should** happen. Numerous studies have adopted Parasuraman's, Zeithaml and Berry's (1988) SERVQUAL measurements when evaluating service quality and customer satisfaction in diverse industries and organisations as pronounced by Hasan et al. (2008 cited Uiso and Magali 2018: 71). Adil, Ghaswyneh and Albkour (2013: 1) argued that SERVQUAL and SERVPERF are the two most frequently used techniques of assessing service quality. Jain and Aggarwal (2015: 126) cogently stated, "Berry, Parasuraman and Zeithaml are among the most admired and accredited researchers on service quality". Indeed, these authors have been widely cited in retailing and marketing journals globally.

Parasuraman, Zeithaml and Berry (1985: 42) offered SERVQUAL as a measuring service quality instrument. They define the determinants as "a measure of how well the service level delivered matches customer expectations". Through seminal research, the authors outline ten determinants (1985: 47) of service quality as reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer and tangibles. The authors mentioned above (1988: 23) further refined the ten dimensions to form five distinct dimensions (RATER) with assurance and empathy incorporating communication, credibility, security,

competence, courtesy and understanding/knowing customers and access; hence in this way, all the facets of dimensions are captured.

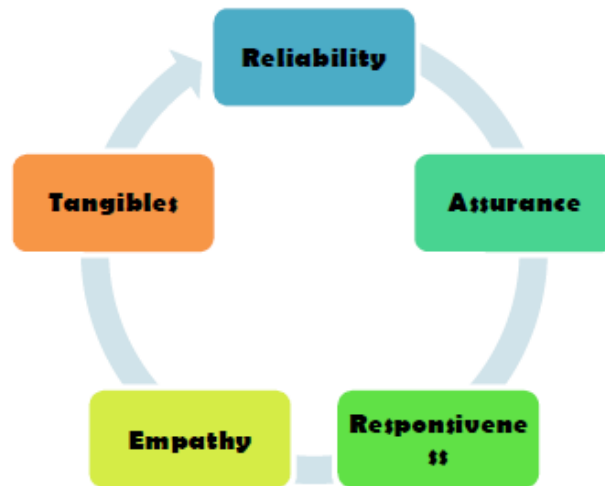


Figure 2.4: RATER Model
Sharma (2011: 17)

A concise definition for the dimensions as outlined by Ramya, Kowsalya and Dharanipriya (2019: 40):-

- Reliability – Capability of performing the promised service accurately and dependably
- Assurance – Ability of employees to inspire trust and confidence as well as be knowledgeable and courteous.
- Tangibles – Appearance of physical facilities, equipment, personnel, and communication materials,
- Empathy – The attitude of individualised and caring attention a company provides to its customers
- Responsiveness – Promptness of services as well as the willingness to help clients.

SERVQUAL prompts rankings of consumers' expectations and perceptions on each dimension mentioned above using a survey approach. Service quality

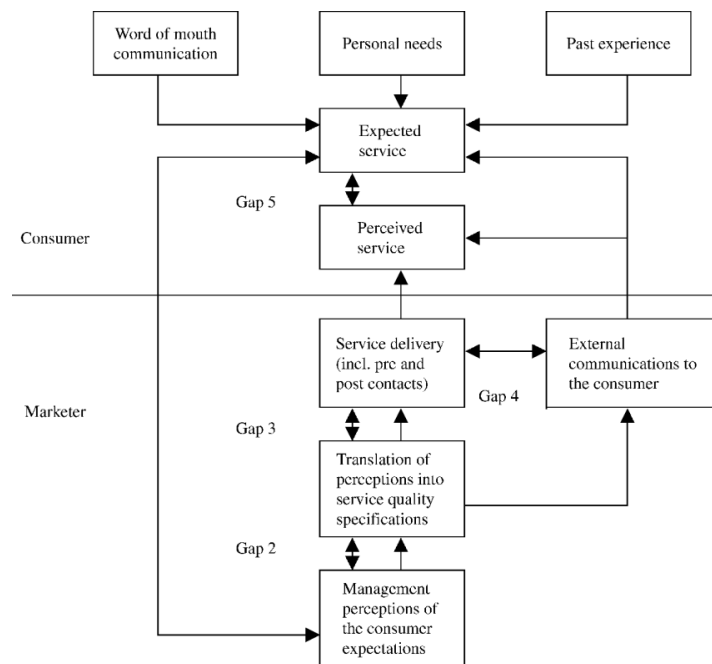
can be defined as "closing the gap" between service expectations and perceptions. The SERVQUAL method involves a questionnaire that appraises five generic service dimensions through twenty-two (22) questions, evaluating expectations and performance.

Evaluation of service quality is when consumers compare what they expect with how the service provider performs. Therefore, service quality can be explained as the difference between consumers' expectations and perceptions of actual services performed. Parasuraman, Zeithaml and Berry (1985: 46) believed that "customers use similar evaluation criteria regardless of the type of service being evaluated". SERVQUAL is known to be the general approach to quantitatively assessing service quality in organisations. Awoke (2015) confirmed that SERVQUAL was adapted and used in various environments that include banking, hospitals and the HE sector, while authors Latif, Latif, Sahibzada and Ullah (2017: 2) and Nsamba and Makoe (2017: 93) found SERVQUAL to be the most widely used instrument in education. Internationally, Saleem, Hussain and Ahmed (2017: 171), Anwowie (2015: 148) and Goran (2014: 48), and locally, Williams (2018: 55), Nell and Cant (2014: 242) and Green (2014: 131) utilized the SERVQUAL model in their assessments of service quality in HE. Equally important was the research by Donlagic and Fazlic (2015: 39), whose main objective was to produce empirical findings that the adapted SERVQUAL model can indeed be used to assess quality in HE, which they concluded, was achieved (2015: 53).

2.14.4.1 The five-gap model of service quality

Understanding Gap 5 of the SERVQUAL model of Parasuraman, Zeithaml and Berry (1990: 34) is critical to the study as it is related to the focus of this study: student expectation and student perception of service quality in a HE environment. Developed by Parasuraman, Zeithaml and Berry (1988), the five-gap model interprets the customer-company relationship and significantly highlights the gaps that contribute to unsatisfactory consumer experiences of services. Parasuraman, Zeithaml and Berry (1985: 42) defined service quality

as “the difference between consumer expectations of service and perceived service”. Meaning, if the perceived service of an organisation exceeds the expected service, then customers are likely to use the company again or recommend the company to others as word-of-mouth advertising. Wilson, Zeithaml, Bitner and Gremler (2016: 71) maintained that service quality reflects the consumer’s perception of the five dimensions, i.e. reliability, assurance, tangibles, empathy and responsiveness.



Source: Parasuraman *et al.* (1985)

Figure 2.5 The Five-Gap Model of Service Quality
Source: Parasuram, Zeithaml and Berry’s (1985)

Parasuraman, Zeithaml and Berry’s (1985: 44) discussion of the five possible gaps in facilitating a service is outlined as “understanding/knowledge gap, service design and standards gap, service delivery/performance gap, communication gap and the expectation gap”. The authors further declare that these gaps can be a great hindrance in affording a service of high quality as perceived by customers. In essence, if these gaps exist or are not kept to a minimum in a company, it can lead to an undesirable evaluation by customers of the service quality offered by the company. Businesses recognise that it is more profitable to retain current customers than to acquire new ones, so

expectations and perceptions must be measured to gauge if current consumers are satisfied with the service quality. Gap 5 is measured as a difference in score of $Q = P - E$ ($P =$ Perceptions and $E =$ Expectations) as clarified by Silva, de Moraes, Makiya and Cesar (2017: 415) and Adil, Ghaswyneh and Albkour (2013:4). The five gaps explained:-

- Gap 1: Understanding: There is a variance between the actual consumer expectations and management's perceptions of customer expectations. This occurs because management is unaware of exactly what the customer expects and thus do not offer what the customer essentially wants.
- Gap 2: Service Standard: The gap between management perception and service quality identification. This gap arises when management knows what customers want, but this is not interpreted into understandable and practical service delivery procedures. Even though knowledge of customer expectations exist, delivery of these expectations does not.
- Gap 3: Service Performance: This gap implies the difference between service delivery procedures and policies and the actual service delivery where employees do not fulfil the specified service quality or supply has not adequately met the demand. Companies have proper standards and procedures but find it challenging to maintain this consistent quality.
- Gap 4: Communication: The gap between service delivery and external communications. Tendency to guarantee more than an organization can deliver in products and services or lack of communication of current services offered to customers. This creates high expectations of quality but low perceptions when assurances do not match delivery. This, in turn, leads to

dissatisfaction, and customers are unlikely to purchase from the company again.

- Gap 5: Service Quality: This gap lies in the difference between customers' expectations and perceptions of the services delivered. Good quality service can be ensured by meeting or exceeding what consumers expect from the service. Customers' expectations are driven by marketing communications, word of mouth and customers' needs and experiences. Therefore, expectations must be defined so that a service provider can understand and make service delivery as tangible and visible as possible.

2.14.4.2 Criticism of the SERVQUAL model

The SERVQUAL model is aimed at understanding general constituents of service quality in various industries and organisations. Nevertheless, it faced criticism of its theoretical and operational underpinnings from numerous writers (Martinez Garcia & Martinez Caro 2010; Brady & Cronin 2001; Ekinci & Riley 1998; Buttle 1996; Iacobucci, Grayson, & Omstrom 1994; Teas, 1993; Andersson 1992; Babakus & Mangold 1992 cited in Polyakova and Mirza 2015: 65). The authors maintained that it focused not on the service delivery process but rather on the outcomes of the service encounter. Parasuraman, Berry and Zeithaml (1990: 36) asserted that a company would be impervious to a deterioration in quality if customer's perceptions were assessed in absolute terms instead of perceptions and expectations. Cronin & Taylor (1992) implied that the SERVQUAL model is "based on an expectation model rather than an attitudinal model and is not enough for measuring service quality across different service settings". They further defined quality as customer perceptions only and that assessing this dimension of service quality is enough to evaluate the level of quality received.

As pointed out by other critics (Ghotbabadi and Baharun 2015: 267; Machado, Ribeiro and Basto 2014: 267 and Buttle 1996: 10), one of the significant shortcomings to the model is that “the five quality dimensions are not universal” and the overlapping of some dimensions had a negative effect on the validity of the content. Based on the service industry and the model, the above authors claim that the descriptions of the dimensions and their number differ, thus making this model not conducive to all service industries. Jain and Aggarwal (2015: 128) negated this by stating the crucial dimensions: reliability, responsiveness, assurance and empathy of SERVQUAL are considered relevant. Khattab (2018: 28), Khoshraftar and Rozan (2014: 7), and Yarimoglu (2014: 90) further confirmed that it is a selected measuring instrument compared to other measurement tools and is widely accepted in both industry and academic settings. Jain and Aggarwal (2015: 131) presented a concise table highlighting the various models and censure by numerous critics on each model. These critics who do not support SERVQUAL and point out ambiguity between service quality and customer satisfaction claim no accurate tool to measure customers' expectations. It focuses on the process rather than the outcome; it is not universal and creates confusion among respondents.

Consequently, Parasuraman, Berry and Zeithaml's (1993: 140, 146) article contested Brown, Churchill and Peter's (1993) critique of the SERVQUAL's difference-score conceptualization in countless instances. Parasuraman, Berry and Zeithaml (1991: 445) have expounded that SERVQUAL has universal applicability, addresses critical questions regarding operating hours and serves as a meaningful structure for assessing a company's service quality. The authors mentioned above (1993: 146) significantly reiterated the advantages of assessing both perceptions and expectations instead of perceptions only while advising (1991: 445) on guidelines and caveats to ensure the appropriate and effective use of the SERVQUAL model. Despite various criticism from numerous authors, Papanmanthou and Darra's (2017: 141) Table 8 and Gupta and Kaushik's (2018: 584) Table II shows

SERVQUAL as the most widely used model to assess quality in all organisations, including HEIs. Therefore, the logical conclusion is that the SERVQUAL model is an open model that can be used in different industries, including the HE platform, due to its flexibility.

2.14.5 Justification for the use of the SERVQUAL model

This research aims to ascertain service quality deficiencies in the administrative sector at a KZN HEI; therefore, this study adopts the SERVQUAL model. Jain and Gupta (2004: 25) aptly recommended this instrument over SERVPERF to identify areas relating to service quality shortfalls. SERVQUAL is also a reliable survey instrument in terms of measuring the gaps between student expectations and perceptions. Ultimately, the outcomes can assist management to allocate resources to fill the gaps and offer superior quality of service that will eventually lead to student satisfaction. Studies conducted at the DUT (Nhari, 2017, Ngibe, 2015, Green, 2014; Pillay, 2011), UNISA (Nsamba: 2016) and the University of Kwa-Zulu Natal (Ncwane: 2016, Naidu: 2009) has provided the opportunity to conduct similar studies at other HEIs in South Africa using the SERVQUAL model.

Shauchenka and Busłowska (2010) discussed various tools to assess service quality in HE, and these include but are not limited to SERVQUAL, SERVPERF and HEdPERF. The SERVQUAL model, developed by Parasuraman, Zeithaml and Berry (1998), consists of 22 items to assess customers' expectations and perceptions of service delivery. This was further classified into five dimensions, i.e. reliability, assurance, tangibility, empathy and responsiveness. Adhil, Ghaswyneh and Albkour (2013: 4) explained the calculation of the quality gap as perceptions minus expectations. Parasuram, Zeithaml and Berry (1998: 30) endorsed the design of this instrument as it can be used across any service industry. Awoke (2015: 150) consequently proclaimed that SERVQUAL is adapted and used in various environments that include fast foods, banking, department stores, hospitals and the HE sector.

On the other hand, SERVPERF, developed by Cronin and Taylor (Singh, 2016; Bhatt and Bhanawat, 2016; Cronin and Taylor, 1992) and HEdPERF created by Abdullah Firdaus (Silva et al. 2017: Firdaus: 2005: 569), concentrate on a performance-only approach to assessing service quality. As noted in previous literature, various instruments were used to assess service quality in numerous industries, namely, SERVQUAL (Williams: 2018; Saleem: 2017; Anwowie: 2015 and Sharma: 2014), SERVPERF (Fragoso and Espinoza: 2017; Unuvar and Kaya: 2016) and HEdPERF (Singh, 2016: 10) amongst others

Papanthymou and Darra's (2017: 141) table reiterated that the most frequently used model measuring service quality in HE was the SERVQUAL model. Further empirical evidence of previous literature (Onditi and Wechuli: 2017; Uiso and Magali: 2017; Saleem, Hussain and Ahmed: 2017; Anwowie, Amaoka and Abrefa: 2015; and Cheruiyot and Maru: 2013) suggested SERVQUAL is an effective instrument in measuring service quality in the HE environment and is especially useful in offering direction to change deficiencies to strengths. Parasuram, Zeithaml and Berry (1998: 30) confirmed that the design of this instrument is such that it can be used across numerous service industries. However, it has received its share of criticism in the questionnaire's length and the dimensions' validity.

2.15 SUMMARY

This chapter delivered the study's theoretical framework and delved into a brief history of HE in SA and the formation of the DUT. The importance of conducting student surveys was highlighted, and further discussion involved service quality and student satisfaction in detail, drawing on empirical research conducted previously on HEIs. Emphasis was placed on understanding customer expectations and perceptions of service quality and the relationship between faculty support and the student. An analysis of the commonly used service quality models ensued. It was revealed that several models

incorporated almost all or some of the SERVQUAL dimensions to measure levels of service quality. The extensive focus was placed on the SERVQUAL model adopted for this study to ascertain the gap between customer expectation and customer perception of service quality. Parasuraman, Berry and Zeithaml (1990: 34) alleged that “knowing what customers expect is the first step in delivering quality of service”. Based on this phenomenon, this empirical study will focus on SERVQUAL (gap 5) to analyse students’ expectations and perceptions of the quality of service of the administrative staff at a UoT in KZN.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 INTRODUCTION

In the previous chapter, the researcher reviewed empirical literature related to research (Service quality of administrative staff for student satisfaction at a KZN University of Technology) to identify the research gaps to focus on the specific areas to make some valuable contribution to the aims and objects of this study.

In the analytical phase of research, relationship or patterns in data are identified, and the research question or hypothesis is answered. Descriptive statistics are used to interpret the analysis phase. This is an important phase as it is used to evaluate the outcome and ascertain whether the study participants are representative of a larger population and whether they have provided rich qualitative data. The research methodology begins with outlining the research aims, objectives and purpose of this empirical study followed by the research design and includes all methods of statistical analysis that can be performed.

Further, the research design on obtaining solutions to the objectives listed below and the selected method of collecting and analyzing the data. This chapter also conferred the research model of the population, sampling techniques, data collection instrument, validity and reliability, and data analysis method. A discussion of ethical considerations and standards concludes this chapter. The results thereof will be discussed in Chapter 4.

3.2 AIM AND OBJECTIVES OF THE STUDY

This study's main aim is to assess administrative staff's service quality to enhance student satisfaction at a KZN University of Technology.

In order to achieve the aim stated above, the following objectives were addressed:

- To identify student's expectations of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model;
- To identify students' perceptions of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model;
- To identify gaps between student's expectations and perceptions of service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model;
- To ascertain if students are satisfied with the service quality offered by the administrative staff of the Faculty of Management Sciences based on the gap analysis above.

3.3 RESEARCH PARADIGM

(Mackenzie & Knipe: 2006) cited in Kivunja and Kuyini (2017: 26), the defined paradigm in educational research is a researcher's 'worldview'. The authors Kivunja and Kuyini (2017: 26) further explained that paradigms comprise four elements, epistemology, ontology, methodology and axiology. The research paradigms are classified into three philosophically distinct categories, i.e. positivism (quantitative), interpretivism (qualitative) and critical postmodernism. The positivism approach is a part of epistemology and is one of the dominant paradigms applied in educational research. The role of the researcher is limited to data collection and interpretation. Knowledge gathered is objective, usually quantifiable and observable and leads to statistical analysis under the positivism philosophy.

Furthermore, the researcher is independent of the study, meaning there is minimal interaction with the study participants, thereby making the research purely objective and concentrating only on the facts obtained with data

collection undertaken based on statistics and many participants. “In respect of data analysis, the choice of the Positivist paradigm means that the data to be gathered will be quantitative in nature and are most likely to be analysed using quantitative procedures”. (Kivunja and Kuyini (2017: 36).

In light of the above, this study is in the positivist paradigm. It involves ascertaining students’ perceptions and expectations of the quality of service delivery, so the quantitative research design is adopted, allowing for a broader study involving more respondents to answer questionnaires that consisted of closed-ended questions. Replication and comparisons with similar studies can be conducted over time to obtain a better understanding.

3.4 RESEARCH DESIGN

A good research design is a framework that ensures that the data obtained will provide practical solutions to the variables specified in the research objectives by answering the questions validly. Sekaran and Bougie (2016: 95) defined research design as “a strategy for collecting, measuring and analysing data”. Research should be a systematic and rigorous investigation of identifying gaps in knowledge of the unknown, which then produces an outcome under a given set of conditions, explained Kumar (2019: 46). The author aptly quoted, “The strength of **what** you find largely rests on **how** it was found”, meaning that the research design must be valid, workable and manageable. Additional authors (Thyer, 1993: 94; Kerlinger, 1986: 279 and Selltiz et al., 1962: 50 cited in Kumar 2019: 154) offer various observations regarding a research design; explaining that research is a strategy of how a study is to be accomplished; obtaining answers to research questions and is a data-gathering process for analysis to test hypotheses. A good research design entails data collected objectively and ensures that the obtained information is pertinent to the research problem. In essence, the research design constitutes the research paradigm, population and sample size, procedure on obtaining and analysing data, reliability and validity, and research ethics, which is discussed further in

this chapter. An intense discussion of qualitative, quantitative and mixed design methods, sampling and reliability and validity follows. However, for this study, only a quantitative design was adopted, with the justification of the use of purposive sampling and the validity and reliability of the measuring instrument.

3.4.1 Qualitative research design

Kumar (2019: 170) describes the qualitative design as being recognised and specific to a lesser degree and not as sequential and structured as quantitative studies. The author indicates that qualitative design involves the researcher seeking agreement between the participant's response and the researcher's interpretation. The gathering of information is often flexible. No generalisations are emphasised as conclusions are communicated in a narrative and descriptive manner. Consequently, Salkind (2014: 13) explains qualitative research to explore phenomena within the political, social and cultural settings in which they happen. Qualitative design involves interviews, focus groups and case studies where research problems become research questions founded on previous understanding or experiences. Data is gathered via open-ended questions. Creswell and Creswell (2018: 183) cogently indicated that the interviewer is an integral part of the qualitative design as "the enquirer is involved in a sustained and intensive experience with participants". Qualitative research is not suitable for this study, as numerical data must be gathered to ascertain the aims and objectives.

Creswell and Creswell (2018: 13), Astalin (2013: 119), and Sekaran and Bougie (2016: 97-99) discuss the five most common approaches in qualitative research:

3.4.1.1 Ethnography

It is a descriptive style of study on human culture and society. The researcher immerses themselves and observes the subjects in their natural setting, thus

experiencing the environment first hand where people under study have something in common. This design involves a detailed description of the setting.

3.4.1.2 Narrative

The researcher holds unstructured interviews or asks open-ended questions and focuses on the lives of an individual as told by their own stories. It involves an account of or the history of something.

3.4.1.3 Phenomenological

The researcher systematically conducts many interviews on events and experiences so that sufficient information can be assembled to look for developing themes and then use other participants to confirm the findings. This design is a study of incidences in their natural surrounding that exists as a fundamental part of the world that we live in.

3.4.1.4 Grounded theory

This design explains the events and allows theory to emerge from the systematic yet flexible process of data collected. The researcher does not formulate a predetermined theory; instead, a theory is built on the data gathered. It can be said that theory is grounded in data.

3.4.1.5 Case study

The researcher performs a holistic study of a single group, individual or organization where sufficient knowledge is unavailable. This approach involves a descriptive and exploratory investigation into a phenomenon in its real-life setting.

3.4.2 Quantitative research design

Kumar (2019: 170) described the quantitative design as being recognised, specific and tested for their validity and reliability where the design is more structured, rigid and fixed. Quantitative research finds evidence to either support or contradict a theory and shares the study's finding with participants, unlike qualitative design. This design is also used to observe the relationship between variables, and the results can be documented definitively and objectively using numerical data. It deals with numbers and can be measured. Data can be analysed statistically and viewed as credible and assist in the decision-making process of an organisation. There is more distinction and clarity in the quantitative study between designs and data collection methods, declares Kumar (2019: 170). Deductive processes, which works from more general to more specific, are used often in quantitative studies, and this assists in understanding or predicting business phenomena, emphasises Sekaran and Bougie (2016: 26). Despite various research designs, this study is based on a quantitative paradigm, as it is statistical.

The nature of this research was descriptive as the main aim is to assess the quality of service delivery to enhance student satisfaction, thereby defining the current status of opinion or behaviour from respondents. Salkind (2014: 269) explains descriptive research design as collecting data from respondents only once to understand events in the present and how associations or relationships are established between variables

The study adopted a cross-sectional method as it was conducted at a specific point in time, as explained by Creswell and Creswell (2018: 149) and Salkind (2014: 329). It was also an observational study that analysed data collected from a cost-effective and less time-consuming population. This study involved the distribution of questionnaires to respondents that were present either in a classroom setting or online, thus saving time and money.

Not only is quantitative research results valid and reliable, but another advantage is that it can be generalized to a larger population. The dependent and independent variables are clearly defined, and the research aims and objectives can be followed. However, as articulated by Kumar (2019: 14), the disadvantage is that quantitative design might be rigid and artificial due to the structured nature of questions. This is consistent with Dowd (2018), who purported that questionnaires are vulnerable to errors as mistakes can be made in measurements or sampling techniques. A brief description of quantitative research designs follows.

3.4.2.1 Descriptive design

Kumar (2019: 15) defines this design as ultimately seeking to describe a situation, problem or phenomena by gathering information that can be used to statistically analyze a target population without influencing or manipulating the variables. The hypothesis is developed after the data is collected. Descriptive design involves observational, case study and survey research.

3.4.2.2 Correlational design

Discovers or establishes a relationship between variables using statistical analyses as written by Kumar (2019: 15). The degree of association between two or more variables is measured. It is observational mainly in terms of data collection and does not look for cause and effect.

3.4.2.3 Quasi-Experimental design

This design looks to establish a cause-and-effect relationship between two or more variables. However, Sekaran and Bougie (2016: 179) emphasise that this is a fragile design as there is no comparison between groups. Although closest to actual experiments, there is no random assignment of participants, and the independent variable can be manipulated. This design has attributes

of both experimental and non-experimental designs and allows generalisations about a population.

3.4.2.4 Experimental design

The researcher starts with the cause and is given sufficient time to see its effects. Changes in one variable cause visible changes in another. This is identified as a causal relationship and used to establish a cause-effect relationship among variables and includes actual experiments characterised by the control of all variables except the independent variable.

3.4.2.5 Survey design

Creswell and Creswell (2018: 149) reported that this design describes the opinions and attitudes where a sample of the population is studied. Cross-sectional and longitudinal studies are adopted, and for data collection, questionnaires or structured interviews are used. The population is frequently visited at regular intervals in longitudinal studies to collect the required information. A cross-sectional study is an observational study that analyses data collected from a cost-effective population and is not time-consuming.

3.4.2.6 Cross-sectional studies

According to Sekaran and Bougie (2016: 104), this survey design is predominantly used in social sciences to collect data at one point, which is sufficient to find pertinent answers to a research question. This study adopted the cross-sectional method as it involves distributing questionnaires to respondents at one location, either within a classroom setting or online, at one point in time, thus saving time and money and making it convenient for the respondent. This will describe the overall picture in ascertaining students' level of satisfaction with the service offered, which is the principal purpose of this research. This will also benefit by removing assumptions about the level of service delivery leading to student satisfaction and replace them with actual data gathered during the period accounted for. The results of this empirical

study can assist in understanding the relationship between service delivery and student satisfaction, thus helping to learn more about what is going on in a specific population. Kumar (2019: 174) cites the advantages of this design as cheap to undertake as data is only collected once at a specific point in time, and it is easy to evaluate, thereby creating new theories or in-depth research. However, the author also stipulates that changes in behaviour cannot be measured as it is necessary to have at least two studies at two data collection points on the same population. This, as postulated by Kumar (2019: 174), is necessary a distinct disadvantage.

3.4.3 Mixed-Methods research design

Qualitative and quantitative data incorporate the mixed methods research design in a single study to better understand or interpret the research question or hypotheses. Sekaran and Bougie (2016: 106) note that inductive and deductive thinking can be combined in the mixed methods design to address and solve research problems using different data types. Data collection and analysis features both the methods as one data source may not be sufficient, or the results need a more in-depth explanation. This method allows the researcher to develop a complete understanding or confirm the findings when collecting similar results from different perspectives. Terrell (2012: 273) concurs that using this design, the researcher can draw on the details that allow for greater depth of understanding offered by qualitative research while accentuating the extent of generalization offered by quantitative research.

3.5 SAMPLING

The process of selecting several individuals for a study to gather information about a population is known as sampling. The selection is made in a way that represents the larger group from which the respondents are selected. This arises from the inability to test all persons in a given situation and has the advantage of saving time and money. Sekaran and Bougie (2016: 237)

explains a sample as being a “subset of the population” while Kumar (2019: 292) confirms sampling as “selecting a few from a bigger group” to aim to evaluate what is likely to be the condition of the total study population. When selecting samples, the criterion must be set to confirm that the data collected is consistent with research objectives. Conclusions can be drawn by studying the samples that can be generalised to the population, and that sampling is likely to produce more reliable results (Seekaran and Bougie, 2016: 237). The authors (2019: 239) further discuss sampling as a process whereby the correct elements from an adequate population is selected so that an understanding of the characteristics of the sample can be generalized to the population elements. Kumar (2019: 292) implied that there is a possibility of error in predicting the population’s characteristics of interests instead of gathering information about them.

3.6 STUDY POPULATION

Quoting Sekaran and Bougie (2016: 236), “population refers to an entire group of people of interest that the researcher wishes to evaluate”. They are a large group of potential individuals taken from a general population that focus on the study. They share common characteristics such as age and gender. Not every individual in a large population, due to time and cost factors, can be tested. Population refers to an entire group of individuals from the general population who become the study's primary focus and share common characteristics, such as age and gender. Kumar (2019: 92) maintains the study population needs to be narrowed to be made as specific as possible in order to select the appropriate respondents, while Sekaran and Bougie (2016: 240) indicate, “The population must be defined in terms of elements, geographical boundaries and time”.

Kumar (2019: 292) explains the sample or target population as the selected people from the study population the research gathers the information. The UoT consists of thousands of registered students, so for this study, the target

population consisted of full-time and part-time post-graduate students registered at the DUT. This population sample was carefully chosen as it was appropriate to obtain the data necessary for this research. The full-time and part-time B-Tech students enrolled at the FoMS at the DUT were defined as the target population of this research. This selection was because they have been at the University long enough to enable informed data to be garnered from them and can provide the relevant feedback required for this study during the data gathering process.

3.7 SAMPLING STRATEGY

Sampling is generally a viable solution as it is time-consuming, expensive and virtually impossible to research the whole population. A subset representing a larger population is referred to as a sample. This is consistent with Kumar (2019: 292), who reiterates, “A sample is a subgroup of the population that you are interested in” when answers to research theories or questions are sought where it relates to the total population. The population from which the sample is extracted, known as the sample size, is enough to be generalized to the entire population.

Using the survey method in data collection can assist in examining every element of a population or just a sample of a population. Fowler (2008 cited in Creswell and Creswell 2018: 12) maintains that survey research could gain attitudes and opinions of a population by studying a population sample using questionnaires. Sekaran and Bougie (2016: 237) describe a sample as a subset representing a more significant population where some, but not all, elements are selected. The number of elements from which the sample is drawn is known as the sample size, which can be generalised to the entire population. It gives the researcher more control over the population and is easier to avoid errors. Furthermore, resources do not allow for the entire population to be surveyed. The study population must be narrow to be as

specific as possible to select the appropriate respondents and show clarity to readers (Kumar 2019: 92).

At the outset, the sample population of this study comprised of a subset of 1 123 full-time and part-time B-Tech students registered in the FoMS in the year 2018. Over 2 years, due to the phasing out of the B-Tech qualification, the registered number of students for this faculty dropped drastically to 355, so the sample size will therefore be 185 respondents as represented in the table provided by Krejcie and Morgan (1970 cited in Sekaran and Bougie 2016: 263). This sample will allow the level of satisfaction or dissatisfaction with the quality of service delivery to be established.

- **Inclusion criteria:** Full-time and part-time B-Tech students enrolled in the Faculty of Management Sciences at the DUT ML Sultan Campus.
- **Exclusion criteria:** Semester 1, semester 2, semester 3, semester 4, semester 5 and semester 6 students registered in the Faculty of Accounting and Informatics, Faculty of Applied Sciences, Faculty of Arts and Designs, Faculty of Engineering and the Built Environment, Faculty of Health Sciences, Faculty of Management Sciences as well as all students registered at the Pietermaritzburg and Riverside campuses. Furthermore, full-time and part-time B-Tech and annual students registered in the Faculty of Accounting and Informatics, Faculty of Applied Sciences, Faculty of Arts and Designs, Faculty of Engineering and the Built Environment and Faculty of Health Sciences were excluded from this study as well.

3.7.1 Sampling design

Kumar (2019: 296), Salkind (2016: 97) and Seekaran and Bougie (2013: 247) describe two critical categories of sampling designs viz. probability and non-probability:-

3.7.1.1 Probability sampling design

In probability sampling, Kumar (2019: 296) stipulates, “It is vital that each element in a population has the same or equal chance of being selected”, meaning it is not influenced by personal preference, thus avoiding biases in selection. This sampling technique has the advantage in that the inferences can be generalized to the population. Probability sampling identified by Kumar (2019: 302), Salkind (2014: 97) and Sekaran and Bougie (2016: 242) is outlined below.

- **Simple random sampling**

Each element in the population has an equal opportunity to be chosen to participate in the study. Methods used to select a random sample can be the fishbowl method, a table of randomly generated numbers, or a computer program. However, this sampling method is known to be time-consuming and expensive.

- **Stratified random sampling**

The population is stratified to the extent where the profile or characteristics of the sample match the population's profile. If the sample selected is as closely represented as possible of the total population, then observations made can be inferred to the total population. More information is garnered within a sample size.

- **Cluster sampling**

The sampling population is split into individuals known as clusters based on geographical locations or common characteristics. Subsequently, each that are correlated with the primary variable of the study.

- **Systematic sampling**

This method is seen as a “mixed” sampling design as it has features of both random and non-random sampling designs. Here, the sampling frame is first divided into several segments call intervals and then every n th element, beginning with a randomly chosen element between 1 and n , is drawn.

3.7.1.2 Non-Probability sampling design

According to Kumar (2019: 306), “non-probability sampling design is used when the number of elements in a population is unknown and do not have probabilities attached to their being selected as sample subjects”. However, Seekaran and Bougie (2016: 250) indicate that these designs cannot be easily generalised to the entire population. Researchers use this technique when wanting to obtain information that is quick and inexpensive. Thus, they are less concerned with generalizability. Salkind (2016: 105) indicates that sampling errors are smaller and more representative of large sample size. Creswell and Creswell (2018: 150) describe non-probability sampling as selecting respondents due to convenience and availability. Etikan, Musa and Alkassim (2015: 1) emphasise that although non-probability sampling is not a good representative of the population and has its limitations; this type of sampling is beneficial to the researcher when the population is substantial, or when limited resources, workforce, and time is challenging, as is with the current research.

Nonprobability sampling identified by Kumar (2019: 306), Salkind (2014: 102) and Sekaran and Bougie (2016: 242) is outlined below.

- **Quota sampling**

This type of purposive sampling is where the researcher is directed by some noticeable characteristic, e.g. race or gender of the study population of interest and will enlist elements until the required quota is met. Generalizability is restricted as this sample is not typical of the population.

- **Convenience sampling**

The selected respondents or participants of a population are easily accessible to partake in the research, defined as convenience sampling. Kumar (2019: 306) and Sekaran and Bougies (2016: 247) describe convenience sampling as primarily guided by convenience to the researcher, considering the geographical location and easy accessibility to gather information quickly and efficiently.

- **Expert sampling**

The participants must be specialists in the area of interest to the researcher. This method in qualitative and quantitative designs is used to garner information from known persons with expertise in the field.

- **Snowball sampling**

The researcher gathers information from some respondents in a group or company. These individuals are then asked to suggest other people within the same company, making the latter part of the sample. The process continues until a saturation point is reached in terms of information reached.

- **Purposive sampling**

Sekaran and Bougie (2016: 248) define purposive sampling as “obtaining information from specific target groups” instead of conveniently available respondents.

The authors explain the two major types of purposive sampling as:-

- Judgement Sampling - the researcher selects a pre-determined number of respondents who can deliver the pertinent information to accomplish the research's aims and objectives.
- Quota sampling – assigning a quota to ensure that specific population categories are sufficiently represented in the study.

3.7.2 Justification for the use of sampling technique

Considering the effort, accessibility and time needed to do a probability sample, the researcher could not use the probability sampling method, so the option selected was the non-probability sampling method. Unless conducted on a tiny population, a census survey is impossible due to resources, time and cost constraints, so a sample survey has opted for this study. Previously, convenience sampling was selected, but after much discussion and deliberation with professors and learned educators, the researcher opted for the purposive judgement sampling technique. This was chosen as the respondents were readily available, and due to time and financial constraints, this technique was found to be suitable. Furthermore, using purposive sampling assisted the researcher in gathering useful information, which otherwise would not have been possible using a probability sampling technique that required a more formal approach to the list of populations. Due to the POPI act, this was not easy to come by. The DUT comprises six faculties, but the researcher focused on one faculty within the UoT due to convenience. To prevent bias, only respondents who met the inclusion criteria, i.e. full-time and part-time registered B-Tech students in the FoMS were selected. As the respondents may be atypical, this method was used with caution. This selection of students was registered at the UoT long enough for relevant information to be garnered from them. Etikan, Musa and Alkassim

(2015: 2) reiterate this by stating that the researcher seeks knowledgeable and willing respondents to provide the information by experience. These participants are also well informed with the current phenomenon of interest, i.e. service quality of administrative staff at a UoT. It was noted that these students were educated, communicative, and reflective of the services rendered.

3.7.2.1 Advantages of purposive sampling

- The most cost-effective and time-effective method that allows the researcher to obtain informed data;
- Allows the researcher to define the significant impact the findings have on the population;
- Data collection can be garnered in a minimal of time when quick and timely information is needed.

3.7.2.2 Disadvantages of purposive sampling

- Prone to influences and biases as researcher specifies the target population;
- Limitation in making inferences and generalizations about the entire population as the sample does not represent the population.

3.8 SOURCES OF DATA

Research questions or hypotheses can be answered by collecting data using qualitative, quantitative or mixed methods where the distinction lies in obtaining solutions to questions. Data gathering can be from either principle or secondary sources. Sekaran and Bougie (2016: 2) define primary data as “attaining information first-hand while secondary data is information obtained from existing sources”. This study focuses on primary data collection and analysis. The researcher handed out or emailed questionnaires to students, and these were collected at the end of the lecture and when the online closing

date was reached. Primary data was necessary for this study to gauge responses to the objectives outlined in chapter one as this information was not compiled or published previously. The data collected was current and relevant to the research, so the accuracy can be considered high, and the views considered realistic.

3.9 DATA COLLECTION

Information should be collected using established practices to ensure and protect the reliability and credibility of data. Numerous data collection methods involved in quantitative research design are present. However, for this study, the survey method involving questionnaires, which was administered to the entire time and part-time B-Tech students enrolled in the FoMS at the DUT, was selected as the primary method of data collection. Creswell and Creswell (2018: 147) and Fink cited in Sekaran and Bougie (2016: 97), acknowledged that survey designs provides a quantitative description of opinions, knowledge, attitudes, and behaviour of a population and helps the researcher answer descriptive questions. Salkind (2016: 8) posited that collecting relevant information should reveal as much of the truth as possible and that survey questionnaires should be used when the information required tends to be straightforward. This is consistent with (Fink cited in Sekaran and Bougie 2016: 97), who commented that survey strategies are prevalent in business research and are used in a variety of research methods to collect data about people, events or situations to measure satisfaction, use of health services and management information systems. Surveys can be used continuously, allowing the researcher to observe changes over time.

3.9.1 Measuring instrument

According to Kumar (2019: 222) and Sekaran and Bougie (2016: 143), a questionnaire is an efficient data collection mechanism to collect large numbers of quantitative data where respondents record their answers to a set of predefined questions. A questionnaire is a research instrument comprising a sequence of questions to gather information relevant to the research at hand. Open-ended questions are qualitative, while numerical responses are considered quantitative (Kumar 2019: 214).

The measuring instrument used is a survey questionnaire consisting of closed-ended questions. This is appropriate to collect data on a supernatural phenomenon that cannot be observed directly. Questionnaires ensure a high response rate, are less expensive and provide greater anonymity (Kumar 2019: 226). Furthermore, the author (2019: 229) maintains that close-ended questions have possible answers set out already, and the participant has merely to select the appropriate one suited to him/her. This helps the respondent to make quick decisions and helps the researcher code the feedback quickly. In addition, Creswell and Creswell (2018: 149) agree that surveys provide a rapid turnaround in data collection. The researcher can also clarify any issues respondents may have, and it is less expensive and less time-consuming. Questionnaires require that the respondents remain anonymous, allowing them to be more truthful regarding controversial issues. For this research, the measuring instrument for primary data collection was an adapted SERVQUAL questionnaire consisting of closed-ended questions that would assist in accomplishing the aims and objectives of the research. The Likert scale of 1 = strongly disagree to 5 = strongly agree adopted to measure the students' responses. The questions based on the aims and objectives of the study were easy to understand and interpret as Kumar (2019: 232) emphasises that "respondents should feel as if someone is talking to them". The author further maintains that questionnaires ensure a high response rate as people are assembled in one place.

3.9.2 Design of the questionnaire

The foundation of the research design, the data gathering and ultimately the data interpretation and analysis is based on the research question. A poorly designed questionnaire can confuse the participant, and the outcome can be either that the participant provides incorrect information or leaves the question unanswered. Kumar (2019: 222) advocates that questions should be coherent and understandable. However, the author (2019: 227) also cautioned against a low response rate and participants being influenced by others when using questionnaires. A panel of independent experts confirmed the validity of the construct.

The formulation and wording of the questions is critical and influences the quality of information obtained from the participants, maintains Kumar (2019: 229). Furthermore, the author stipulates that the construction of the questions should be clear, succinct and appropriate to the subject at hand. In keeping with this, the following guidelines were adhered to in the phrasing of the questionnaire:-

- Short, easy to understand questions was used that was easy to read and interpret;
- No double negatives were used in the questions;
- The language was straightforward English without abbreviations;
- Questions regarding culture and emotions were avoided in expectations and perceptions;
- The questions were unambiguous so as not to confuse the participant, and no leading questions were asked;
- Questions are posed in a non-intrusive way, so respondents do not get the feeling that their lifestyles and beliefs are being judged

In keeping with the above, Sekaran and Bougie (2016: 145) further illustrated in Figure 9.1 the principles of questionnaire design. The authors expounded on the appearance and wording of the questionnaire, issues on how the

variables will be categorised, and the general appearance of the questionnaire. Moreover, the authors (2016: 150-154) subsequently warned on the “content and purpose of the questions, language and wording, open-ended versus closed questions, positively and negatively worded questions, double-barreled and ambiguous questions as well as leading or loaded questions”.

In wording each questionnaire question, the above recommendations were considered, and the questions were structured such that they were uncomplicated and logical to avoid the risk of misunderstanding. Every effort was undertaken to ensure that the language was practical and lacking ambiguity and that each question was designed with only the required information about the relevant faculty. Extra care was taken to phrase each question bearing in mind that the sample population from which the researcher sought opinions varied in their level of interest, expertise, commitment to the survey and that opinions changed over time. The questionnaire’s specific design pertained only to students' perceptions and expectations of the service delivery within a specific faculty. The wording was phrased to ensure that it was meaningful to the student and minimised biases. The length of time refers to the regular time it takes a single respondent to complete the questionnaire. During the pre-testing, the questionnaire was tested to ensure that it did not frustrate or exhaust the participant. Seekaran and Bougie (2016: 154) explain that when a researcher needs to reach a large number of respondents, then the most helpful data collection tool is a questionnaire. Furthermore, the results can be duplicated, and additions to the theory base can be made.

The questionnaire consists of four parts: information about the respondent, expectations of service delivery, perceptions of service delivery, and a section titled general to ascertain if the respondent was satisfied with the overall service. A brief explanation was given in each section. Section B and C incorporates the SERVQUAL questionnaire and uses the Likert scale. Participants were asked to evaluate their level of expectations and perceptions regarding the service delivery received. The letter of information (Appendix 5), a letter explaining the nature of the research to be conducted (Appendix 6) and

a letter of consent (Appendix 7) preceded the questionnaire. The respondent was assured that all data provided would remain confidential and anonymous to avoid verbal and written victimisation.

3.9.3 Administration of the questionnaire

There are numerous ways to administer questionnaires, as Kumar (2019: 223) and Creswell and Creswell (2018: 153) commented, including emailing the questionnaire, collective administration, and online questionnaires. The mailed questionnaire involved sending the questionnaire to prospective participants via email. Although this is the most common method, according to Kumar (2019: 223), the disadvantage is that this method has a low response rate. Collective administration is one of the best ways to have person-to-person contact with the study population and explain the research's relevance. This also ensures a very high rate of response. Finally, online questionnaires are electronic surveys administered easily via survey design websites such as SurveyMonkey (Seekaran and Bougie 2016: 155). One disadvantage of this method is obtaining participants email addresses, which can be difficult due to the PoPI Act and can be time-consuming.

Sekaran and Bougie (2016: 157) emphasised that questionnaires distributed personally are appropriate if respondents are conveniently assembled. The researcher decided on collective administration due to convenience. The sample population was available both on campus in a classroom setting as well as online. Printed copies of the survey questionnaires were distributed to the students in a lecture theatre by the researcher after gaining permission from various lecturers whilst adhering to the strict rules and regulations of the COVID-19 pandemic. Furthermore, online surveys were administered for the students to complete to ensure that the sample population was reached due to the pandemic. These methods ensured a high response rate with the study population. It gave the researcher a chance to explain the purpose of the study and clarify any issues or challenges the respondents may have had. "If you

have a captive audience for the study, don't miss the opportunity", expounded Kumar (2019: 223).

3.10 TESTING OF THE QUESTIONNAIRE

A pre-test or a pilot test is necessary to avoid data gathering obstacles and test the survey instrument's efficiency. Kumar (2019: 15) differentiated between pilot and pre-testing as the former was done on a small scale to determine the feasibility of undertaking the study on a larger scale and the latter as a "critical examination under actual field conditions on a group of respondents similar to the study population". According to Sekaran and Bougie (2016: 155), pre-testing is not for data collection purposes but to detect possible inadequacies or ambiguities with understanding the questions posed in the questionnaire and avoid primary data being compromised, thus reducing bias. The researcher pre-tested the instrument on a small number of participants from the FoMS before distributing them to the entire study population for actual data gathering. The intention of the research was explained and advised the students that participation was voluntary and that they were under no obligation to complete the questionnaire. These participants were not included in the main study. A timer was used to gauge how long it took the respondents to complete the questionnaire, and it was completed in under 15 minutes. The results of the pre-testing were that one typographical error was found, and this was amended accordingly. The pre-testing also served as a tool to measure the reliability and validity of the survey instrument. Creswell and Creswell (2018: 154) indicated that it is "important to establish the content validity of scores on an instrument".

3.11 VALIDITY AND RELIABILITY OF THE QUESTIONNAIRE

Sekaran and Bougie (2016: 220) aptly pointed out, “validity is concerned with whether we measure the right concept and reliability with stability and consistency of measurement”.

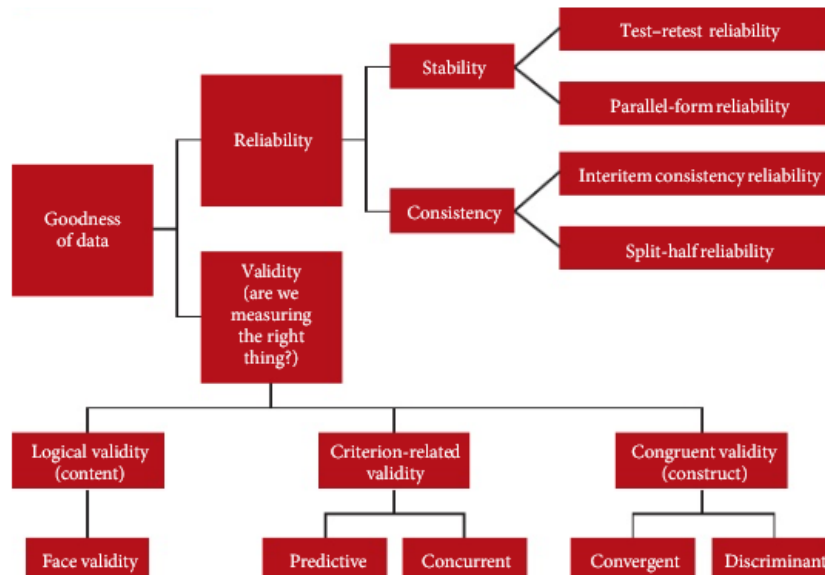


Figure 3.1: Reliability and Validity
Sekaran and Bougie (2016: 221)

3.11.1 Validity

Kumar (2019: 270), Sekaran and Bougie (2016: 205) and Salkind (2016: 123) propounded that the validity of the measuring instrument measures the concept that it sets out to measure. Creswell and Creswell (2018: 153) claimed that “establishing the validity helps researchers identify whether an instrument might be a good one to use in survey research”. When validity is established as accentuated by Kumar (2019: 271), then each question related to the aims and objectives of the study is justified as the inclusion of the questions is linked to the overall study. Denscombe (2010: 328) articulated validity as “the extent to which research data and the methods for obtaining the data are deemed accurate, honest and on target”. This study sets out to

measure the students' expectations and perceptions of administrative staff's service quality. The questionnaire was designed to be appropriate and adequate to the aims and objectives.

The two main types of validity are internal validity and external validity. According to statistics how to (2019), a simple definition is "Internal validity is a way to gauge how strong your research methods were while external validity helps to answer the question: can the research be applied to the 'real world'?" External validity is how the study results can be applied to the larger population to measure quality and accuracy. It helps us compare the interpretations, attitudes and behaviours of a range of relevant people to confirm that there are no significant discrepancies.

3.11.1.1 Criterion validity

Bolarinwa (2015: 197) defines this as "determining the relationship of scores on a test to a specific criterion".

3.11.1.2 Construct validity

To investigate its correlation with other constructs, both unrelated and related. Bolarinwa (2015: 197) explains validity as "how meaningful the instrument is when it is in practical use"

3.11.1.3 Content validity

Refers to the precision with which an assessment instrument has sampled from the intended area of information. Kumar (2019: 272) emphasised that it is essential to ascertain that the research questions covered all research areas.

Face validity, which is an index of content validity, was used in this study. Sekaran and Bougie's (2016: 221) definition of face validity was "items that are intended to measure a concept, do, on the face of it, look like they measure the concept". Before the pre-testing and data collection, the questionnaire was

scrutinised by an academic (research supervisor) in the field, a practitioner and a statistician to confirm that the research questions were based around the objectives of the study and that it met the standard protocols of the SERVQUAL mode. Kumar (2019: 272) discussed face validity as linking questions with the objectives, thus justifying the inclusion of such questions in the instrument. The questions set out in the study questionnaire are linked to ascertaining expectations and perceptions of the quality of service delivery received.

The validity and reliability of the SERVQUAL scale were reassessed by Parasuraman, Berry and Zeithaml (1991: 439 & 445), and this substantiated using the instrument to ascertain expectations and perceptions of service quality in various sectors. In numerous literature, SERVQUAL is the dominant method used to evaluate service quality, using a survey approach. Justification of the extensive use of SERVQUAL by various authors in higher education landscape by (Daniel, Liben and Adugna 2017; Saleem, Husain and Ahmed 2017; Nsamba and Makoe 2017; Latif *et al.* 2017; Donlagic and Fazlic 2015; Anwowie, Amoako and Abrefa 2015 and Nell and Cant 2014), gave the researcher assurance that this measuring tool will measure what it was designed to measure. As discussed in chapter 2 in detail, SERVQUAL's method of measuring quality was widely used in all industries and service organisations. Empirical literature was presented of SERVQUAL being used in the HE sector as well.

The researcher believed that the work was valid and relevant and measured the concepts addressed to the participants. Furthermore, the items used in the questionnaire have previously been tested by other authors and proved to be valid within the HE setting. The answers gained in preceding studies gave the researcher assurance that it was possible to gather the data to answer the research objectives with this questionnaire.

3.11.2 Reliability

The degree or the consistency to which an investigation is replicable is articulated in terms of reliability. When an instrument measures the same results under the same conditions, it can be considered that reliability is high. Salkind (2014: 165) describes reliability as “measuring the same thing more than once with the results constantly having the same outcomes”. Data is gathered and measured consistently according to standard methods and practices, similar to when repeating the measurements. Creswell and Creswell (2018: 154) stipulate reliability is essential because “the instrument scale items should be assessing the same underlying construct, so these items should have suitable inter-correlations”. Kumar (2019: 275) discusses external and internal consistency procedures to ascertain the instrument’s reliability. Test/retest, which are external consistency procedures, permits the instrument to be compared to itself. In contrast, internal consistency is explained as questions that measure the same occurrence should yield similar results if they are reliable indicators, irrespective of their number. Reliability can be assessed as follows:

3.11.2.1 Test-retest reliability

When the same instrument is administered to the same group of respondents under the same conditions with a reasonably short time interval between the administrations and the result obtained are the same or similar (Bolarinwa 2015: 198)

3.11.2.2 Parallel-form reliability

Sekaran and Bougie (2016: 224) maintain parallel-form reliability when two similar types of tests are used to measure the same variable simultaneously, with the only changes being the structure and rephrasing of the questions.

3.11.2.3 Internal consistency reliability

Bolarinwa cited that this assessment concerns “the extent to which items on the instrument measure the same thing”. This can be ascertained via split-half reliability testing, where the correlation between two halves of an instrument is replicated, alternatively, by using the coefficient alpha, which represents the average of all possible split-half estimates.

This study adopted the internal consistency procedure and used Cronbach’s coefficient alpha. This indicates how closely related a set of objects are as a group to determine the reliability of grouping the questions into the groups of the SERVQUAL scale (reliability, assurance, tangibility, empathy and responsiveness). The external consistency procedure was time-consuming. Pallant (2016: 101) asserted, “Cronbach’s alpha coefficient as being one of the most commonly used indicators of internal consistency”.

Scherbaum and Shockley (2015: 59) indicate that the reliability coefficients of Cronbach Alpha can range from 0.0 to 1.0, with “0 indicating a perfectly unreliable measurement”, and 1 is an indication of high internal consistency reliability. The Cronbach alpha coefficient test, which tests all possible split halves, was used to test the instrument for internal consistency. Seekaran and Bougie (2016: 225) and Pallant (2016: 101) stated that Cronbach’s alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another or how closely related a set is if items are as a group. This is a widely used tool to test internal reliability. Furthermore, the reliability of SERVQUAL is established from previous empirical studies in numerous industries to evaluate service quality, and this is adequate proof.

The researcher believed that the work was reliable in that, if future studies were to be undertaken, the results thereof would be similar to the current research. The items used and questions set out in the questionnaire were easy to comprehend and could be answered at any given time. However, the results could change when collected at another time due to students’ continuous expectations and perceptions.

3.12 VARIABLES

Kumar (2019: 105) cited a variable as a concept that can be measured and has numerals or values attached to it. The two main variables in research are the dependent and independent variables. Quantitative research is conducted to determine the relationship between a dependent and an independent variable within a population. Distinctions must be made between these two variables so that the outcomes are measurable. A dependent variable is measured, while an independent variable is changed or controlled and is explained as affecting the dependent variable (Statistics Solutions 2019).

3.12.1 Dependent variable

Creswell and Creswell (2018: 51) outline dependant variables as the outcomes influenced by the independent variables. For this study, the dependent variable is student satisfaction, as it is dependent on the level of service quality received from administrative staff. Kotler and Keller (2012: 128) define satisfaction as a customer's pleasure or displeasure from comparing a product's perceived performance to expectations. This study set out to evaluate the student's expectations and perceptions of the quality of service delivery that will ultimately result in either the student's pleasure or displeasure with the particular administrative department under study.

3.12.2 Independent variables

Kumar (2019: 107) indicates an independent variable responsible for bringing about variations in a condition. For this study, the independent variable is the quality of service delivery, which affects student satisfaction. However, because of the use of the SERVQUAL model, the dimensions of SERVQUAL (reliability, assurance, tangibility, empathy and responsiveness) are also considered independent variables as these are service quality factors that ultimately affect the dependent variable, student satisfaction. The dimensions

of the SERVQUAL model consists of questions that set out to measure students' expectations and perceptions of service quality. Therefore, satisfaction can be measured by matching the student's anticipated level of service with the actual service received. Once factors shaping satisfaction have been identified, policies and processes can be amended or developed to suit the needs of the students. Creswell and Creswell (2018: 50) emphasised that examining the relationship between variables is essential to answering questions through surveys and experiments.

3.13 DATA ANALYSIS AND PROCESSING

Quantitative data analysis involves a series of steps designed to assist the researcher in understanding the properties of the data collected and prepare the data for analyses to test the research questions.

Most research is performed so that accurate statements regarding the behaviour and characteristics can be ascertained. However, researching an entire population is somewhat impossible; therefore, data is gathered on a sample population and analysed to infer the total population. Once the data was collected, the process of data analysis was performed. Data analysis is used to organise and give meaning to the data that was collected. Sekeran and Bougie (2016: 273) advised that it must be coded and edited before data is analysed. Inconsistencies and blank or incomplete answers need to be handled. Firstly, the researcher ensured that the collected data was accurate by examining each questionnaire to ensure it was completed correctly and screen for missing data. Primary data collected is referred to as raw data, which must be systematically organised to make sense of the data to be easily analysed.

Once collected, the researcher organised and summarised the data to understand what the respondents had said. After that, the data were coded from the classroom questionnaires, and online surveys on a Microsoft Excel

worksheet then forwarded to a statistician. The researcher used Sekaran and Bougie's (2016: 273) suggestion of data coding whereby a number is assigned to response and then entered into a database. The response for each question was coded on a scale from 1 to 5 where 1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree and 5 = strongly agree. For this quantitative research, statistical tools were required to assist the researcher in the analysis phase. A qualified statistician processed the data using the SPSS (Statistical Package for the Social Sciences) Version 26. The interpretation and analysis of the data gathered were presented using descriptive and inferential statistics. The analysis allowed the researcher to deduce whether the responses were similar or different or relationships between what was studied. Multiple regression analysis was used to test the different concepts to determine relationships between one dependent variable and more independent variables.

3.13.1. Likert scale

Seekaran and Bougie (2016: 215) and Dawson (2017: 4) describe the Likert scale as a tool designed to evaluate attitudes and opinions of how strongly a respondent's views align, agree, or disagree with a set of statements presented. It is a five-point scale of 1 to 5 where 1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree and 5 = strongly agree. This scale was predominantly used for this study's expectation, and perception sections as the respondents could select the best option that suited their opinion. Under expectations, the respondent has to select a scale that they believe the level of service should be offered by an outstanding faculty as described in the statements and under perception, the scale they believe the faculty offers. It was also used to measure the student's attitude towards service delivery, and the results are easy to analyse objectively. Furthermore, Kumar (2019: 254) advocates that "this scale is created upon the assumption that each element on the scale has an equal value in terms of reflecting an attitude towards the topic in question".

3.13.2. Data measurement scales

Data can be classified into four measurement scales, viz nominal, ordinal, interval and ratio. This describes the value relationship and stipulates the type of mathematical operations performed on the collected data. Data collected during the survey are transformed into variables by using measurement scales outlined below:

3.13.2.1 Nominal – each observation is assigned a label but has no numeric value, and deductions can be drawn on whether the labels are the same or not. Kumar (2019: 117) states that the classification of responses is based on shared properties.

3.13.2.2 Ordinal – similar to nominal. The elements can be rank-ordered, but the distances between elements have no meaning. Kumar (2019:119) defines ordinal scale sub-categories arranged in order of magnitude of characteristic.

3.13.2.3 Interval – data that can be assigned numeric values and is computable. Differences in the distance along the scale can be interpreted. According to Kumar (2019: 119), this scale has a starting and terminating point and has equally spaced units.

3.13.2.3 Ratio – The defining property of this scale is its ability to compute ratios. Kumar (2019: 120) explains this ratio as an absolute scale used for mathematical operations.

The interval scale was adopted for this research as it allows the mean and standard deviation to be calculated and applied to the data measured. An Interval scale is defined as quantitative in that it can measure the variance between values, and the variances in the distance along the scale can be interpreted.

3.13.3. Descriptive statistics

In a descriptive study, the participants are generally measured once, usually to establish associations between variables. Descriptive statistics involving percentage frequencies and arithmetic mean are used and describes the summarising and sorting of quantitative data. It is helpful as it summarises results for an experiment, allowing for more constructive research after more detailed analysis. It allows for a straightforward interpretation of the data. Pallant (2016: 53) reports that one of the uses of descriptive statistics addresses specific research objectives. The first stage of the analysis was a descriptive analysis of the extent of service quality based on a set of variables that expressed the student's extent of expectation and perception according to a five-point scale.

3.13.3.1 Frequencies

Scherbaum and Shockley (2015: 45) wrote that frequency analysis commonly provides the growing number of observations and the cumulative percentage. Pie charts, bar charts and histograms are used to display frequencies visually, and this can aid in understanding the data, according to Sekaran and Bougie (2016: 280).

3.13.3.2 Measures of central tendency

Sekaran and Bougie (2016: 282) define the arithmetic mean, the median and the mode as the three measures of central tendency where the mean is the average computed by the sum of all the values divided by the total number of values. The median is the middle value in either an ascending or descending order, and the mode is the value that occurs most frequently in a data set. Scherbaum and Shockley (2015: 55) noted that the median and mode values could be slightly more stable from sample to sample than the mean.

3.13.3.3 Measures of dispersion

Sekaran and Bougie (2016: 283) discuss measures of dispersion as “the variability that exists in a set of observations, which is unique to nominal and interval data”. It gives a clear idea about the distribution of the data and the variation of the data from one another. Most common are the range and the standard deviation. According to Scherbaum and Shockley (2015: 55), the range is computed as the difference between the maximum and minimum value of a variable, while the standard deviation (2015: 56) is the variability or spread of the data from the mean.

3.13.4. Inferential statistics

In quantitative research, the findings generalize theoretically beyond the studied population as the outcomes can be applied to other individuals who have not answered the survey. The inferential statistical analysis, therefore, allows the researcher to conclude populations from sample data. The researcher is interested in the outcome of a study on the impact of service delivery on student satisfaction. However, due to the researcher applying the purposive sampling method, the collected sample in this research is not considered a representative sample for the entire population, Sekaran and Bougie (2016: 250). Therefore the results were unique for this particular group of people. So inferences will only be made to the B-Tech full time and part-time students registered in the FoMS as this is a distinctive group selected for this study. This is also based on the assumption that all full time and part-time B-Tech students within this faculty will have similar experiences. Inferential statistics examines the differences and relationships between two or more population samples, but this study comprises only one population sample.

The following statistics can be used to explore relationships between variables:

3.13.4.1 Correlation

Scherbaum and Shockley (2015: 58) reported that Pearson correlation or Spearman correlation is a statistical technique used to assess the strength of the relationship between two or more variables. Correlation enables us to determine the connection between the actual dimensions of two or more variables. This study adopted Pearson's correlation to verify the association between variables in the SERVQUAL model, the most widely used statistic.

3.13.4.2 Partial correlation

Pallant (2016: 107) describes this statistic as removing the effect of the confounding variable so the researcher can get a detailed picture of the relationship between two variables of interest.

3.13.4.3 Regression analysis

This statistic is used when "one independent variable is hypothesized to affect one dependent variable" (Sekaran and Bougie 2016: 312).

3.13.4.4 Multiple regression

This regression seeks to find a linear association between one criterion variable and more than one independent variable. As Pallant (2016: 108) reported, it explores a set of independent variables' predictive ability on one continuous dependent measure. Sekaran and Bougie (2016: 314) explained that multiple regression coefficients indicate how vital each independent variable is in predicting the dependent variable.

3.13.4.5 Factor analysis

Factor analysis comprises of two forms, as mentioned by Pallant (2016: 182). In the early stages of research, exploratory factor analysis is used to explore the correlation among a set of variables. A more sophisticated technique,

confirmatory factor analysis, is used later in the research process to confirm specific theories. This study was used to determine if SERVQUAL was an appropriate tool to assess student satisfaction in a HE environment. However, as SERVQUAL is a pre-existing widely used tool, Parasuraman, Zeithaml and Berry (1991: 445) conducted confirmatory factor analysis, and validity was established in all aspects. Pallant (2016: 182) further reiterated that factor analysis is used to evaluate tests and scales.

3.13.4.6 T-Test

Scherbaum and Shockley (2015: 61) indicate T-tests are used to ascertain a noticeable difference between the means of two groups or two sets of data, e.g. male and female. Pallant (2016: 109) discusses the two main types of T-tests: paired-sample T-tests used to test changes in scores tested at Time 1 and again in Time 2. The opposite will be independent sample T-tests used to collect data only once but from two different sets of people. The researcher is interested in comparing their scores.

3.13.4.7 One-way analysis of variance (ANOVA)

It is used to differentiate the mean scores on a continuous variable when two or more groups determine just one independent variable's impact on the dependent variable (Pallant 2016: 109).

3.13.4.8 Two-way analysis of variance

Two-way analysis of variance, as explained by Sekaran and Bougie (2016: 322), examines the effects of the independent variable on the dependent variable and the interaction effects that exist between the independent variables.

3.13.4.9 Multivariate analysis of variance (MANOVA)

Scherbaum and Shockley (2015: 91) state that this statistical analysis evaluates an independent variable or multiple independent variables on multiple dependent variables.

3.13.4.10 Analysis of covariance (ANCOVA)

To ensure that the independent variable is doing the influencing, ANCOVA can be used to statistically remove the effect of the covariate (Pallant: 2016: 110).

3.14 ETHICAL CONSIDERATIONS

Sekaran and Bougie (2016: 159) and Salkind (2014: 85) unanimously agree that the self-esteem and self-respect of the subjects should never be violated. Human beings must be treated in a way whereby dignity is maintained despite the nature of the research or its outcome. They should not be harmed either physically or psychologically, and breaching confidentiality must be avoided at all costs. Kumar (2019: 356) asserted that misusing respondents' information constituted unethical behaviour in any profession and that a code of conduct must be adhered to religiously. Salkind (2014: 91) significantly reiterated ethical guidelines that should be followed to ensure that the research is performed ethically with minimum risk to the respondent.

According to the DUT's Research Ethics Policy (2013), the researcher undertook the ethical requirements and completed the ethical issues checklist for research approval (Appendix 1). Voluntary participation was outlined in the letter of information (Appendix 5) and the covering letter (Appendix 6). These letters and the letter of consent (Appendix 7) were distributed with the survey instrument and then returned with the date and the participant's signature. The information letter provided an introduction to the study, outlined the aims and objectives and advised the participant of the benefits of this study. The letter also notified the participant about the details of the researcher as well as the

supervisor. It informed the respondent that there was no monetary value or costs to bear and no injury to the participant.

Furthermore, the consent letter assured the applicant that their participation was voluntary and anonymity and confidentiality in participating in the study were ensured. The letter of authorisation was obtained, giving the researcher permission to research the DUT from DUT's Institutional Research and Innovation Committee (IRIC) (Appendix 2) as well as the DUT's Institutional Research Ethics Committee (IREC) (Appendix 3). Anonymity and confidentiality are essential to confirm no victimization of any participant, and this was ensured in that the identity of respondents will not be revealed.

3.15 ASSUMPTIONS, DELIMITATIONS AND LIMITATIONS

Firstly, the results obtained from this empirical study can not be generalised to other departments or universities of a similar nature because a non-probability sampling method is used. This was a significant limitation of the study; however, the methodology used could be applied to similar situations. This research is limited to the administrative staff of one faculty, at one UoT, in one province due to convenience. The results provide crucial information relevant to this as it discloses the University's quality gaps that students in the study identified.

The quality of service would be considered excellent if the perceptions exceeded the expectations, reasonable or adequate if perceptions equalled expectations or poor if perceptions did not meet expectations at all. The study was conducted at only one of the six faculties at one HEI within the KZN province. For this reason, the result of this study could be seen as not being representative of the estimated result. A future study based on all six faculties or more HEI's could yield more representative results.

The literature review (chapter 2) showed various service quality models that could have been used instead of Parasuraman, Zeithaml and Berry. However,

the researcher chose to use the SERVQUAL model for this study, as it is a well-documented model globally.

3.16 SUMMARY

Numerous research methods were described in this chapter, and the reasoning behind why specific methods were chosen for this study. Details of the research instrument adopted for this study, its organisation, collection and analysis of the data was explained. Information gathered for the study was directly related to this research's aims and objectives, thereby ensuring that reliability and validity were met. To effectively communicate the ethical considerations and an unhindered data collection process, the researcher personally administered questionnaires within the classroom and online methods. Permission was obtained from the IREC (Appendix 3) sector at the DUT to conduct the research. The sample population was the full-time and part-time BTech students registered in the Faculty of Management Sciences. The next chapter concentrates on the results, discussions and interpretations of the findings of the study.

CHAPTER FOUR: EMPIRICAL FINDINGS AND DISCUSSIONS

4.1 INTRODUCTION

Chapter three reiterated the aims and objectives of this study. After that, the discussion centred around the research methodology applied to this study in terms of the research design, sampling design, study population, sampling strategy and method, data sources and collection, design and administration of the questionnaires. After this, this study's data analysis was detailed, followed by an in-depth discussion regarding validity and reliability.

The study results are presented in this chapter, and the primary data collected using the questionnaire are analysed. This is necessary so that the research aims and objectives outlined in chapter one can be achieved to make necessary recommendations that will contribute to the development of strategic decision-making processes with the FoMS regarding the level of service quality and student satisfaction.

4.2. QUANTITATIVE DATA

The survey questionnaire was the primary research instrument used to collect data and was distributed to both full time and part-time B-Tech students registered in the FoMS at the DUT's Durban campus. The research instrument consisted of 50 items, with a level of measurement at a nominal or an ordinal level. The questionnaire distribution to 355 students was via email, online via Google forms and in a controlled classroom setting as per COVID-19 rules and regulations. 185 responses were received, and this was the total sample size according to the table was provided by Krejcie and Morgan (1970) cited in Sekaran and Bougie (2016: 263).

Each respondent answered all 50 questions of the questionnaire, so no respondent needed to be eliminated. The online data collected was captured

automatically in Google Forms and was imported into a spreadsheet. The researcher physically captured the classroom survey and combined it with the online responses. The data was then analysed by a statistician using SPSS version 26.0. The results of the descriptive statistics are presented in the form of graphs, cross-tabulations, and other Figures for the data collected. An interpretation of these results is outlined in compliance with the theories gathered. P-values are used to interpret inferential techniques, including correlations and Chi-square test values. The traditional approach to reporting a result requires a statement of statistical significance. A p-value is generated from a test statistic, and a significant result is indicated with " $p < 0.05$ ".

The questionnaire was divided into sections, which measures various themes as illustrated below:

- **Section A:** Biographical information of all participants of the study. Personal information is gathered about the respondent in this section.

- **Section B:** Expectations

This section involves the SERVQUAL analysis of the five RATER dimensions viz. reliability, assurance, tangibles, empathy and responsiveness to determine the students' expectations regarding the level of service quality delivered by the FoMS staff. It requires respondents to show the extent to which they believe staff "should" possess the attributes stated in the questionnaire. In other words, its purpose is to picture the ideal service students would expect from an administrative department in an ideal University and to express their desire for a particular attribute of service quality.

- **Section C:** Perceptions

In this section, SERVQUAL analysis of the five RATER dimensions viz. reliability, assurance, tangibles, empathy and responsiveness to determine the students' perceptions regarding the quality of the service delivered by the FoMS staff. This section requires the respondents to state the "actual" service received from an administrative department.

Both sections B and C above will assist in meeting the aims and objectives of this study as outlined in chapter one.

- **Section D:** General

This section asks general questions to ascertain if respondents are satisfied overall with the quality of service received from an administration department. Moreover, if they will or will not recommend the DUT to prospective students.

4.3. DEMOGRAPHIC CHARACTERISTICS of PARTICIPANTS

4.3.1 Age and Gender

This section summarises descriptive statistics of the biographical characteristics of the respondents. (Table 4.1) below describes the overall gender distribution by age. These distributions are not similar as the age parameter counted more respondents younger than 30 years ($p < 0.001$). Overall, the ratio of males to females is approximately 3:7 (30.8% : 69.2%) ($p < 0.001$). The ratios of males to females within this sample indicate the various age groups of B-Tech students registered at the DUT in the FoMS.

			Gender		Total
			Male	Female	
Age (years)	21 - 25	Count	15	49	64
		% within Age	23.4%	76.6%	100.0%
		% within Gender	26.3%	38.3%	34.6%
		% of Total	8.1%	26.5%	34.6%
	26 - 30	Count	17	39	56
		% within Age	30.4%	69.6%	100.0%
		% within Gender	29.8%	30.5%	30.3%
		% of Total	9.2%	21.1%	30.3%
	31 - 35	Count	20	16	36
		% within Age	55.6%	44.4%	100.0%
		% within Gender	35.1%	12.5%	19.5%
		% of Total	10.8%	8.6%	19.5%
	36 - 40	Count	4	15	19
		% within Age	21.1%	78.9%	100.0%
		% within Gender	7.0%	11.7%	10.3%
		% of Total	2.2%	8.1%	10.3%
> 40	Count	1	9	10	
	% within Age	10.0%	90.0%	100.0%	
	% within Gender	1.8%	7.0%	5.4%	
	% of Total	0.5%	4.9%	5.4%	
Total	Count	57	128	185	
	% within Age	30.8%	69.2%	100.0%	
	% within Gender	100.0%	100.0%	100.0%	
	% of Total		69.2%	100.0%	

Table 4.1: Age and Gender

Source: Statistician: Mr D Singh

Of the 185 respondents, 57 were male, and 128 were female. In terms of percentage, males and females made up 30.8% and 69.2%, respectively, making females the higher number of respondents. According to Statistics South Africa (2017: 34), Management Sciences was one of the qualifications students enrolled the most, especially female students.

Within the age category of 21-25 years (n=64), 15 were male, and 49 were female. Females made up 76.6% within the 21-25 age category, and within this category of females (only), 38.3% were between the ages of 21-25 years.

This formed 26.5% of the total sample making this age category the largest group of respondents. The most number of female responses also came from this category

Within the age category of 26-30 years (n=56), 17 were male, and 39 were female and formed 30.4% and 69.6% within this age category, respectively. Males made up 9.2% of the total responses, and females made up 21.1 %.

Within the age category of 31-35 years (n=36), 20 were male, and 16 were female and formed 55.6% and 44.4% within this age category, respectively. Males made up 10.8% of the total responses, and females made up 8.6 %. The most number of male responses also came from this age category.

Within the age category of 36-40 (n=19), 4 were male, and 15 were female, making males 21.1% of this category. Within the males (only) category, 7.0% were between 36 to 40 years. This category of males between the ages of 36 to 40 formed 2.2% of the total sample.

Within the age category of over 40 years (n=10), 1 was male, and 9 were female. Males made up 10.0% within the over 40-age category, and within this category of males (only), 1.8% is over the age of 40. This formed 0.5% of the total sample.

Similarly, the smallest category of the female respondent also falls in the over 40-age category. With (n=9), females made up 90% within the over 40 age category, and within this category of females (only), 7% is over the age of 40. This formed 4.9% of the total sample. The over 40-age category was also the smallest group of respondents.

4.3.2 Race

Figure 4.2 below indicates the racial formation of the sample.

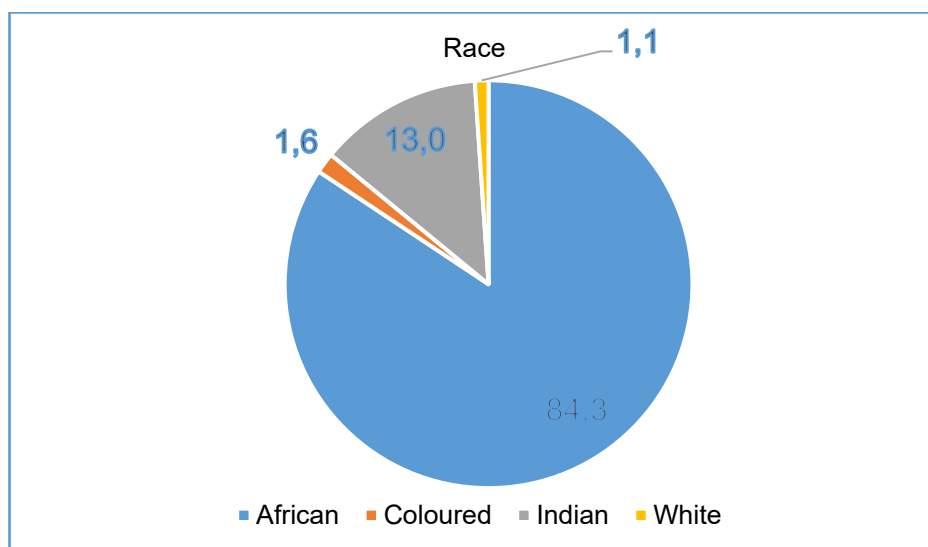


Figure 4.2: Race

Source – Statistician: Mr D Singh

The majority of the sample was African (84.3%), with small and similar Coloured and White respondents. The remaining respondents were Indian ($p < 0.001$), making up the second-highest race group. The Figure above clearly shows that there are more African students registered in the FoMS. In keeping with the demographic data on tertiary enrolments from Statistics South Africa (2017: 36), the table entitled "Enrolment by Population Groups for Universities and Technikons" on tertiary enrolment, the highest number of enrolments at Universities were by black students.

4.3.3 DUT qualification

(Table 4.3) below summarises students that have completed or not completed their previous qualifications at the DUT.

	Frequency	Percent
Yes	140	75.7
No	45	24.3
Total	185	100.0

Table 4.2: DUT Qualification

Source – Statistician: Mr D Singh

One of the biographical questions asked was whether the student completed their previous qualification at the DUT or not. (Table 4.3) above indicates that more than 75% of students have completed their previous qualifications at the DUT. This indicates that most of the students were registered in DUT in the FoMS long enough for relevant information regarding the level of service delivery to be gathered from them.

4.4 EXPECTATIONS AND PERCEPTIONS

4.4.1 Reliability statistics

(Table 4.4) below illustrates a reliability level of over 0.70, which confirms the reliability of the SERVQUAL dimensions.

Section	Expectations		Perceptions	
	Number of Items	Cronbach's Alpha	Number of Items	Cronbach's Alpha
Reliability	5	0.886	5	0.910
Assurance	4	0.918	4	0.882
Tangibles	4	0.846	4	0.814
Empathy	5	0.939	5	0.928
Responsiveness	4	0.936	4	0.928
Overall	22	0.941	22	0.947

Table 4.3: Reliability Scores

Source – Own Compilation

The two most important aspects of precision are validity and reliability. The validity, which denotes the accuracy and precision of data; Denscombe (2010:

192) confirms that “inaccuracies in data can be eliminated in the case of internet surveys as responses come in the form of text construed directly by the respondent”. Reliability is computed by taking several measurements on the same subjects. A good level of reliability means the same data is produced time after time on each occasion by the research instrument continues, expanded Denscombe (2010: 326). The author further details that if there were variations, it would be due to the variations in what is measured. A reliability coefficient of 0.70 or higher is considered “acceptable”, and the results reflected in (table 4.4) above are all above 0.70, thus confirming the reliability of the service quality dimensions of the RATER scale. This means that the research instrument was successful in measuring what it set out to measure. To ensure consistency amongst the specific variables applied in the research instrument and to ensure that the study produced credible results, a reliability analysis is crucial when conducting a research study. Sekaran and Bougie (2016: 223) confirm that the measuring instrument indicates the extent to which it is without errors or biases. The authors further discuss that it is also an indication of the consistency and stability with which the instrument measures the concept and helps to assess the “goodness” of a measure.

The technique found suitable to test the questionnaire was Internal Consistency Reliability, and Cronbach alpha is a measure of internal consistency. Cronbach alpha was used to compute each service quality dimension in the questionnaire to check the reliability of the SERVQUAL model, both in expectations and perceptions, before the factor analysis was done. Bolarinwa (2019:5) confirms, “Cronbach alpha (α) is the most commonly used measure of internal consistency reliability”. However, it should be noted that the validity and reliability of the SERVQUAL scale were reassessed by Parasuraman, Berry and Zeithaml (1991: 439, 445), and this substantiated the use of the instrument to ascertain expectations and perceptions of service quality in various sectors.

If all of its items are in solid correlation, then this denotes that the scale is internally consistent. (Table 4.4) above reflects the Cronbach's alpha score for all the items that constituted the questionnaire in both expectations and perceptions. A Cronbach alpha coefficient ranging from 0.886 to 0.939 was obtained for service quality expectation dimensions and 0.941 for overall service quality expectations; and 0.814 to 0.947 for service quality perception dimensions and 0.947 for overall service quality perceptions. The reliability scores for all sections exceed the recommended Cronbach's alpha value of 0.70. This indicates an excellent, consistent scoring for these research sections, showing that the instrument is sufficiently reliable.

4.4.2 Inferential statistics: Factor Analysis

4.4.2.1 Why is factor analysis critical?

Factor analysis is a statistical technique whose primary goal is data reduction (Pallant 2016: 182). A typical use of factor analysis is in survey research, where a researcher wishes to represent several questions with a small number of hypothetical factors. "The purpose of factor analysis is to reduce many individual items into a fewer number of dimensions" (Statistics Solutions 2020). Data can be simplified by using this method to reduce the number of variables in regression models. For example, as part of a national survey on political opinions, participants may answer three separate questions regarding environmental policy, reflecting issues at the local, state and national levels. Each question, by itself, would be an inadequate measure of attitude towards environmental policy, but *together* they may provide a better measure of the attitude. Factor analysis can be used to establish whether the three measures do measure the same thing. They can then be combined to create a new variable, a factor score variable that contains a score for each respondent on the factor. Factor techniques apply to a variety of situations. A researcher may want to know if the skills required to be a decathlete are as varied as the ten events or if a small number of core skills are needed to succeed in a decathlon.

You need not believe that factors exist to perform a factor analysis, but in practice, the factors are usually interpreted, given names, and spoken of as real things.

4.4.3 KMO and Bartlett's test

The matrix table is preceded by a summarised table reflecting the KMO and Bartlett's Test results as outlined in (Table 4.5) below.

KMO and Bartlett's Test		Expectations	Perceptions
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.951	0.954
Bartlett's Test of Sphericity	Approx. Chi-Square	4097.286	3585.100
	df	231	231
	Sig.	0.000	0.000

Table 4.4: KMO and Bartlett

Source – Statistician: Mr D Singh

To test if the correlations between the variables are significant enough, the KMO measure of sampling (Kaiser-Meyer-Olkin) was used to determine if the correlation matrix is an identity matrix. Bartlett's test of Sphericity was conducted. Pallant (2016: 193) explains that these processes must verify that the data set is suitable for factor analysis. The results indicate that the factor model is appropriate for factor analysis. The sample size is considered adequate for factor analysis. The KMO-values of 0.951 and 0.954 for expectations and perceptions respectively indicates a highly satisfactory factor analysis, as both values are higher than 0.9. The Kaiser-Meyer-Oklin (KMO) measure verifies the sampling adequacy. The requirement is that Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.50 and Bartlett's Test of Sphericity sig. the value should be less than 0.05. In all instances, the conditions are satisfied, which allows for the factor analysis procedure.

4.4.4 Rotated component matrix

The principle component analysis was used as the extraction method, and the rotation method was Varimax with Kaiser Normalization. “This is an orthogonal rotation method that attempts to minimize the number of variables that have high loadings on each factor”, confirms Pallant (2016: 186). It simplifies the interpretation of the factors. (Appendix 9).

4.5 DIMENSION ANALYSIS: EXPECTATIONS AND PERCEPTIONS

In attempting to ascertain the level of service quality delivery performed by the FoMS, research was undertaken using the RATER dimensions of the SERVQUAL model below (Figure 4.3).

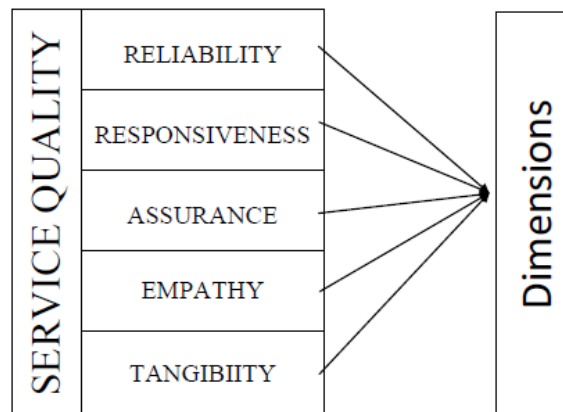


Figure 4.3: Service Quality Dimensions
Adapted from Ramya (2019: 40)

Parasuraman, Zeithaml, and Berry (1985: 48) claim that consumers' perception of service quality depends on the nature of the discrepancy between the expected service and perceived service.

Student support refers to those services that provide students in their day-to-day lives on campus, both administratively and academically. This includes but is not limited to financial aid services, health services, library, student counselling, residence, and faculty services. Uiso and Magali (2017: 71) confirm that universities in most countries utilise SERVQUAL to assess the

level of service quality that brings about student satisfaction. “In the service industry, service quality is recognised as the degree of difference between customer expectations and their perceptions of the service they receive,” proclaim Parasuraman, Zeithaml and Berry (1988: 16).

The section that follows analyses the scoring patterns of the respondents per variable per section. The results are first presented using summarised means for the variables that constitute each section. Results are then further analysed according to the importance of the statements. Expectations and perceptions were measured using the 5-point Likert scale whereby the highest number was indicated by “strongly agree” and the lowest by “strongly disagree”. In general, it can be seen that student expectations exceed student perception in every dimension, thus resulting in a negative gap score. Parasuraman, Zeithaml and Berry (1988: 30) signify that there is always a need for improvement when customers’ expectations exceed the actual service perceived. The authors declared that these gaps could be a significant hurdle in attempting to deliver quality service.

A Wilcoxon paired test was done to determine whether the gap scores (differences between perceptions and expectations) was a significantly different per statement. The null hypothesis claims that there is no difference in the mean values. The highlighted sig. values (p-values) are less than 0.05 (the level of significance), which implies that the central measures were not similar, viz., the differences between the way respondents scored were significant. These gap scores measure service quality and ultimately customer satisfaction, and the closer the perceptions are to expectations, the higher the perceived level of quality.

The gap scores between expectation and perception about this study indicate in which dimensions the FoMS service delivery falls short, i.r.o. service quality, and based on these deductions, suitable recommendations can be made to improve these shortfalls. Adil (2013:4) describes the gap score as the

“difference between quality specifications of the promised service and the final service delivered”.

CUSTOMER ASSESSMENT OF SERVICE QUALITY

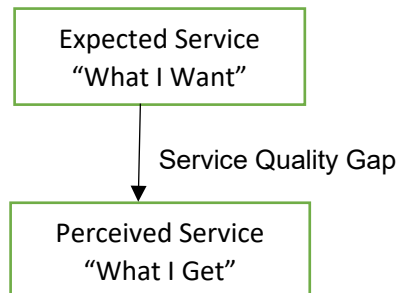


Figure 4.4: Customer assessment of Service Quality

Adapted from Parasuraman, Berry and Zeithaml (1990: 35)

(Reproduced by the researcher)

Figures (4.5 to 4.9) below indicate the mean scores for each statement and the gap scores (which is the difference between the expectations and perceptions) for each component. Service quality for each dimension is captured by a difference score G (representing perceived quality for that item), where

$$G \text{ (gap)} = P \text{ (perception)} - E \text{ (expectation)}$$

as formulated by Parasuraman, Ziethaml and Berry (1988: 19) and where P and E are the average ratings of a dimension's corresponding perception and expectation statements. An average (mean) score was used as a measure of the component. The statements in each Figure are indicated on the horizontal axis, e.g. Rel1 refers to the first statement in the reliability dimension, T3 refers to the third statement in the tangibles dimension, E18 refers to the fifth statement in the empathy dimension on. The mean scores are indicated on the vertical axis: expectation (E: blue bar), perception (P: brown bar). The gap scores between the E and P (G: grey bar) are discussed under each dimension.

4.5.1 Reliability

In this section, under the dimension of reliability, delivering on promises, the students are asked to rate the level of service performed by the FoMS by answering five questions.

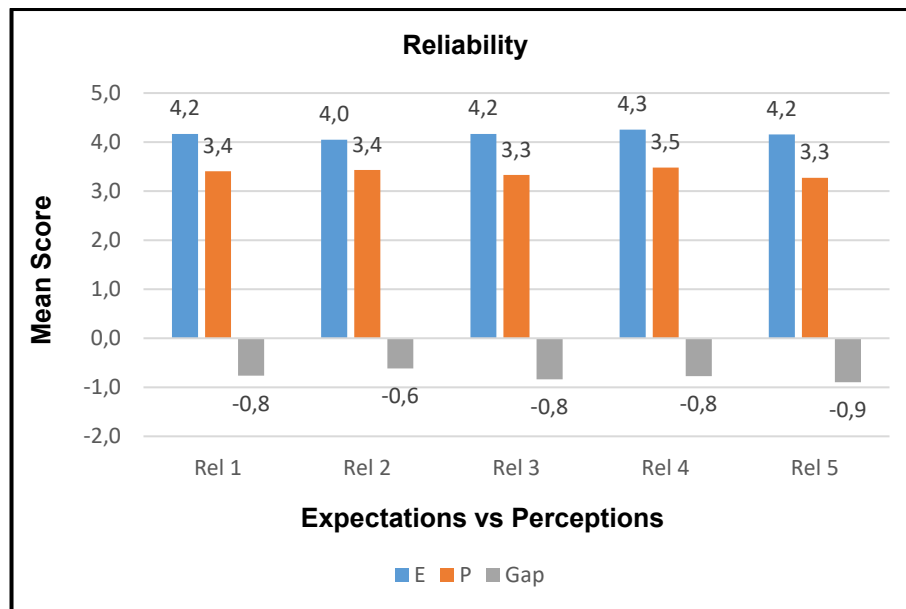


Figure 4.5: Reliability dimension score

Source: Statistician: Mr D Singh

Parasuraman, Berry and Zeithaml (1991: 47) describe this dimension as the consistency of meeting a promised service accurately and dependably. In the Figure above, all of the statements show higher levels of Expectations (E) than Perceptions (P). There are no statements with higher levels of Perceptions. The significance of the differences between Expectations and Perception is tested and shown in the summary of tables (Appendix 11). This is known as the gap score and specifies the level of service delivery quality rendered by the FoMS. The perceived importance of the five dimensions differ. However, Parasuraman, Berry and Zeithaml (1990: 39) posit that reliability is consistently a key performance indicator and the essential determinant of perceptions of service quality.

Figure 4.5 above shows the items covered under the dimension of reliability. The overall gap score is (-0.8), with the average gap score for the Reliability dimension being (0.78). The result in gap scores for the reliability items is: keep error-free records (Rel2) and perform services right the first time (Rel5) were (-0.6) and (-0.9) respectively. Provide service at the time they promise to do so (Rel1); show sincere interest in problem-solving (Rel3), and provide a dependable and accurate service (Rel4) all scored an equal gap score of (-0.8). It is noted that the mean scores for expectations and perceptions of the items under the reliability dimension are (>4) and (>3.0), respectively.

(Rel1) with a negative gap score of (-0.8) is considered high. This is problematic as students need to adhere to deadlines to progress effectively with their studies; thus, responding on time is an important concept. This high gap score can be narrowed by ensuring that staff do not over promise and under deliver. Pillay (2011: 76) aptly stated that staff might be competent; however, the inconsistency could lie between the actual service delivery and what is communicated to the students. Despite the variable students expecting error-free records (Rel2), having the lowest mean rating of 4.0 under expectation and the lowest gap score of (-0,6) within this dimension, this still resulted in a negative gap score of (-0.6). A system should be maintained where student records and information is captured accurately, and staff should be trained to be knowledgeable and influential in working with the implemented system. Additionally, effective auditing processes, modern technology and control systems can assist in maintaining accurate records.

(Rel3) has an expected score of (4.2) and one of the lowest perception scores of (3.3) with a very high resulting gap score of (-0.8). This indicates that students perceived that the FoMS does not show a sincere interest in solving a problem. Students often expect services to be carried out accurately, effectively and reliably within a realistic turnaround time. The low score denotes that staff members are not available and not actively involved in solving students' problems.

Of all the items under the reliability dimension, (Rel4) is rated the highest in expectation (4.3) with a high gap score of (-0.8), meaning that students expected an outstanding faculty to provide dependable and accurate service by doing what they say when they say they are going to do it. Unfortunately, this was not the case with FoMS, thus resulting in student dissatisfaction. Mwiya et al. (2017: 1059) clearly articulated, "Reliability positively influences students' satisfaction with education services". When the FoMS has defined strategies that can provide dependable and accurate service, quality increases, and students will automatically be satisfied. The most significant contributor within this dimension, (Rel 5) with a gap score of (-0.9), signified that the FoMS does not perform services right the first time, resulting in students not being satisfied with the level of service quality described in this dimension. Efficient and technical service process outcomes must be discussed among the faculty to ensure that staff members work together in harmony, creating a pleasant working environment. The University should have better concerns on addressing these insufficiencies to enhance the quality of services provided.

The overall gap score of (-0.8) is similar to the individual gaps for each statement. The average expectation and perception scores are similar as well. The expectation scores are high (≥ 4.0), which corresponds to solid levels of agreement with each of the statements, while the perception scores average between 3.3 and 3.5. This consistent level of scoring gives an overall expectation score of 4.2 whilst the perceived value is 3.9. These scores indicated that the expectation under this dimension was higher than the perception of service delivery within these areas. This signified that the students expected the FoMS to deliver the quality of service effectively, reliably and accurately. However, this is not taking place, and the FoMS needs improvement in this area.

Although the perception scores are relatively high in most reliability dimension statements, they cannot prevent the overall reliability score from having a very high negative result. Furthermore, despite all the perception values being so

close to each other, (Rel3) and (Rel5) have the lowest perception scores (3.3), meaning FoMS staff do not show a sincere interest in solving a problem and does not perform services right the first time.

This dimension is of the essence since the students expect the service to be accomplished every time and on time without errors, meaning the FoMS should perform the services right the first time. Staff should be kept informed about students' expectations, perceptions and problems and should have ways to resolve them efficiently to ensure satisfaction brought about by quality service delivery. Once FoMS staff become aware that the students count, the focus will shift from less essential aspects to the students.

4.5.2 Assurance

In this section, under the dimension Assurance, which translates to inspiring trust and confidence, students are asked to rate the FoMS in terms of politeness and staff knowledgeability based on four statements.

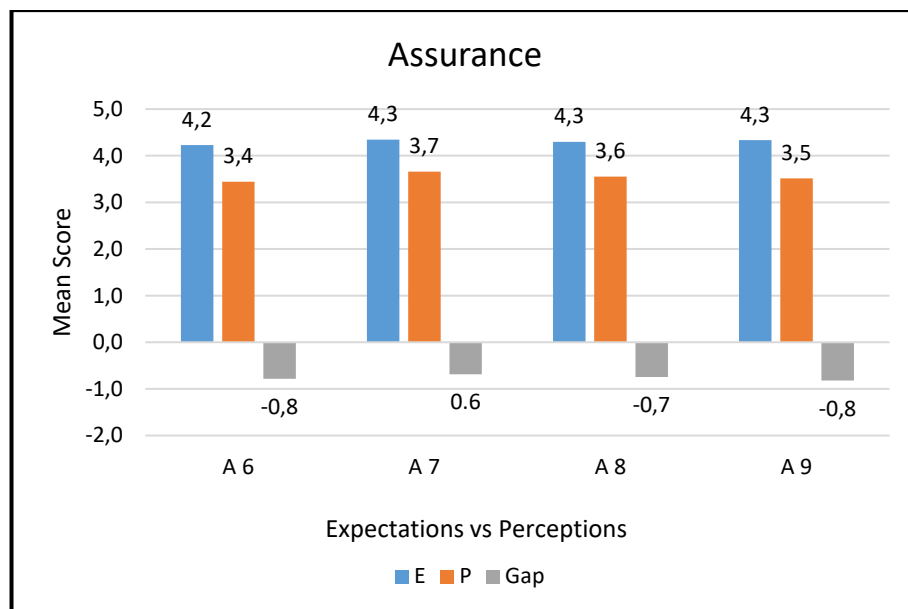


Figure 4.6: Assurance dimension score

Source: Statistician: Mr D Singh

Parasuraman, Berry and Zeithaml (1991: 47) define assurance as knowledge, courtesy and the ability to convey trust and confidence. This is an important dimension when students are unclear about their ability to assess outcomes or perceive services as high risk. The University has to build loyalty and trust between students and staff. Wilson, Zeithaml, Bitner and Gremler (2016: 78) emphasizes that confidence and trust should also be built into the organisation itself.

In (Figure 4.6), the responses to whether the FoMS staff were polite and courteous when providing a service (A6) and if students were made to feel safe in their transactions (A9) results in an equal gap score of (-0.8). The reactions to whether the FoMS staff were suitably knowledgeable in their area of expertise to offer quality service (A7) and whether the staff inspired confidence and trust (A8) both scored an equal gap score of (-0.7). The overall gap score was (-0.8), while the average gap score was (0.75). The expectation scores are high (≥ 4.0), which corresponds to solid levels of agreement with each of the statements, while the perception scores average between 3.4 and 3.7.

Question (A6) scores (4.2) and (3.4) under expectation and perception, respectively, with a significant gap score of (-0.8). This signifies that the student expected staff to be courteous; however, FoMS staff fell short in this area. University staff are expected to be constantly courteous to students and have pleasant behaviour when answering questions. Question (A7) scored (4.3) and (3.7) under expectation and perception, respectively, with the lowest gap score of (-0.6) within this dimension. This suggests that students perceive staff to be knowledgeable and skilled in their communication when assisting with various queries and are content with this. It is the effectiveness of the staff member's skill and ability. In saying this, however, the gap still needs to be narrowed by training staff members and educating them in their respective fields to better understand the student's needs.

Additionally, staff must ensure that the communication channels between staff and students are clear and undisrupted. Interventions from management to assist employees in developing the necessary skills to perform their tasks efficiently would go a long way in developing excellent staff/student rapport and delivering a high quality of service. This resonates with Williams's (2018: 120) findings on another South African University. When staff have the requisite knowledge, they can answer student queries efficiently and contribute to a positive image and reputation of the UoT, attaining a solid level of service quality at the institution. This will also lead to students feeling assured and safe in their transactions when dealing with the FoMS.

Statement (A8) scored (4.3) and (3.6) under expectation and perception, respectively, with a gap score (-0.7). This meant that students perceived that the behaviour of FoMS staff did not inspire confidence and trust in them. FoMS staff training should include skills that display knowledge and understanding to deliver a high-quality service. Ensuring uniformity within the faculty will ensure a better level of service delivery. Statement (A9) scored (4.3) and (3.5) under expectation and perception, respectively, again with a significant gap score of (-0.8). Students' perception is that they did not feel safe in their transactions with the FoMS. Communication is the key factor within this dimension; therefore, students' needs should be treated with confidentiality and respect. In order to make an effort to ascertain the needs and wants of the students, understanding the students' behavioural aspects is most important for the UoT. This dimension is about the ability and behaviour of the employees to instil confidence, secure transactions, courtesy of the employees and the knowledge of the employees to answer questions from students. Ncwane's (2016: 68) research on library services within a SA University also found that Assurance lacks staff courtesy and the ability to instil confidence. Staff must communicate their competencies and expertise when dealing with students, and these characteristics involve honesty, believability and trustworthiness to make students feel safe and satisfied.

4.5.3 Tangibles

In this section, under the dimension Tangibles, which equates to the representation of the physical aspects of service delivery and staff appearance, students were asked to answer four questions about the physical appearance of staff and facilities.

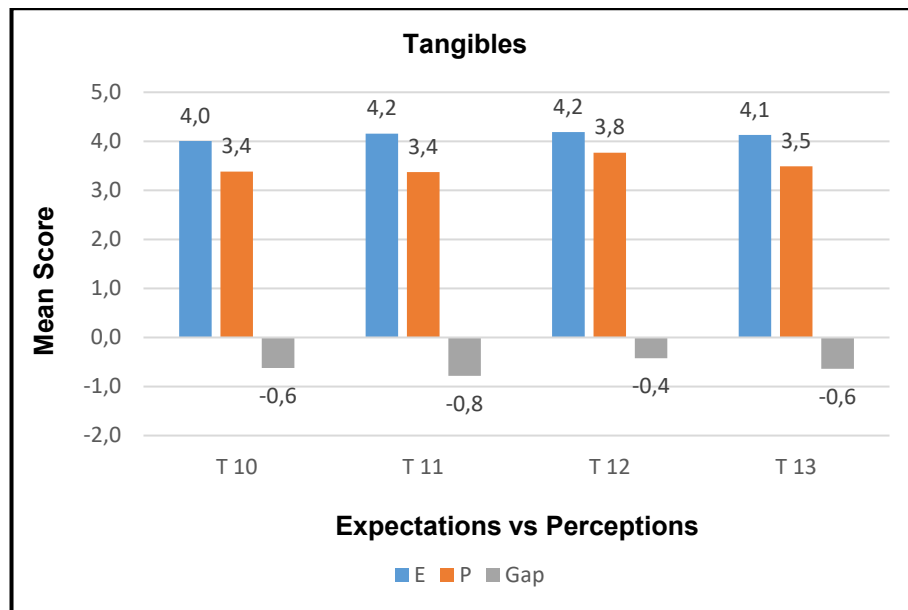


Figure 4.7: Tangibles dimension score

Source: Statistician: Mr D Singh

Parasuraman, Berry and Zeithaml (1991: 47) explain this dimension as the appearance of physical facilities, equipment, personnel and communications materials. This would mean that the University should provide appealing physical representations of their services that students would use to evaluate quality. The enhanced images of their services will signal quality and provide stability. Wilson, Zeithaml, Bitner and Gremler 2016: 79 claim, “this dimension is sometimes combined with other dimensions to create a service quality strategy for a company”.

Similar to the research completed by Williams (2018: 122) and Reddy (2014: 151), this study found a relatively small Gap score between the expectation and perception for each question within this dimension. The average gap

score was (0.6), and the overall gap score was (-0.6). It should be noted that this dimension scored the lowest Gap score of all five dimensions of the SERVQUAL model. However, expectations still exceeded perceptions within this dimension. The expectation scores are high (≥ 4.0), which corresponds to solid levels of agreement with each of the statements, while the perception scores average between 3.4 and 3.8.

The responses to the FoMS having physical facilities that are visually appealing (T10) and have up to date equipment (T13) resulted in equal gap scores of (-0.6). Items: have material associated with service (e.g. statements and pamphlets) that is visually appealing (T11) and have staff that are well dressed and neat (T12) resulted in (-0.8) and (-0.4) respectively. Universities must have modern-looking equipment with updated software in order to perform duties efficiently and effectively. Physical appearances indicated that FoMS needs to invest in physical facilities in order to appear appealing. Although, it is worth noting that between the time this survey was conducted and the analysis report, the FoMS had undergone a small scale revamp in updating their physical facilities and equipment, so if re-evaluated, this dimension should attain a higher perceived value.

The statement has staff that are well-dressed and neat (T12) has the lowest gap score of (-0.4). Most students expect University staff to be well dressed and perceive that they are. Nevertheless, in saying that, there is still room for improvement in that staff should appear neat and bright in appearance and professional at all times. In respect of all of the questions within the tangibility dimension, students seem to be most satisfied with employees' appearance.

The highest gap score within this dimension (T11) indicated that FoMS do not have material associated with service (e.g. statements and pamphlets) that is visually appealing. This statement echoes the findings of Ngibe's (2015: 95) research on services offered by the Faculty Research Office at a UoT within SA, where it was found that postgraduate guides were lacking and not readily available to students or staff. This denotes that information to students

presented in the form of handouts and brochures must be informative and visually appealing. Emphasis should also be placed on the visual materials distributed by the UoT, which should have an essence of an attractive marketing appeal. These pamphlets or statements should be error-free and professional-looking, thereby creating a positive impression of the University. In addition, the mission, vision and goals of the UoT should be clearly defined, transparent and communicated as thus to the students. The DUT has currently embarked on Envision 2030 (DUT 2020), and the faculty should have pamphlets and material associated with this vision to appraise students of each step taken to achieve Envision 2030. These are quality indicators of the service quality of UoT's.

Concerning facilities, dress code and infrastructures of the UoT, these are the physical surroundings when customers encounter services, and it should be remembered that appearances always matter. Staff should ensure that their appearance, uniform, equipment and work area are constantly kept neat and professional.

4.5.4 Empathy

This section, under the dimension of Empathy, interpreted as treating customers as individuals; students answered five questions concerning operational hours of the FoMS, showing a sincere interest in solving student issues and having the student's best interest at heart when resolving these issues.

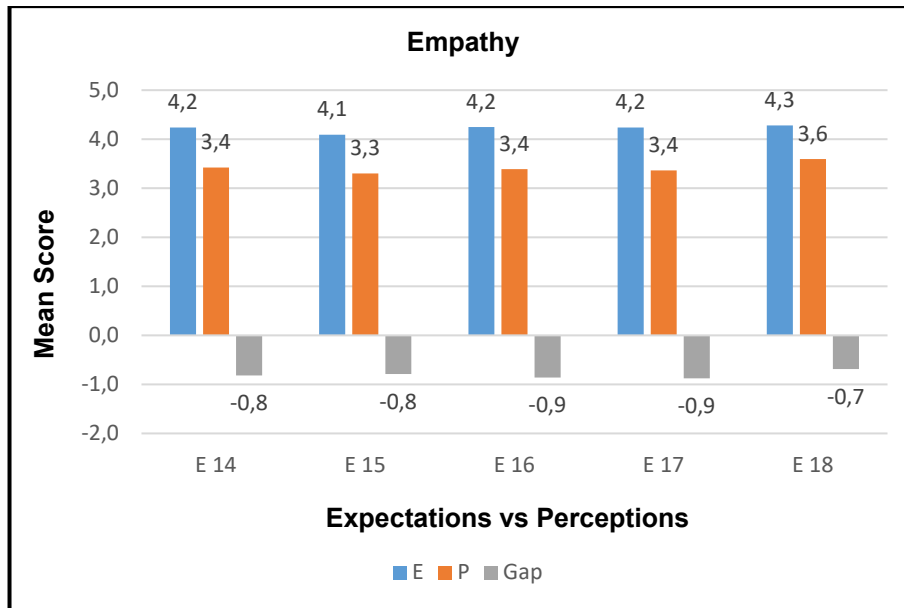


Figure 4.8: Empathy dimension score

Source: Statistician: Mr D Singh

Parasuraman, Berry and Zeithaml (1991: 47) outline this dimension as showing concern and care and giving personalised attention to customers. The essence of empathy is indicating the importance of students through personalized and customized services.

For this dimension, the average gap score is (0.82), and the overall gap score is (-0.8). The average expectation is (4.2), while the average perception is (3.4). The responses for have convenient operating hours (E18) resulted in the lowest gap score of (-0.7) in this dimension. Students expect the FoMS to have convenient operating hours and perceive that they do indeed.

Despite this, the gap score of -0.7 is still relatively high, and this should be noted, and steps are taken to narrow the gap. Staff can alert students to the correct operating times, avoiding disappointment when students try to access the faculty only to discover the department. is closed. This is especially true for the part-time B-Tech students registered in this faculty. The majority of these students have full-time jobs and find that they cannot access the faculty during regular operation hours. Provision should be made to assist these students to the best of the staff's ability by designing consultation times

conducive to part-time students. When students cannot access the faculty during regular operating times, flexibility should be allowed to meet the staff during allotted consultation times specifically designed to accommodate part-time students. One such way is to make and keep appointments with the part-time students to ensure a high level of service delivery.

The responses to statements: have the student's best interest at heart (E14) and provide individual attention (E15) resulted in equal Gap scores of (-0.8). From these scores, it can be deduced that students did not feel FoMS staff showed care and concern when providing administrative support. This resonates with Nell and Cant's (2014: 84) research as the authors established that the students felt that staff did not have their best interest at heart; neither did they understand their needs. Staff should show considerable care for students' problems and an understanding of their desires. In addition, sufficient consulting times should be allocated so that students can be provided with individual attention, making students feel that staff are showing a sincere interest in solving their queries. This will increase the low perception of staff and result in satisfied students.

Students expect more individual attention, but this was not always possible. Staff should offer a service integrated with interpersonal skills showing a caring, positive and understanding attitude. The responses to the statements that FoMS staff show sincere interest in solving queries (E16) and understand the needs of the students (E17) have the highest Gap scores of (-0.9). Thus, students expect staff to show a sincere interest in solving queries and understanding their needs, though this is not the situation. Understanding the specific needs of students and their values will help build the relationships between the University and the students. Staff should be taught to generate a caring attitude when dealing with the student's needs. Pillay (2011: 83) concurred when he stipulated that simple language should be used when dealing with students, and staff should make every effort to understand students' needs. These gaps between expectations and perceptions must be

addressed urgently. The failure to enforce this appropriately could lead students to a feeling of dissatisfaction and to feel disconnected.

It must be understood that each student is unique and special, and therefore they should be treated with respect, and it is of utmost importance that their needs are ascertained and recognised. Each student wants to feel significant. It would be a good approach for universities to know their students by building lasting associations that reveal their knowledge of their requirements and preferences. Williams (2018: 51) cogently stated, “empathy in HE will include the institution giving students' attention and understanding their students' specific needs”. In endeavouring to build a competitive advantage over other universities, the DUT should have the ability to be empathetic towards the student, thus giving the DUT a definitive advantage over other UoTs.

Services can be completed according to specification, but the student may not feel that the employee cared about him/her during the actual delivery of this service, so staff should acknowledge that delivery of the service is as important as how the service was executed. The feeling that students are unique and special to the firm are conveyed through personalized or individualized services. This is focused on a variety of services that satisfies the student's different needs. Therefore, the UoT must endeavour to know the personal preferences of the students.

4.5.5 Responsiveness

This section, under the dimension of Responsiveness, involves answering students' queries quickly and willingly while ready to serve and provide express services. Students are asked to answer four questions relating to prompt service, never too busy, always willing to help and advise precisely when services will be performed.

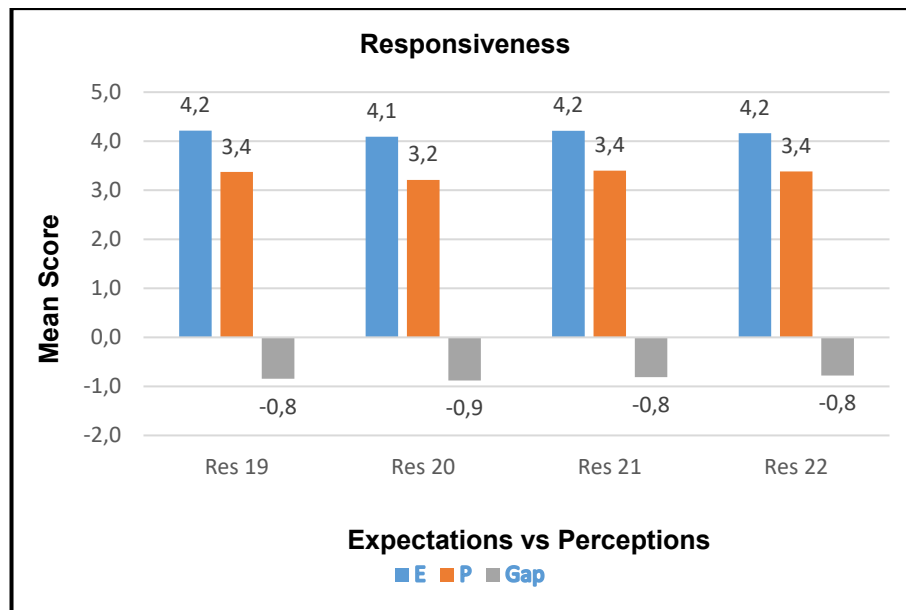


Figure 4.9: Responsiveness dimension score

Source: Statistician: Mr D Singh

This dimension is described as the willingness or readiness of employees to provide prompt service (Parasuraman, Berry and Zeithaml 1990: 35) to their customers.

The average gap score is (-0.83), with the average expectation score being (4.2) and the average perception score (3.4). The response to whether FoMS staff give prompt service (Res19), are always willing to help (Res21), and to advise precisely when services will be performed (Res22) have an equal but high Gap score of (-0.8). This means there is a deficiency in the FoMS staff's attitude for the promptness in dealing with problems, questions, requests and complaints. This resonates with Naidoo's (2014: 204) and Reddy and Karim's (2014: 5) articles on other universities, which found that responsiveness also scored the highest gap score from all five dimensions, indicating the lowest satisfaction. Staff can show a willingness to assist students by being actively involved in service delivery. FoMS staff do not advise students on exactly when services will be performed, indicating that punctuality is lacking, service is unprofessional, and staff is not committed to student satisfaction. It also represents the length of time that students wait to be served or are provided with answers to questions. Clear lines of communication with students can be

set up via the DUT website, noticeboards, and emails or Moodle, where all students have access to inform them of when the required services will be performed.

The responsiveness dimension can be enhanced by viewing the service delivery process continuously and ensuring that staff have a positive attitude when dealing with student queries or complaints. Furthermore, staff can be trained and given the right resources to ensure that services rendered to students are prompt and effective.

The highest gap score of (-0.9) for (Res 20) showed that FoMS staff are always too busy to respond to requests. This dimension involves timeliness of service in the length of time a student has to wait for services to be rendered or receive assistance from FoMS staff to possible questions or problems. Wilson, Zeithaml, Bitner and Gremler (2016: 78) indicate it is a concept of flexibility and the ability to customise the service to customer needs. FoMS should provide students with consultation times to deal with queries, and these times should be effectively communicated to the students via the various communication channels available. Procedures and processes should be in place to deal with repetitive and mundane tasks to ensure staff are actively involved in the service delivery process.

In any business, staff are expected to help customers, so it should make sense that the same concept applies to universities. Staff are expected to help students by giving them an efficient service that leads to student satisfaction. Williams (2018: 50) wrote, "Responsiveness captures the notion of flexibility and ability to customise the service to the consumers' needs". The willingness of FoMS staff to provide the required service at any time without any inconvenience will have a positive impact on student satisfaction. In addition, the DUT can respond timeously and willingly to the student's problems and ensure readiness to provide express services within proper timelines. This involves giving prompt service at the counter, calling a student back in a short time and responding to e-mails timeously. Providing individual attention and

FoMS staff being considerate to the problems that students' problems will increase students' satisfaction levels. It is imperative that students feel that staff are responsive to their requests. When this happens, then a radical shift occurs in student satisfaction.

SUMMARY OF QUANTITATIVE ANALYSIS

Dimension		Statement	E	P	Gap	P-value
Reliability	REL 1	Provide service at the time they promise to do so	4.2	3.4	-0.8	< 0.001
	REL 2	Keep error-free records	4.0	3.4	-0.6	< 0.001
	REL 3	Show a sincere interest in solving a problem	4.2	3.3	-0.8	< 0.001
	REL 4	Provide a dependable and accurate service	4.3	3.5	-0.8	< 0.001
Assurance	REL 5	Perform services right the first time	4.2	3.3	-0.9	< 0.001
	A 6	Be polite and courteous with students	4.2	3.4	-0.8	< 0.001
	A 7	Be knowledgeable	4.3	3.7	-0.6	< 0.001
	A 8	Inspire confidence and trust	4.3	3.6	-0.7	< 0.001
	A 9	Makes students feel safe in their transactions	4.3	3.5	-0.8	< 0.001
Tangibles	T 10	Have physical facilities that are visually appealing	4.0	3.4	-0.6	< 0.001
	T 11	Have material associated with service (e.g. statements and pamphlets) that is visually appealing	4.2	3.4	-0.8	< 0.001
	T 12	Have staff that are well-dressed and neat	4.2	3.8	-0.4	< 0.001
	T 13	Have up to date equipment	4.1	3.5	-0.6	< 0.001
Empathy	E 14	Have the student's best interest at heart	4.2	3.4	-0.8	< 0.001
	E 15	Provide individual attention	4.1	3.3	-0.8	< 0.001
	E 16	Show sincere interest in solving queries	4.2	3.4	-0.9	< 0.001
	E 17	Understand the needs of the students	4.2	3.4	-0.9	< 0.001
Responsiveness	E 18	Have convenient operating hours	4.3	3.6	-0.7	< 0.001
	RES 19	Give prompt service	4.2	3.4	-0.8	< 0.001
	RES 20	Never be too busy to respond to requests	4.1	3.2	-0.9	< 0.001
	RES 21	Always willing to help	4.2	3.4	-0.8	< 0.001
	RES 22	Advise exactly when services will be performed	4.2	3.4	-0.8	< 0.001

Table 4.5: Summary of Quantitative Analysis

Source: Own Compilation

The above (table 4.6) provides a summary of the data analysed quantitatively. The column for description states the particular statement for each dimension, and the score attained. It details the scores for each of the sub-scales under the expectations and perceptions scale. Featured in the table under Gap, along with the P-values, is the gap scores for each dimension.

4.6 THE GAP SCORE ANALYSIS

Jalali, Islam and Ariffin (2011: 182) mention that the perception of the quality of service is strongly influenced by student status and that “student expectation increases as they have more contact with the University”.

Dimension	Expectations (E)	Perceptions (P)	Gap Score (P-E)	Rank
Reliability	4.2	3.4	-0.8	2
Assurance	4.3	3.5	-0.8	2
Tangibility	4.2	3.5	-0.6	3
Empathy	4.2	3.4	-0.8	2
Responsiveness	4.2	3.3	-0.9	1
Mean	4.2	3.4	-0.8	

Table 4.6: Gap score analysis

Source: Own Compilation

The gap score analysis is to assist in finding out how students perceive the service quality of the FoMS and try to identify what dimensions of service quality satisfies the students. In (Table 4.7) above, the gap scores were calculated based on the differences between the students’ perceptions and expectations of services offered by the faculty. Specifically, it was found that students’ perceptions of service quality offered did not meet their expectations (all gap scores are negative). Jordaan and Prinsloo (2004: 65 cited in Nell 2014: 66) state that the SERVQUAL measurement instrument significantly values quality. It specifies the difference between customers’ expectations about a particular service and their perceptions of the actual service received. The negative scores indicate that the FoMS is failing to reach the expectations of students. These findings coincided with Naidoo’s (2014: 204) article “Service quality perceptions of students at a South African University”. The author noted that the gap scores for the student respondents were all negative, thus indicating that their expectations far exceeded their perceptions. Students, therefore, were very dissatisfied with the quality of services provided by this top-ranking South African University. The perceived value is

considered higher the closer perceptions are to expectations. Dimensions accounting for more significant mean gaps were responsiveness (-0.9), equal gap scores for reliability (-0.8), assurance (-0.8) and empathy (-0.8), with the smallest gap being tangibility (- 0.6). These values reveal that the perception of the service quality received from the FoMS is less than the expected level of service quality.

From (table 4.7), it can be inferred that all students expect more from the faculty than what is being offered, which is evident from the SERVQUAL total negative mean of (-8), showing that expectations exceed perceptions. Summarily, overall perceived service quality is low, meaning the level of service quality they receive is lower than expected, indicating no satisfaction. This could be because of the under-delivering of services to students or the over-promising service that cannot be achieved. Looking at the individual dimensions, students expect a lot from the responsiveness dimension as this has the overall highest negative gap score of (-0.9). Therefore, special attention needs to be paid to this dimension to ensure that staff are more responsive and helpful when dealing with students and their queries.

4.7 GENERAL

4.7.1 Overall Satisfaction

In this section, question D1, students were asked if they were satisfied overall with the services provided by the FoMS.



Figure 4.10: Overall student satisfaction

Source: Statistician: Mr D Singh

As can be seen from the graph (Figure 4.10), less than 50% (42.7%) of students agreed that overall, they are satisfied with the service rendered by the FoMS, (21.6%) were uncertain while (19.5%) disagreed. The balance was strongly agree (11.9%) and strongly disagree (4.3%). Despite the negative gap calculation, slightly more students are satisfied with the quality of service they received from the FoMS than expected. (Rod, Ashill, Shao, & Carruthers, 2009) cited in Mwiya et al. (2017: 1057) strongly imply that perceived responsiveness, empathy, assurance, reliability and tangibility were the main determinants of overall customer satisfaction. The frequency table highlights that students aged 21-25 and 31-35 are satisfied overall with the services received from FoMS of which 43.8% are female.

4.7.2 Recommendation of the DUT

In this section, question D2, students were asked to recommend the DUT to prospective students.

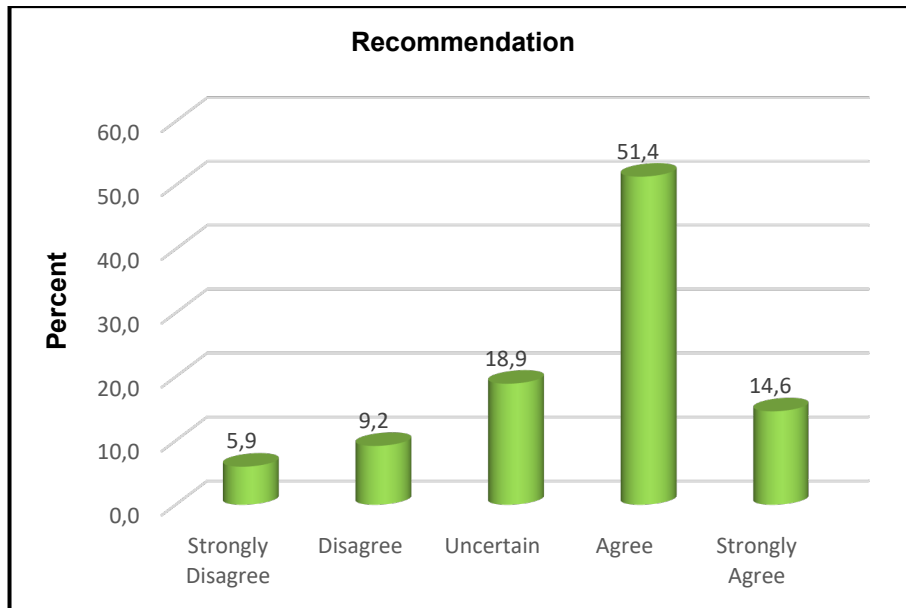


Figure 4.11: Recommend the DUT to prospective students

Source: Statistician: Mr D Singh

The graph above (Figure 4.11) indicates (51.4%) of students agree that they would recommend the DUT to prospective students, while (18.9%) were uncertain, (14.6) strongly agree, (9.2%) disagree and (5.9%) strongly disagree. Once again, regardless of the negative gap analysis experienced and dissatisfaction, students are still willing to refer prospective students to the DUT. The frequency table indicates that despite 63.2% of students not completing their previous qualification at the DUT, they will nonetheless refer prospective students to the DUT.

4.8 THE CHI-SQUARE TEST

According to Denscombe (2010: 271), the Chi-square test is the most frequently used statistical test to ascertain if two variables are related to a level of significance as it works with ordinal, nominal, interval and ratio data hence its popularity. The author further explains that the key to the Chi-square test is “the difference between what was ‘observed’ and what was ‘expected’”.

A Chi-square test of independence was performed to determine a statistically significant relationship between the variables (rows vs columns). The null hypothesis states that there is no association between the two. The alternate hypothesis indicates that there is an association. The table summarises the results of the Pearson's Chi-square tests (Appendix 10). If the p-value (Asymptotic Significance (2-sided)) < 0.5 , then it implies that there is a significant relationship between the variables.

For example, the p-value between "Rel_2_P * Age" (Reliability 2 Perception and Age) is (0.019) which is (p-values < 0.05). This indicates a significant relationship between the variables, meaning the respondent's age played a significant role in how respondents viewed Reliability 2, i.e., keeping error-free records. An inspection of the frequency table indicated that more respondents within the age groups of (21 – 25), (31 – 35) and (>40) years agreed that error-free records were kept.

The p-value between "D1 * Age" (overall, I am satisfied with services provided by the faculty staff and Age) is (0.038), which is (p-values < 0.05). This indicates a significant relationship between the variables, meaning the respondent's age played a significant role in whether they are satisfied overall with the services provided. An inspection of the frequency table indicated that more respondents within the age groups (21 – 25) and (31 – 35) agreed with this statement.

No values with (p-values > 0.05) had a significant relationship between variables. For example, the p-value between Res_20_P * my previous qualification was completed at the Durban University of Technology (Responsiveness 20 Perception and My previous qualification was completed at the Durban University of Technology) is (0.115) (which is greater than the significance value of 0.05). This demonstrates that whether the respondent completed their previous qualification at the Durban University of Technology or not did not play an important role in how respondents viewed

Responsiveness 20 (Is never too busy to respond to requests). Suggesting that there was no substantial relationship between the variables “my previous qualification was completed at the Durban University of Technology” and the perception that “the faculty is never too busy to respond to requests”. An inspection of the frequency table indicated that more respondents who completed their DUT qualification agree that the FoMS is never too busy to respond to requests.

4.9. SUMMARY

The SERVQUAL dimensions viz. reliability, assurance, tangibles, empathy and responsiveness yielded a negative gap score signifying that perceptions are less than expectations, thus reflecting unsatisfactory situations and student unhappiness. A large number of gaps evident indicates a considerable discrepancy between the perceptions expectation of the respondents across all dimensions with responsiveness showing the most significant gap score of (-0.9). In general, student expectations far exceeded the perceived level of service shown by the perception scores. These gaps show that the expectations of students of the level of service quality of FoMS are more than they perceived during their years of study. This equates to a definite need for improvement to ensure student satisfaction in service delivery. In effect, students' expectation has an essential role in service quality delivery, and therefore this should be recognised and noted.

The results of SERVQUAL indicated that generally, students expect an institution to deliver services that will exceed their expectations. Responsiveness was the highest, followed by reliability, assurance, empathy and, lastly, tangibles was rated the least essential expectation according to the respondents. The results have shown that students' perception of service quality is low and that the FoMS service falls below their expectations, which presents a severe challenge to the DUT.

The next chapter constitutes a summary of the study conclusions of the research findings. Focuses on the achievements of this study's aims and objectives and recommends innovative and creative strategies to alleviate the gaps and enhance service delivery quality that brings about student satisfaction within the faculty services, including recommendations for further research.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The findings and discussions were presented in chapter four of this report. This chapter provides a detailed discussion of the research objectives, recommendations, limitations and concludes with possible future research.

Parasuraman, Ziethaml and Berry's article (1988: 16), amongst various other writers, confirms the relationship between service quality and customer satisfaction. Similarly, empirical studies by Osman, Sarkar and Islam (2017: 119) and Rouf, Rahman and Uddin (2016: 376) posited a strong relationship between student satisfaction and overall service quality in the HE sector. Additionally, Mwiya *et al.* (2017: 1061) emphasized that service quality performance dimensions (reliability, assurance, tangibility, empathy and responsiveness) are significantly and positively related to overall customer satisfaction. Donlagic and Fazlic (2015: 42) reiterated, "customer satisfaction is related to service quality".

The powerful combination of pressures for change in the HE arena viz. increases in competition, decrease in funding, overall scrutiny, changes in technology and communication resources, especially online learning, forces HEIs to reconsider the quality of services students receive. The expectations students are entitled to should be effectively managed from the outset, i.r.o. the support, level of service and contact with administrative staff. These services must be relevant to the student's needs, experiences, abilities and background. They should be delivered by competent, responsive, accessible, and knowledgeable staff, optimizing the student's total University experience.

Although HEIs, both internationally and nationally, change gradually, they should be creative and progressive in principle concerning the level of service quality education of young people, especially in the vein of equality and primary education to all, despite colour or creed. Young people should have the opportunity to be exposed to new skills, ideas and technologies that could

make University life bearable and impressionable. This will elevate their level of satisfaction and avoid the feeling of demotivation if pertinent issues are addressed satisfactorily and bring about possible future feelings of contentment. To achieve this, the obstacles to change must be addressed or removed altogether. Quality of educational services encompasses the past, the present and most importantly, the future generation of a developing country. Mwiya *et al.* (2017: 1060) believes that if service quality indicators are developed as a whole and not in isolation, these result in advanced student satisfaction. The afore-mentioned researchers highlighted that an escalation in the service quality of support staff would have a more significant impact on student satisfaction.

5.2 SUMMARY OF THE STUDY

The rationale behind this study is that with the evolution of HE, the support departments must take cognisance of inefficiencies and determine which dimensions of service quality require further development. Lekhanya (2014: 300) cogently notes that service quality provided by UoT's are still unidentified and surrounded by assumptions. It is anticipated that processes can be put in place. Such that they benefit students in gaining their full academic potential to graduate with high levels of employable skills and successfully compete in the industry while at the same time improving the integrity and reputation of the DUT. Satisfied students can be a marketing strategy via word of mouth and a competitive advantage for educational institutions.

It is eminent from preliminary assessments on South African UoT's conducted by Hall (2013: 4), Noel (2011: 2), Pillay (2011: 3) and Manuel (2008: 3) that there is minimal analysis on the quality of service delivery of administrative staff at the DUT. Further research by Diedericks's (2012: 7) assesses two HEI's in the Gauteng province, while Weideman's (200: 111) focuses on the various criterion that can be used to evaluate service delivery. Driving service delivery to heighten student satisfaction is compulsory due to universities constantly adapting to the country's political climates and the increasing

competitiveness of the HE landscape. The Council on Higher Education (2011: 10) noted that student satisfaction surveys are infrequently used to ascertain student experience in the quality assurance documentation.

Mandal and Gupta (2018: 353) strongly cited service quality as strategic to satisfaction between front line staff and customers and that numerous researchers believe that customer satisfaction is related to service quality. Accordingly, this study has been initiated to find the gap in service quality of support facilities at a UOT in a developing country. Valuable resources can be assigned to refine these elements to expand service quality, attain satisfaction, and improve institutional performance. Wilkins and Balakrishnan (2013: 145) discount arguments that student satisfaction is determined solely by academic experiences. Furthermore, this coincides with Hanssen and Solvoll (2015: 745), who emphasized that other factors are now equal, if not more important than academic fulfilment.

5.3 ACHIEVEMENT OF OBJECTIVES

There were four main objectives initially identified at the beginning of this study (chapter one), and these had to be accomplished to validate the reasons for conducting this research. The following is a discussion on meeting each of the four objectives.

As discussed extensively in Chapter two, SERVQUAL was the ideal model that highlighted the crucial service quality gap forming the basis of this research, and to determine the main aim of this study, i.e. to assess the service quality of administrative staff to enhance student satisfaction at a KZN University of Technology. As explained by numerous authors in Chapter two, gap 5, involving service quality, is the gap that lies in the difference between customers' expectations and customers' perceptions of the services delivered ($Q=P-E$). This survey is of great importance to the FoMS to initialise steps in attaining the ultimate goals of exceptional service delivery for

customer satisfaction, retention and loyalty. SERVQUAL is a concise multiple-item scale with good reliability and validity (as discussed in chapter two) that can better understand students' service expectations and perceptions, improve the quality of service, and enhance the quality of service student satisfaction.

Using the RATER scale, the objectives below were achieved.

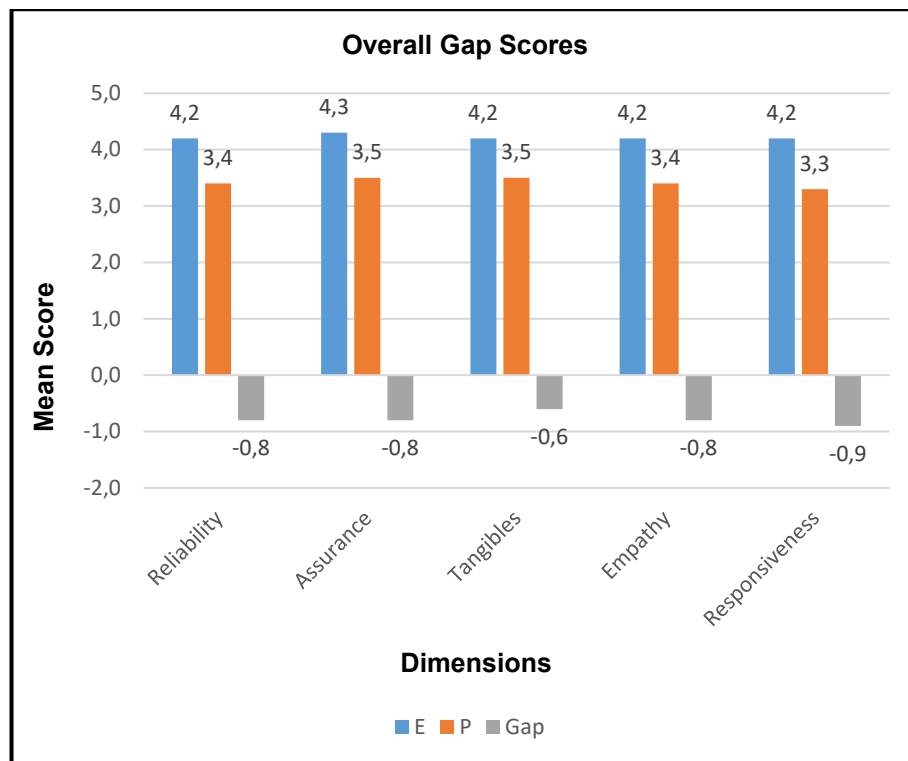


Figure 5.1: Overall gap scores - five dimensions

Source: Statistician: Mr D Singh

5.3.1 Objective 1: To identify students' expectations of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model

Parasumaran, Zeithaml and Berry (1994: 204) define expectations as “the level of service that a customer *should* get from a service provider”, while Churchill and Surprenant’s (1992: 492) description is that of a customer’s reflection of anticipated performance. The results detailed in (Figure 5.1) clearly show that the expectations exceed the perceptions for every dimension measured, resulting in student dissatisfaction. The FoMS needs to address these gaps as the students expect excellent service quality. The inconsistencies between students’ expectations and perceptions of service delivery imply that the quality of FoMS service delivery must be enhanced, as students should feel assured that they can request services at any time. Expectations affect service quality and student satisfaction, as detailed by numerous authors. However, as evident from (Figure 5.1), student expectations are not met, thus leading to student dissatisfaction. It is essential to understand what the student expects to identify any gaps in the delivery of good service quality.

Parasumaran, Zeithaml and Berry (1991: 31) established that a pre-requisite for delivering exceptional service is understanding customer expectations as customers compare expectations with perceptions when judging an organisation’s service. While trying to meet student expectations and train for excellent customer service, accountability, efficiency and conflict management should not be sacrificed. Students expect a welcoming environment as making a positive first impression is critical. They expect responsive staff, so there must be flexible ways available in approaching student problems. Additionally, students expect issues to be resolved promptly, so the University should not physically use the various digital platforms available to visit the department.

5.3.2 Objective 2: To identify students' perceptions of the service quality of the administrative staff of the Faculty of Management Sciences using the SERVQUAL model

The overall perceived service quality is low as expectations exceed perceptions suggesting that students demand more than what is offered. Due to such prevailing gaps in each dimension, it is clear that students are dissatisfied with service delivery. Further observation of the perceptions reveals that none of the dimensions contributed to service quality as they all fell below expectations. When it comes to student services and student satisfaction, it is pretty challenging to recover from mistakes, so FoMS staff should ensure that every effort is made to do things right the first time. In this way, staff can inspire trust and confidence, appear knowledgeable, and students will feel safe in transacting with staff. In addition, it will display staff's understanding of students' needs and show that staff are indeed interested in solving queries right the first time.

Examining each specific dimension, we realize that students expect a lot from the responsiveness dimension as its perception score is the lowest at (3.3) (Figure 5.1). Management has to pay attention to this dimension, therefore and ensure the enhancement of quality of service. Ciobanu (2013: 172) believes that if administrative staff were more knowledgeable, this would influence how services are delivered. Papanthymou and Darra's (2017: 132) writings reveal that there was increased interest in quality management and that HEIs solve problems and propose solutions by meeting the expectations of their customers, thereby differentiating themselves from their competitors, assuring long-term sustainability. Students have a choice of universities to select from. If the DUT wants to achieve a competitive edge, management needs to understand students' needs and build continuously positive relationships between staff and students.

5.3.3 Objective 3: To identify gaps between students' expectations and perceptions of the administrative staff of service quality of the Faculty of Management Sciences using the SERVQUAL model

Wilson, Zeithaml, Bitner and Gremler (2016: 93) emphasized that critical to delivering service quality is closing the gap between what customers expect and perceive. The gap analysis can reveal how well a department or section performs service by determining the difference between expectation and perception.

In descending order, students placed importance on responsiveness (-0.9), empathy (-0.8), reliability (-0.8), assurance (-0.8), and tangibles (-0.6). The importance placed on variables under each dimension is as follows: Responsiveness, emphasis was placed on "informing students of when the services will be performed." Empathy focused on, 'having convenient operating hours.' Reliability focused on "provide a dependable and accurate service"; while assurance was "be knowledgeable", and the essential variable for tangibles was "have staff that are well dressed and neat". In every dimension of the SERVQUAL model, gaps were evident. The institution is concerned about students attaining their degrees and the academic requirements that a student needs to achieve this. However, the administrative frustrations that the students feel or have to go through is not recognised. The DUT needs to make a solid commitment to delivering a culture of service during the period that the student is registered at the UoT, leading to student satisfaction, thereby defining the DUT's brand image and generate much-required revenues. Wilson, Zeithaml, Bitner and Gremler (2016: 402) confirm studies that have shown a strong association between customer satisfaction and company profitability

The results of this research are in corroboration with the findings of, to name but just a few authors that studied service quality at South African universities, Govender, Veerasamy and Noel (2014: 473), May and Viljoen (2004: 886),

Nsamba (2016: 198) and Williams (2018: 117). Services can be deemed inadequate if services are determined from an institutional perspective rather than the students' perspectives, resulting in not meeting students' needs and expectations.

5.3.4 Objective 4: To ascertain if students are satisfied with the service quality offered by the administrative staff of the Faculty of Management Sciences based on the gap analysis above.

In the articles published by Parasuraman, Zeithaml and Berry (1985, 1988), identifying gap 5 of the service quality model, the authors posited that the key to ensuring good quality of service is to meet or exceed what customers expect. As per (Figure 4.10) the majority of the respondents (42.7%) were satisfied overall with the FoMS staff services, and (21.6%) respondents were uncertain while (19.5%) disagreed with being satisfied overall. Less than 15% of the respondents (11.9%) strongly agreed that they were satisfied with the overall services, and a minority (4.3%) expressed dissatisfaction with the staff services. The authors further explained perceived satisfaction is when the customer's expectations are met and dissatisfaction when they are not; however, when the expectations are exceeded, the quality of service is perceived to be more than satisfactory.

It is recommended that particular emphasis be placed on Responsiveness, Assurance, and Empathy to enhance overall student satisfaction. Student evaluations should be an essential component to universities in all aspects, i.e. academic, administrative and total University experience. Surveys should form an integral part of a student's University life cycle. This knowledge can benefit the UoT in planning strategic processes to create, maintain, and improve service delivery quality and student satisfaction. Survey questions should be designed to gain the student's in-depth knowledge of their service quality experience, thus enabling the institution under investigation to learn the specifics of each RATER dimension and be predictive in accomplishing overall

student satisfaction. Kärnä & Julin (2015: 49) maintain that overall, satisfaction is based on ALL of a consumer's encounters and involvements with a particular organisation. Likewise, they established that accessibility to ALL student services at a University was a vital satisfaction factor.

5.4 LIMITATIONS OF THE STUDY

The primary limitation of this study is that only students were asked to participate, as they were the immediate users of the services. Furthermore, the criteria were narrowed down to B-Tech students based on the Durban campus only within the FoMS. Due to time and financial constraints, the vast number of students registered in this faculty would have been impossible to survey. This study, therefore, cannot be generalised. Results emerging from this study may not necessarily reflect the situation in other faculties within the UoT or in other UoTs.

Additionally, the researcher experienced many problems in achieving the desired number required for the sample population. Firstly, the B-Tech numbers had dropped drastically due to the course being phased out, so where the numbers were around 1 655, it had dropped to 355. Another challenge faced was that students were not attending classroom lectures due to the COVID pandemic, so surveys were sent online. The researcher implored students to assist in completing the survey. This took longer than expected as students were not interested in completing online surveys, but they finally assisted after much encouragement from their resident lectures.

Moreover, the classroom surveys were conducted with only 20 or fewer students present in the classroom at any one time. Again, this proved a challenge that the researcher had to overcome. Future surveys can incorporate more students from other levels to get a more dynamic view of the level of service.

This study also only used quantitative data. The limitation is that students were required to answer fixed questions only; however, a mixed-method would have allowed qualitative data to be collected. Students were also allowed to comment on the level of service delivery received. This would have allowed a more in-depth analysis of the issues plaguing the FoMS. Denscombe (2010: 139) stated that using a mixed-method approach allows the researcher to check the findings from one method against an alternate method. Various other stakeholders, e.g. alumni, staff and organisations, should be included in surveys so that management can gain other perspectives of the service delivery offered.

5.5 RECOMMENDATIONS

Education has long since been acknowledged as the means to achieve transformation, initiate new practices, and create new ideas that increase prosperity. Muswede (2017: 205) carries this further by stipulating that education is an escape from the poverty trap. Therefore, this encourages HEIs to provide excellence in service delivery to the students, creating and shaping the country's future by identifying variables that would hinder departments in providing this level of service. Students' perceptions and satisfaction are thus significant in the service delivery that affects them.

Students are the customers of HEIs as they are the significant recipients of post-school education. The gap analysis model for this study should assist management to find where the causes lie for the gaps in the quality of the service and determine appropriate ways to close this gap. This allows management to discover inconsistencies between the faculty and the student; the level of service the student is expecting instead of the level of service the student receives. Addressing these inconsistencies is a reasonable basis for developing strategic service processes in which perceptions can meet or even

exceed expectations. This ultimately will bring about student satisfaction and give the institution a competitive edge over other UoTs.

The UoT's management needs to be cognizant of the services that currently do not meet students' expectations. These dissatisfied students may pass unwanted or damaging messages to current and prospective students. This, in turn, can affect enrolment, funding, brand image and retention of existing students. Ganguly (2015: 86) proclaimed that quality has become one of the essential ingredients and strengths globally with HEI's. Business success depends on understanding customers' needs and satisfaction; hence, at the FoMS, staff's administration of service quality should not be underestimated when trying to improve student satisfaction levels.

Student experiences in HE can be improved by directing all of the institution's resources, viz., people, technology, and physical assets, to improve service delivery quality. Operation processes can be designed according to students' preferences, bearing in mind that these progressions must be frequently refreshed to improve the quality continuously. Klemenčič and Chirikov (2015: 365) believe that a collection of student experiences has important implications for quality enhancement and institutional sustainability. These processes must influence the student while they are currently registered and throughout the entire lifecycle of the student/staff relationship. Koen and Bester (2009: 283-304) discuss how HE has affected their lives professionally and personally and talk about a journey through their study life cycle. The authors further accentuate the quality of education received and how this has shaped their future and helped them eventually attain success as professionals in the academic sector in HE. This relationship starts before the student is enrolled and continues well after the student has graduated. Koen and Bester (2009: 287) believe enrolling in HE studies helps acquire new skills and knowledge aside from influencing a change in perceptions and beliefs.

Students' feedback on their holistic experience can provide invaluable information. It can assist the HEI in building a more than a good relationship that would help them maintain and improve the quality of service across the board. Okogbaa (2016: 139) reiterates that students' opinions are essential and should be involved in the robust discussions regarding service quality in HE. There is a need to assess front-line staff services as they are significant contributors to the organisation, and they can influence student evaluation of the services received.

Listed below are recommendations on how to close the gap.

5.5.1 Recommendation: Reliability

According to Ramya (2019: 40), the reliability dimension performs the services accurately and dependably. The quality gap for this dimension was found to be negative (-0.8). Students will want to continue studies with the HEI if the University shows a sincere interest in solving problems right the first time. Management should build a winning team to avoid negatively affecting each other, thus avoiding conflicts and creating a unified workspace. Berry, Parasuraman and Ziethaml (1994: 41) writings have convincingly shown that service quality declines with the absence of teamwork.

Additionally, staff should be continuously trained and monitored to ensure that they find out what is expected of the student in terms of service accuracy and expectancy and be proactive in helping to solve student queries. Keeping error-free records by engaging in constant auditing processes and checklists and providing a service at a time they promise to do so will ensure the quality of service and student satisfaction. In this regard, the DUT must be kept aware of students' expectations of reliability. Suppose students deem the staff to be reliable. In that case, the department will be deemed reliable, giving the FoMS a positive light, increasing the level of service quality, and increasing student satisfaction. Good service will spread via word-of-mouth, decreasing the gap between perception and expectation and possibly even bringing about positive

disconfirmation. Grimmelikhuijsen and Porumbescu (2017: 1272) describe disconfirmation as the difference between expectation and perception and that this affects customer satisfaction. The highest gap score within this dimension was “perform services right the first time” (-0.9). A suggestion would be to ensure mechanisms are put in place to ensure that students’ queries are not repeated. Efficacious communication channels between students and staff should be established and always utilized.

5.5.2 Recommendation: Assurance

“Assurance can be defined as employee's knowledge, courtesy and the ability of the firm and its employees to inspire trust and confidence in their customers”, maintains Ramya (2019: 40).

This dimension scored one of the highest perception ratings from all five dimensions (3.5). This indicates that students expected staff to be polite, be knowledgeable, inspire confidence and trust and make students feel safe in their dealings with staff. This is similar to the results of the study done by Green (2014: 131) in South Africa, where it was found that the assurance dimension also had the highest perception rating. Clear and concise communication between staff and the student will encourage a healthy and long-lasting relationship, thereby ensuring that every encounter with the student is handled with courtesy, trust and knowledge.

The negative gap score (-0.8) shows that it could be role ambiguity/conflict or ineffective recruitment processes. Role quality in job descriptions should be provided to empower staff to be more responsible and knowledgeable in decision-making and deliver valuable service. The recruitment process should ensure that people have the right skills and attitude to perform the tasks they have been employed for. Prospective staff should also be enthusiastic and highly motivated and should enjoy dealing with students to resolve their complaints effectively. Furthermore, staff should constantly be improving their

skills, and this consistency should be maintained. With adequate training, staff morale and confidence are improved and not only will this lead to better service and inspire student trust and confidence in staff. When these processes are more efficient, then service quality is higher and satisfaction increases.

5.5.3 Recommendation: Tangibles

As per Ramya (2019: 40), communication materials, technology, and the appearance of physical facilities and staff can be defined under the tangibles dimension. In this study, tangibles scored the lowest gap score of (-0.6). Within tangibles, “have well-dressed and neat staff” had the highest perception score of (3.8). Sharing the top spot with assurance, tangibles also scored one of the highest perception ratings (3.5).

The FoMS “front-desk” staff are the first point of contact, so they must be well presented and well-mannered. Support staff must always be clean, neat and presentable to the students' expectations of students is that staff must be formally dressed and well-groomed, and their perceptions do not fall short of their expectations, as proven by the lowest gap score (-0.4). In discussing the SERVQUAL model, Parasuraman, Zeithaml and Berry (1990: 39) established that customers exhibit lower tangibles expectations than other dimensions across different organisations. Although the tangible dimension did not feature significantly when students thought of an ideal faculty, the variable “have material associated with visually appealing service” scored the lowest gap score. This suggests that more resources need to be allocated to enhance faculty material, e.g. statements, and pamphlets. These materials should be trendy and colourful in keeping with the diverse student population and ensure that they are distributed widely to students via all communication channels.

Additionally, as mentioned in chapter four, the FoMS offices have undergone a minor upgrade, so furniture and equipment should now be more modern and high quality. However, the lighting, painting and overall features must meet

this modernism so that students have an aesthetic feeling when in a well-ventilated and comfortable environment. It must be ensured that provisions or alternative arrangements are made to assist physically challenged students as well.

5.5.4 Recommendation: Empathy

Tan, Muskat and Johns (2019: 142) posited that students felt that it was most important for staff members to have the students' best interest at heart under the empathy dimension. Remarkably, the authors also noted that too much concern and care from staff had a negative effect on student experiences. Hence, a balance should be found whereby staff do not overcompensate but provide individual and professional assistance to the student by understanding the student's needs.

FoMS staff should place themselves in the student's position to understand the frustration when the student does not get the required service. When this frustration is understood, then staff can offer services empathically, and this is seen as understanding the student's needs and having the student's best interest at heart. Staff must practice empathy, i.e. listening to and understanding exactly what the student requires so that staff can provide services right the first time. The ability to identify and understand or sense what the student is thinking or feeling will go a long way in providing a high level of service quality and show that the staff member is willing to help and is showing a sincere interest in solving the students' problem. This will inspire confidence and trust in the staff, and the student will feel safe in their transactions with FoMS staff.

Although the SERVQUAL dimensions are not equal, they are interwoven; if empathy is enhanced, then the service quality of the variables of the other dimensions is also improved. Parasuraman, Berry and Zeithaml (1991: 440) confirmed the nature of overlap among the SERVQUAL dimensions. With the

diverse culture of students registered within this faculty, most of them are possibly from disadvantaged backgrounds, so support staff should show empathy. Tan, Muskat and Johns (2019: 144) confirm that one of the key influencing factors in service quality is empathy. Likewise, the authors maintain empathy being a crucial factor in achieving student satisfaction. These results suggest that management undertake efforts in the area of service quality and customer satisfaction in order to begin to cultivate a culture of service quality.

5.5.5 Recommendation: Responsiveness

Ramya (2019: 40) describes responsiveness as providing prompt service and the willingness to help customers. According to an analysis of the student survey, this dimension is the worst of all five dimensions. The gap score of (-0.9) was the highest, and the worse performing variable within this dimension is “never too busy to respond to requests”, also with a gap score of (-0.9). This could imply that time management is a problem with the staff within the faculty or that staff are too busy with other work and therefore inaccessible to the student when the need arises. Students’ frustration about the lack of adequate interaction can bring about dissatisfaction.

Recommendation on planned workshops on customer service, personnel skills and communication skills will assist staff in offering an improved service, especially the staff that are “front-line” as they are the first line of contact. Valuable resources allocated appropriately will assist staff in functioning efficiently and thereby give prompt service and be helpful to students. Policies and procedures should be put in place to further assist staff in working professionally and responsibly. Having polite staff is little consolation if these very staffs are too busy to assist, do not offer a prompt service or are not willing to help.

Furthermore, management must know the service processes adopted by the faculty. When problems arise that cannot be fixed within the faculty, management needs to take control. The attitude of the staff should be continuously reviewed in line with quality, and if found lacking, measures must be implemented to change staff's mindset. Such is the case with responsiveness, where students are not satisfied with all elements of this dimension, and if the faculty fails in finding solutions to these problems, then management must find a way to assist. Management must know how services are delivered and how students feel about the quality of service delivery. This is not only a point of concern of the faculty but, overall, an organizations' issue. UoT management should be aware of the discrepancies in all five dimensions and look for ways to close the gaps. Management's willingness to be responsive to students' needs and respond to a problem also contribute as crucial factors in service quality.

5.6 FURTHER RESEARCH

This study highlighted the gap in expectations vs perceptions in an administrative department in a University of technology. The literature review in chapter two has illustrated the importance of service quality in HEIs. It is therefore recommended that further research be conducted within South African universities using the SERVQUAL model.

Many aspects were touched during this study. They were beyond the scope of this study and can be used for further research. As stated in Chapter One, the focus of this study is based on one faculty, within one institution, within one campus and one province in South Africa. Other faculties or administrative departments from all the DUT campuses can be included in a study giving a richer range of information, giving a complete perspective of the expectations and perceptions of the level of quality of administrative staff within the HEI under the focus of this study. Broader information gauged can be used in comparison either within the University or within incorporating other

government or private universities. Departments within the same University can conduct this research, establish what other departments expect or perceive of them, and fix the areas of discontent.

Further research can include other universities, both private and public, and establish a comparison of the results to offer a broader view of service qualities of administration staff within a University. This study also only adopted quantitative research so that future studies can use qualitative or mixed methods. A longitudinal study can be conducted, although this is expensive and time-consuming. The zone of tolerance was not explored here, so this could be an avenue to investigate as well.

Studies on other support staff within the same institution, e.g. finance, residence library, and IT support, can be conducted and compared. Future research should focus on the expectations and perceptions of service quality from other stakeholders' perspectives, e.g. academic staff and alumni's. Performance can be tracked by periodically administering surveys such as these to determine whether changes made were successful in improving the service quality. A comprehensive study would help the faculty to review the overall service quality in the higher education sector. Information on the respondent's profile and demographic differences was not a part of this writing, so this is worthy of future investigation and may be of significant value in advancing this vital research area in HE in South Africa.

5.7 SUMMARY

Grimmelikhuijsen and Porumbescu (2017: 1288) cite, "Citizens may form expectations while simultaneously experiencing performance".

In summarising this study, one of the difficulties experienced is that education services are not a business and students are not customers. Additionally, quality is regarded as intangible as not buying quality, so it is difficult to

measure. Green (2014: 131) reiterates that the concept of quality is difficult to define because it is an intangible service delivered for consumption at the time or place of delivery. Because education is an intangible and heterogeneous service, its efficacy should be measured by evaluating its effect on the students. This is what this study has set out to accomplish. Measuring student perception of an intangible service is difficult but necessary for any University because the students' views are important and need to be assessed. Parasuram, Zeithaml and Berry (1990: 39) proclaim that companies make the common mistake of spending resources on the wrong initiatives. By a gap analysis measurement, resources can be channelled to the correct dimensions.

In essence, the DUT management needs to make concerted effort to ensure a match between expectations and perceptions, as this is imperative for student success and to avoid a detrimental effect on the student's successful performance. The dissatisfaction held by the students spanned across all the five dimensions of service quality. Khosravi (2013 pg 582) carries this argument further as the author's research also found that support services offered are inadequate to meet the needs of students. Management should pay more attention and be serious about the student's unique needs and provide a service quality to increase student satisfaction. Considering what was mentioned above, this thesis aims to make management aware of the discrepancies within the FoMS, and for these gaps to be addressed to give attention to service quality to benefit the students. Changes implemented should be feasible, desirable and relevant to heighten the quality of service delivery. However, an attitude of inertia, ignorance and lethargy to change should be avoided at all costs, as this will cause the change implementation to be unsuccessful.

Ramya succinctly (2019: 40) ends this study by maintaining, "The management of service quality helps management maintain consistency in service delivery and to meet changing customer expectations more efficiently

and effectively". It is hoped that the recommendations for improvements will contribute to enhanced attitudes and higher perceptions over expectations about administrative staff's level of service quality for student satisfaction at a KZN University of Technology.

REFERENCES

Abdullah, F. 2006. Measuring service quality in Higher Education: HEdPERF versus SERVPERF. *Marketing Intelligence & Planning*, 24(1): 31-47.

Available:

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.465.9691&rep=rep1&type=pdf> (Accessed 03 March 2019).

Adil, M.A., Ghaswyneh, O. F. M., and Albkour A.M. 2013. SERVQUAL and SERVPERF: a review of measures in services marketing research. *Global Journal of Management and Business Research Marketing*, 13(6): 65-76.

Available: https://globaljournals.org/GJMBR_Volume13/5-SERVQUAL-and-SERVPERF.pdf (Accessed 24 August 2018).

Akpoiroro, R.M. and Okon, J.E. 2015. Students' satisfaction with service delivery in federal universities in South-south geo-political zone, Nigeria. *International Journal of Educational Administration and Policy Studies*, 7(5): 110-113. Available: <https://files.eric.ed.gov/fulltext/EJ1075867.pdf> (Accessed 28 May 2018).

Alhabeeb, A.M. 2015. The quality assessment of the services offered to the students of the college of education at King Saud University using SERVQUAL method. *Journal of Education and Practice*, 6(30): 82-93. Available: <https://files.eric.ed.gov/fulltext/EJ1081365.pdf> (Accessed: 09 February 2019).

Annamdevula, S. and Bellamkonda, R.S. 2016. The effects of service quality on student loyalty: the mediating role of student satisfaction. *Journal of Modelling in Management*, 11(2): 446-462. Available: https://www.researchgate.net/publication/304914226_The_effects_of_service_quality_on_student_loyalty_the_mediating_role_of_student_satisfaction/link/5925993c0f7e9b997986569b/download (Accessed: 10 August 2018).

Anim, S. K., & Mensah, J. (2015). Service quality in higher education: a

comparative study in tertiary institutions in Sub Saharan Africa. *Global Journal of Educational Studies*, 1(2). Available :

https://www.researchgate.net/profile/John_Mensah8/publication/282730418_Service_Quality_in_Higher_Education_A_Comparative_Study_in_Tertiary_Institutions_in_Sub-Saharan_Africa_Global_Journal_of_Educational_Studies_Macrothink_Institute/links/561a11d708ae6d173087cd9a/Service-Quality-in-Higher-Education-A-Comparative-Study-in-Tertiary-Institutions-in-Sub-Saharan-Africa-Global-Journal-of-Educational-Studies-Macrothink-Institute.pdf?origin=publication_detail (Accessed 18 January 2019).

Anwowie, S., Amoako, J. and Abrefa, A.A. 2015. Assessment of students' satisfaction of service quality in Takoradi Polytechnic: the students' perspective. *Journal of Education and Practice*, 6 (29), 148-155. Available: <https://www.iiste.org/Journals/index.php/JEP/article/view/26685/27335> (Accessed 15 July 2018).

Approaches for Systematic Planning of Development Projects / Higher Education. 2000. Available: https://www.jica.go.jp/jica-ri/IFIC_and_JBICI-Studies/english/publications/reports/study/topical/approaches/pdf/higher_02.pdf (Accessed 13 January 2020).

Astalin, P.K. 2013. Qualitative research designs: a conceptual framework. *International Journal of Social Sciences and Interdisciplinary Research*, 2(1) : 118-124. Available: <https://docplayer.net/20794592-Qualitative-research-designs-a-conceptual-framework.html> (Accessed 07 July 2019).

Awoke, H.M. 2015. Service quality and consumer satisfaction: Empirical evidence from saving account consumers of the banking industry. *European Journal of Business and Management*, 7(1), 144-164. Available: <https://www.iiste.org/Journals/index.php/EJBM/article/viewFile/18889/19359> (Accessed 07 February 2019).

Azam, A. 2018. Service quality dimensions and students' satisfaction: a study of Saudi Arabian private higher education institutions. *European online journal of natural and social sciences*, 7(2), 275-284. Available:

http://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=17&cad=rja&uact=8&ved=2ahUKEwjer5OakYzkAhWOWhUIHSPHDHcQFjAQegQIAxAC&url=http%3A%2F%2F european-science.com%2F eojnss%2F article%2F download%2F 5331%2F 2541&usg=AOvVaw2VN_0nnhud4FnnRnuvZ40I (Accessed 18 August 2019).

Azoury N., Daou, L. and El Khoury, C. 2014. University image and its relationship to student satisfaction – case of the Middle Eastern private business schools. *International Strategic Management Review*, 2(1):1-8. Available:

<https://reader.elsevier.com/reader/sd/pii/S2306774814000076?token=2DF20096396861796F45B378DFBF43C7AA8A7F50EFE9242317FA00BFDF76AA5E88D1B64B5632A8503D3670599D65A178> (Accessed 24 May 2018).

Bawa, A. and Herwitz, D. 2008. South African universities in the tumult of change. *The Journal of the International Institute: The Africa Issue*, 15(2): 11-14. Available: <https://quod.lib.umich.edu/cgi/p/pod/dod-idx/south-african-universities-in-the-tumult-of-change.pdf?c=jii;idno=4750978.0015.201;format=pdf> (Accessed 27 August 2018).

Bhatt, A.K. and Bhanawat, D.S. 2016. Service quality in retail - a literature review. *International Journal for Research in Business, Management and Accounting*, 2(3): 27-35. Available: <https://gnpublication.org/index.php/bma/article/view/580/572> (Accessed 07 February 2019).

Berry, L.L., Zeithaml, A. and Parasuraman, A. 1985. Quality counts in services, too. *Business Horizons*. 28(3): 44-52. Available:

https://www.researchgate.net/profile/Valarie_Zeithaml/publication/222459504_Quality_counts_in_services_too/links/5aa5081fa6fdccd544bb14b7/Quality-counts-in-services-too.pdf?origin=publication_detail (Accessed 06 March 2019).

Berry, L.L, Zeithaml, V. and Parasuraman, A.P. 1994. Improving service quality in America: Lessons learned. *Academy of Management Executive*, 8 (2):32-52. Available:

https://www.researchgate.net/profile/Valarie_Zeithaml/publication/313499863_Five_Imperatives_for_Improving_Service_Quality/links/5aaba5240f7e9b840b58c285/Five-Imperatives-for-Improving-Service-Quality.pdf?origin=publication_detail (Accessed: 24 February 2019).

Blair, E. and Noel, K.V. 2014. Improving higher education practice through student evaluation systems: is the student voice being heard? *Assessment & Evaluation in Higher Education*, 39(7): 879-894. Available:

<https://www.tandfonline.com/doi/pdf/10.1080/02602938.2013.875984?needAccess=true> (Accessed 29 October 2018).

Bolarinwa, O.A. 2015. Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Niger Postgrad Med J*, 22(4): 195-201. Available:

https://www.npmj.org/temp/NigerPostgradMedJ224195-3466719_093747.pdf (Accessed 11 August 2019).

Brown, T.J., Churchill, G.A. Jr. & Peter, J.P. 1993. Research note: improving the measurement of service quality. *Journal of Retailing*, 69(1):127-139. Available:

<https://www.sciencedirect.com/science/article/abs/pii/S0022435905800065> (Accessed: 17 March 2019).

Burgess, A., Senior, C. and Moores, E. 2018. A 10-year case study on the changing determinants of University student satisfaction in the UK. *Public*

Library of Sciences (PLoS ONE), 13(2): 1-15. Available:
<https://doi.org/10.1371/journal.pone.0192976> (Accessed 24 August 2018).

Buttle, F. 1994. SERVQUAL: review, critique, research agenda. *European Journal of Marketing*, 30 (1): 8-32. Available:
https://www.researchgate.net/profile/Francis_Buttle/publication/235313579_SERVQUAL_review_critique_research_agenda/links/00b4951f74ab92bb5e000000/SERVQUAL-review-critique-research-agenda.pdf?origin=publication_detail (Accessed: 09 March 2019).

Cheruiyot, T.K. and Maru, L.C. 2013. Service quality and relative performance of public universities in East Africa. *The TQM Journal*, 25(5): 533-546. Available: <https://doi.org/10.1108/TQM-11-2012-0103> (Accessed 27 July 2017).

Chinomona, R. 2013. Elements of quality assurance at institutions of higher learning education: the Vaal University of Technology in South Africa. *Mediterranean Journal of Social Sciences*, 4(14): 643-656. Available: https://www.researchgate.net/profile/Richard_Chinomona/publication/257928331_Elements_of_Quality_Assurance_at_Institutions_of_Higher_Education_Vaal_University_of_Technology_in_South_Africa/links/00b7d52935b747b1f5000000/Elements-of-Quality-Assurance-at-Institutions-of-Higher-Education-Vaal-University-of-Technology-in-South-Africa.pdf?origin=publication_detail (Accessed 07 April 2019).

Churchill, A.G. and Surprenant, C. 1992. An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 19(4): 491-504. Available:
https://www.geocities.ws/matthew_lau2002/Downloads/Satisfaction_churchill.pdf (Accessed 02 March 2019).

Ciobanu, A. 2013. The role of student services in the improvement of the student experience in higher education. *Procedia – Social and Behavioral Sciences*, 92: 169-173. Available:

<https://www.researchgate.net/publication/270848856> The Role of Student Services in the Improving of Student Experience in Higher Education

(Accessed 23 June 2018).

Cronin, J.J. and Taylor S.A. 1992. Measuring Service Quality: A re-examination and extension. *Journal of Marketing*, 56(3): 55-68. Available:

https://www.researchgate.net/profile/J_Cronin_Jr/publication/225083621 Measuring Service Quality -

[A Reexamination And Extension/links/54fbd7a70cf20700c5e7dc4c.pdf](https://www.researchgate.net/profile/J_Cronin_Jr/publication/225083621/A_Reexamination_And_Extension/links/54fbd7a70cf20700c5e7dc4c.pdf)

(Accessed 17 December 2018).

Creswell, J.W. and Creswell, J.D. 2018. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 5th ed. Los Angeles: Sage Publications.

Daniel, D., Liben, G. and Adugna, A. 2017. Assessment of student's satisfaction: a case of Dire Dawa University, Ethiopia. *Journal of Education and Practice*, 8(4): 111-120. Available:

<https://www.researchgate.net/publication/318012043> Assessment of Students' Satisfaction A Case Study of Dire Dawa University Ethiopia

Accessed (23 June 2018).

De Jager, J.W. and Jan, M.T. 2015. Antecedents of customer satisfaction in the higher education institutions of South Africa. *Problems and Perspectives in Management*, 13(3): 87-95. Available:

https://www.researchgate.net/profile/Muhammad_Jan7/publication/306316923 Antecedents of customer satisfaction in the higher education institutions of South Africa/links/58c61c3892851c0ccbfb9ca6/Antecedents-of-

[customer-satisfaction-in-the-higher-education-institutions-of-South-Africa.pdf?origin=publication_detail](#) (Accessed: 20 July 2018).

Denscombe, M. 2010. *The Good Research Guide: for small-scale social research projects*. 4th Ed. England: McGraw-Hill Education.

Diedericks, R. 2012. Students' perception of service quality at two South African higher education institutions. M.Tech., North-West University. Available: <http://hdl.handle.net/10394/10280> (Accessed 03 June 2018).

Donlagic, S and Fazlic, S. 2015. Quality assessment in higher education using the SERVQUAL model. *Management*, 20 (1): 39-57. Available: https://www.researchgate.net/profile/Samira_Fazlic/publication/282693142_Quality_assessment_in_higher_education_using_the_SERVQUALQ_model/links/5915634f0f7e9b70f49c564c/Quality-assessment-in-higher-education-using-the-SERVQUALQ-model.pdf?origin=publication_detail (Accessed: 15 July 2018).

Dowd, M. 2018. Advantages and disadvantages of qualitative and quantitative research. *The classroom* (blog). Available: <https://www.theclassroom.com/advantages-disadvantages-of-qualitative-quantitative-research-12082716.html> (Accessed 07 July 2019).

Duong, M. 2016. The factors influencing student satisfaction in Vietnamese higher education. *International Research in Education*, 4(1): 27-38. Available: <http://dx.doi.org/10.5296/ire.v4i1.8191> (Accessed 03 June 2018).

The Durban University of Technology, Division of Corporate Affairs. 2008. *Heralding the centenary: 100 years of wisdom*. Durban: DUT, Division of Corporate Affairs. Available: https://www.dut.ac.za/wp-content/uploads/menu/DUT_100.pdf (Accessed 21 July 2018).

Durban University of Technology, Research. 2013. *Research Ethics Terms of Reference*. Durban: DUT, Institutional Research Ethics. Available:

<https://www.dut.ac.za/wp-content/uploads/research/institutional%20research%20ethics/Research%20Ethics%20Terms%20of%20Reference.pdf> (Accessed 09 February 2019).

The Durban University of Technology. 2020. *Strategy Map Interpretation Guide*. Durban: DUT. Available: <https://www.dut.ac.za/envision-2030/> (Accessed 27 December 2020).

Dursun, T., Oskaybas, K. and Gokmen, C. 2013. The quality of service of distance education. *Procedia Social and Behavioural Sciences*, 103: 1133-1151. Available:

https://www.researchgate.net/publication/275543015_The_Quality_Of_Service_Of_The_Distance_Education/fulltext/5551556c08ae93634eca0c71/The-Quality-Of-Service-Of-The-Distance-Education.pdf?origin=publication_detail (Accessed 06 October 2018).

Etikan, I., Musa, S.A. and Alkassim. 2015. Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1): 1-4. Available:

https://www.researchgate.net/profile/Ilker_Etikan/publication/304339244_Comparison_of_Convenience_Sampling_and_Purposive_Sampling/links/589d919692851c599c9badc8/Comparison-of-Convenience-Sampling-and-Purposive-Sampling.pdf?origin=publication_detail (Accessed 07 May 2019).

Firdaus, A. (2005). HEdPERF Versus SERVPERF: The quest for the ideal measuring instrument of service quality in the higher education. *Quality Assurance in Education*, 13(4), 305-328. Available:

<https://pdfs.semanticscholar.org/1f8b/19cde0a963d3a1c93343a0427e671dd32d58.pdf> (Accessed 18 January 2019).

Fragoso, J.T. and Espinoza, I.L. 2017. Assessment of banking service quality perception using the SERVPERF model. *Contaduría Administración*, 62: 1294-1316. Available:

<https://reader.elsevier.com/reader/sd/pii/S0186104217300761?token=6175AD653B462F5564C16209F2F84B29C44A9311AC1E908371C6951CB609F38DA6612D8B3486E0480183857D34B604A5> (Accessed 09 February 2018).

Ganguly, A. (2015). Exploring total quality management (TQM) approaches in higher education institutions in a globalized environment - case analysis of UK and Sweden. *British Journal of Education*, 3(7). Available:

<http://www.eajournals.org/wp-content/uploads/Exploring-Total-Quality-Management-TQM-Approaches-in-Higher-Education-Institutions-in-a-Globalized-Environment-Case-Analysis-of-UK-and-Sweden.pdf> (Accessed 16 March 2019).

Garraway, J. 2009. Higher education and the world of work. In: Bitzer, E. eds. *Higher Education in South Africa: a scholarly look behind the scenes*. Stellenbosch: SUN MeDIA : 229-252. Available:

https://www.researchgate.net/publication/313598148_South_African_Education_Before_and_After_1994 (Accessed 08 September 2018).

Gholian, H., Bagherzadeh, M.R. and Abbasi, E. 2016. A review on the quality of service models. *International Journal of New Studies in Management Research*, 1(3): 79-83. Available:

https://openscholar.dut.ac.za/bitstream/10321/1332/1/journal_of_iersq2014.pdf (Accessed 16 March 2019).

Ghotbabadi, A.R. and Baharun, R. 2015. Service quality measurements: a review. *International Journal of Academic Research in Business and Social Science*, 5(2): 267-286. Available:

https://www.researchgate.net/profile/Ali_Ramezani_Ghotbabadi/publication/277661334_Service_Quality_Measurements_A_Review/links/55d44d0c08ae7f

[b244f5af00/Service-Quality-Measurements-A-Review.pdf?origin=publication_detail](https://doi.org/10.1080/0309877X.2014.1000280) (Accessed 09 March 2019).

Giannakis, M. and Bullivant, N. 2016. The massification of higher education in the UK: aspects of service quality. *Journal of Further and Higher Education*, 40 (5): 630-648. Available: <http://dx.doi.org/10.1080/0309877X.2014.1000280> (Accessed: 4 May 2018).

Goran, D. 2004. An analysis of the service quality perception in higher education: the case of the school of economics and business, University of Sarajevo. Master's Thesis, University of Ljubljana. Available: <http://www.cek.ef.uni-lj.si/magister/goran1649-B.pdf> (Accessed 24 July 2018).

Govender, J.P., Veerasamy, D. and Noel, D.T. 2014. The service quality experience of international students: the case of a selected higher education institution in South Africa. *Mediterranean Journal of Social Sciences*, 5(8): 465-473. Available: <http://www.mcser.org/journal/index.php/mjss/article/view/2580/2548> (Accessed: 23 July 2018).

Green, P. 2014. Measuring service quality in higher education: A South African case study. *Journal of International Education Research*, 10(2): 131-142. Available: https://openscholar.dut.ac.za/bitstream/10321/1332/1/journal_of_iersq2014.pdf (Accessed 12 April 2017).

Grimmelikhuijsen, S. and Porumbescu, G.A. 2017. Reconsidering the expectancy disconfirmation model. Three experimental replications. *Public Management Review*, (19(9): 1272-1292. Available: <https://www.tandfonline.com/doi/full/10.1080/14719037.2017.1282000> (Accessed 04 January 2021).

Grönroos, C. 1984. A service quality model and its marketing implications. *European Journal of Marketing*, Vol. 18, No. 4, pp. 36-44. Available: https://www.researchgate.net/profile/Christian_Groenroos/publication/233522386_A_Service_Quality_Model_and_Its_Marketing_Implications/links/0c96052a58f958eccc000000/A-Service-Quality-Model-and-Its-Marketing-Implications.pdf?origin=publication_detail (Accessed 04 February 2019).

Guilbault, M. 2018. Students as customers in higher education: the (controversial) debate needs to end. *Journal of Retailing and Consumer Services*, 40: 295-298. Available: <http://dx.doi.org/10.1016/j.jretconser.2017.03.006>. (Accessed 18 February 2018).

Gupta, P. and Kaushik, N. 2018. Dimensions of service quality in higher education – critical review (students' perspective). *International Journal of Educational Management*, Vol. 32: 4, (580-605). Available: <https://doi.org/10.1108/IJEM-03-2017-0056> (Accessed 15 June 2018).

Hall, J.K. 2013. Student satisfaction regarding meal experience at the residential dining hall of the University of Pretoria. M.Tech., University of Pretoria. Available: <https://repository.up.ac.za/handle/2263/41114> (Accessed 23 April 2018).

Hanssen, T.S. and Solvoll, G. 2015. The importance of University facilities for student satisfaction at a Norwegian University. *Facilities*, 33 (13-14): 644-759. Available: <https://doi.org/10.1108/F-11-2018-0081> (Accessed 13 February 2018).

Hay, D and Monnapula-Mapesela, M. 2009. South African higher education before and after 1994. A policy analysis perspective. In Bitzer, E. eds. *Higher Education in South Africa: a scholarly look behind the scenes*. Stellenbosch: SUN MeDIA : 3-20. Available:

https://www.researchgate.net/publication/313598148_South_African_Education_Before_and_After_1994 (Accessed 08 September 2018).

Herdlein, R. and Zurner, M. 2015. Student satisfaction, needs, and learning outcomes: a case study approach at a European University. *Sage Journals*, 5(2): 1-10. Available :

<https://doi.org/10.1177/2158244015580373> (Accessed 08 April 2017).

Jain, P. and Aggarwal, V.S. 2015. Service quality models: a review. *BVIMSR's Journal of Management Research*, 7 (2): 125-136. Available:

https://www.researchgate.net/profile/Prachi_Jain10/publication/307545427_Service_Quality_Models_A_review/links/57cfc76b08ae582e0693999c/Service-Quality-Models-A-review.pdf?origin=publication_detail (Accessed 24 February 2019).

Jain, S.K., and Gupta, G. 2004. Measuring service quality: SERVQUAL vs SERVPERF scales. *Vikalpa*, 29 (2): 25-38. Available:

<https://journals.sagepub.com/doi/pdf/10.1177/0256090920040203>

(Accessed: 07 February 2019).

Jalali, A., Islam, M.A. & Ariffin, K.H. 2011. Service satisfaction: the case of a higher learning institution in Malaysia. *International Education Studies*, 4(1): 182-192. Available:

https://pdfs.semanticscholar.org/e9c9/493b8b72175c2d56213fe2b632b3b731faca.pdf?_ga=2.241583106.1662635690.1609228472-933531602.1609228472 (Accessed 29 December 2020).

Kara, A.M., Tanui, E. and Kalai, J.M. (2016). Educational services quality and student satisfaction in public universities in Kenya. *International Journal of Education and Social Science*, 3 (10): 37-48. Available:

https://www.researchgate.net/publication/333729016_Educational_Service_Quality_and_Students'_Satisfaction_in_Public_Universities_in_Kenya

(Accessed 12 May 2017).

Khattab F. 2018. Developing a service quality model for private higher education institutions in Lebanon. *Journal of Management and Marketing Review*, 3(1): 24-33. Available:

[http://gatrenterprise.com/GATRJournals/pdf_files/JMMR%20Vol%203\(1\)/4.Farah%20Khattab.pdf](http://gatrenterprise.com/GATRJournals/pdf_files/JMMR%20Vol%203(1)/4.Farah%20Khattab.pdf) (Accessed: 09 March 2019).

Klemenčič, M. and Chirikov, I. 2015. How do we know how students experience higher education? On the use of student surveys. In: Curaj A., Matei L., Pricopie R., Salmi J., Scott P. eds. *The European higher education area: between critical reflections and future policies*. London: Springer, 361-379. Available: https://link.springer.com/chapter/10.1007%2F978-3-319-20877-0_24 (Accessed 14 August 2018).

Khoshraftar, A. and Rozan, M. 2014. A review of ten years of research in services quality. *Journal of Information Systems Research and Innovation*, 7: 1-9. Available:

https://seminar.utmspace.edu.my/jisri/download/Vol-7/Pub1_ReviewOfServicesQuality.pdf (Accessed: 09 March 2019).

Khoo, S., Ha, H. and McGregor, L.T. 2017. Service quality and student/customer satisfaction in the private tertiary education sector in Singapore. *International Journal of Educational Management*, 31 (4): 430-444. Available: <https://doi.org/10.1108/IJEM-09-2015-0121> (Accessed 02 May 2018).

Kivunja, C. and Kuyini, A.B. 2017. Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education*, 6 (5): 26-41. Available: <https://files.eric.ed.gov/fulltext/EJ1154775.pdf>

Koen, M & Bester, M. 2009. Two master's students' perspectives on higher education studies: in pursuit of scholarship. In Bitzer, E. eds. *Higher Education in South Africa: a scholarly look behind the scenes*. Stellenbosch: SUN MeDIA : 283-304. Available:

https://www.researchgate.net/publication/313598148_South_African_Education_Before_and_After_1994 (Accessed 08 September 2018).

Kogovsek, M., and Kogovsek, M. 2013. Perception of Service Quality: Student Oriented Model, *Procedia – Social and Behavioral Science*, 106: 2037-2043. Available:

<https://www.sciencedirect.com/science/article/pii/S1877042813048556>

(Access 08 April 2017).

Kotler, P. and Keller, K., 2012. *Marketing Management*. NJ: Prentice-Hall, Available: <https://www.pdfdrive.com/marketing-management-2-download-sociolineru-d12310293.html> (Accessed 12 July 2017).

Kumar, R. 2019. *Research Methodology: A Step-by-Step Guide for Beginners*. 5th Ed. London: Sage Publications.

Latif, K. F., Latif, I., Sahibzada, U.F., Ullah, M. 2017. In search of quality: measuring higher education service quality (HiEduQual). *Total Quality Management & Business Excellence*, 1-24. Available:

<https://www.tandfonline.com/doi/full/10.1080/14783363.2017.1338133?scroll=top&needAccess=true> (Accessed: 07 July 2017).

Lekhanya, L.M. 2014. Customer service orientation of institutes of higher learning in South Africa: A case study of Universities of Technology. *Corporate Ownership and Control*, 11(4): 299-310. Available:

https://ir.dut.ac.za/bitstream/10321/1312/1/COC_%28Volume_11_Issue_4_Summer_2014_Continued3%29.pdf (Accessed 15 February 2018).

Machado, M.A., Ribeiro, A. and Basto, M. 2014. An empirical assessment of customer satisfaction and quality of service: comparing SERVQUAL and SERVPERF. *Revista Gestão Industrial*, 10(02): 264-283. Available: [https://www.researchgate.net/publication/286094246 AN EMPIRICAL ASSSESSMENT OF CUSTOMER SATISFACTION AND QUALITY OF SERVICE COMPARING SERVQUAL AND SERVPERF](https://www.researchgate.net/publication/286094246_AN_EMPIRICAL_ASSSESSMENT_OF_CUSTOMER_SATISFACTION_AND_QUALITY_OF_SERVICE_COMPARING_SERVQUAL_AND_SERVPERF) (Accessed: 03 March 2019).

Mandal, K. and Gupta, H. 2018. Service quality gap measurement in pharmaceutical, educational institutes: an empirical analysis of model development. *Indian Journal of Pharmaceutical Education and Research*, 52(3): 351-361. Available: http://ijper.org/sites/default/files/IndJPhaEdRes_52_3_351.pdf (Accessed 23 June 2018).

Manuel, N. 2008. Customer perception of service quality at the Business Studies Unit of the Durban University of Technology. M.Tech., Durban University of Technology. Available: <http://hdl.handle.net/10321/418> (Accessed: 15 August 2017).

Martin, M. 2018. *Internal quality assurance: enhancing higher education quality and graduate employability*. Paris, France: International Institute for Educational Planning. [https://www.researchgate.net/profile/Farheen_Hassan5/publication/326550975 Internal Quality Assurance Enhancing higher education quality and graduate employability/links/5b55873f45851507a7c04037/Internal-Quality-Assurance-Enhancing-higher-education-quality-and-graduate-employability.pdf?origin=publication_detail](https://www.researchgate.net/profile/Farheen_Hassan5/publication/326550975_Internal_Quality_Assurance_Enhancing_higher_education_quality_and_graduate_employability/links/5b55873f45851507a7c04037/Internal-Quality-Assurance-Enhancing-higher-education-quality-and-graduate-employability.pdf?origin=publication_detail) (Accessed 23 June 2018).

Martirosyan, N. (2015). An examination of factors contributing to student satisfaction in Armenian higher education. *International Journal of Educational*

Management, 29(2): 177-191, Available: <http://dx.doi.org/10.1108/IJEM-09-2013-0143> (Accessed 25 May 2017).

May, C. and Viljoen, P. 2014. Service quality at a South African University: an Exploratory Study. *Mediterranean Journal of Social Sciences*, 5(20): 882-887. Available: <https://www.mcser.org/journal/index.php/mjss/article/view/3809/3732> (Accessed 22 March 2019).

Meling, V., Kupczynski L., Mundy M. and Green M. 2013. Supplemental instruction and academic success and retention in science courses at a Hispanic-serving institution. *World Journal of Education*, 3(3): 11-23. Available: <http://www.sciedu.ca/journal/index.php/wje/article/view/2711/1688> (Accessed 12 July 2017).

Mohamedbhai, G. 2017. *The changing landscape of private higher education* (blog). Available: <http://www.Universityworldnews.com/article.php?story=2017103110332862> (Accessed 22 July 2018).

Muswede, T. 2017. Colonial legacies and the decolonisation discourse in post-apartheid South Africa: a reflective analysis of student activism in higher education. *African Journal of Public Affairs*, 9(5): 200-210. Available: https://repository.up.ac.za/bitstream/handle/2263/59082/Muswede_Colonial_2017.pdf?sequence=1&isAllowed=y (Accessed: 03 May 2018).

Mwiya, B., Bwalya J., Siachinji, B., Sikombe, S., Chanda, H. and Chawala, M. 2017. Higher education quality and student satisfaction nexus: evidence from Zambia. *Creative Education*, 8: 1044-1068. Available: https://www.researchgate.net/profile/Bruce_Mwiya/publication/317407079_Higher_Education_Quality_and_Student_Satisfaction_Nexus_Evidence_from_Zambia/links/593f9785aca272876da9784a/Higher-Education-Quality-and-

[Student-Satisfaction-Nexus-Evidence-from-Zambia.pdf?origin=publication_detail](#) (Accessed 29 December 2020).

Naidoo, V. 2014. Service quality perceptions of students at a South African University. *Mediterranean Journal of Social Sciences*, 5(27): 199-206. Available <http://www.mcser.org/journal/index.php/mjss/article/view/5071/4894> (Accessed 20 February 2018).

Naidu, Y. 2009. User perceptions of service quality and the level of user satisfaction at the Mangosuthu University of Technology Library. M.I.S., University of Kwa-Zulu Natal. Available: https://researchspace.ukzn.ac.za/xmlui/bitstream/handle/10413/590/Naidu_Y_2009_Thesis.pdf?sequence=1&isAllowed=y (Accessed 20 July 2018).

Napitupulu, D., Rahim, R., Abdullah, D., Setiawan, M.I., Abdillah, S., Ahmar, A.S., Simarmata, J., Hidayat, R., Nurdiyanto, H and Pranolo, A. 2018. Analysis of student satisfaction toward quality of service facility. *Journal of Physics: Conference Series*, 954(1): 1-7. Available: <https://iopscience.iop.org/article/10.1088/1742-6596/954/1/012019/pdf> (Accessed 20 July 2018).

Ncwane, S.E. 2016. Users perceptions of service quality and level of user satisfaction at the Mangosuthu University of Technology's natural sciences library. M.I.S., University of KwaZulu-Natal. Available: https://researchspace.ukzn.ac.za/bitstream/handle/10413/14991/Ncwane_Siyabonga_E_2016.pdf?sequence=2&isAllowed=y (Accessed: 22 September 2018).

Nell, C.E. and Cant, M.C. 2014. SERVQUAL: Student's perception and satisfaction regarding the quality of service provided by student administration departments within tertiary institutions. *Corporate Ownership & Control*, 11(4), 242-249. Available:

https://www.virtusinterpress.org/IMG/pdf/10-22495_cocv11i4c2p2.pdf

(Accessed: 18 June 2018).

Nell, C.E. and Cant, M.C. 2014. Determining student perceptions regarding the most important service features and overall satisfaction with the service quality of a higher education institution. *Management*, 19(2), 63-87. Available: <https://pdfs.semanticscholar.org/c40f/d92d88cfcf39bea70a9824cc3a2682138a2f.pdf> (Accessed: 21 March 2019).

Ngaaso, C.K. and Abbam, A. 2016. An appraisal of students' level of satisfaction of support services of distance education at the University of Education, Winneba. *Research on Humanities and Social Sciences*, 6 (10): 168-173. Available: <https://www.iiste.org/Journals/index.php/RHSS/article/viewFile/30671/31510> (Accessed 24 February 2019).

Ngibe, M. 2015. Staff and student perceptions of research structures and services provided by the faculty research offices at a University of technology in South Africa. M.Tech., Durban University of Technology. Available: https://ir.dut.ac.za/bitstream/10321/1285/1/NGIBE_2015.pdf (Accessed: 22 September 2018).

Nhari, S.R. 2017. Investigating internal service quality at the Durban University of Technology writing centres. M.Tech., Durban University of Technology. Available: https://ir.dut.ac.za/bitstream/10321/2607/1/NHARI_SR_2017.pdf (Accessed: 22 September 2018).

Noel, D.T. (2011). International students' expectations and perceptions of customer service at the Durban University of Technology. M.Tech., Durban University of Technology. Available: <http://hdl.handle.net/10321/714> (Accessed: 15 August 2017).

Nsamba, A. and Makoe, M. 2017. Evaluating quality of students' support services in open distance learning. *Journal of Distance Education*, 18(4): 91-103. Available: <http://uir.unisa.ac.za/handle/10500/21694> (Accessed 17 August 2018).

Nsamba, A.N. (2016). Exploring the quality of students' support services in distance learning environments. D.Tech., University of South Africa. Available: http://uir.unisa.ac.za/bitstream/handle/10500/21694/thesis_nsamba_an.pdf?sequence=1&isAllowed=y (Accessed 06 July 2018).

Okogbaa, V. 2016. Quality in higher education: the need for feedback from students. *Journal of Education and Practice*, 7 (32): 139-143. Available: <https://files.eric.ed.gov/fulltext/EJ1122512.pdf> (Accessed 23 May 2018).

Olufunke, O.A. 2015. The impact of faculty of study on students' satisfaction: a study of four private universities in Nigeria. *International Education Studies*, 8(7): 57-63. Available: <https://files.eric.ed.gov/fulltext/EJ1070765.pdf> (Accessed 07 June 2017).

Onditi, E.O. and Wechuli, T.W. 2017. Service quality and student satisfaction in higher education institutions: a review of the literature. *International Journal of Scientific and Research Publications*, 7(7): 328-335. Available: <http://www.ijsrp.org/research-paper-0717/ijsrp-p6737.pdf> (Accessed 03 March 2019).

Ong, W.M. 2013. Students' expectations and perceptions of service quality performance: University student advisors in Australia, Malaysia and Singapore. D.Tech., RMIT University School of Management. Available: <https://researchrepository.rmit.edu.au/discovery/search?query=any,contains,Students%E2%80%99%20expectations%20and%20perceptions%20of%20service%20quality%20performance:%20University%20student%20advisors%20in%20Australia,%20Malaysia%20and%20Singapore&tab=Research&sear>

[ch_scope=Research&vid=61RMIT_INST:ResearchRepository&offset=0](#)

(Accessed 06 October 2018).

Osman, A.R., Sarkar, J.B. and Islam, S. 2017. Revisiting student satisfaction through SERVQUAL: private tertiary education perspective. *British Journal of Education*, 5(11): 119-137. Available:

https://www.academia.edu/35441689/REVISITING_STUDENT_SATISFACTION_THROUGH_SERVQUAL_PRIVATE_TERTIARY_EDUCATION_PERSPECTIVE?email_work_card=title (Accessed 03 January 2021).

Oxford English and Spanish Dictionaries. 2014. Expectations. Available:

<https://en.oxforddictionaries.com/definition/expectation> (Accessed: 21 March 2019).

Oxford English and Spanish Dictionaries. 2014. Perceptions. Available:

<https://en.oxforddictionaries.com/definition/perception> (Accessed: 21 March 2019).

Pallant, J. 2016. *SPSS Survival Manual: A step by step guide to data analysis using IBM SPSS*. 6th Ed. England: McGraw-Hill Education.

Papanthymou, A. and Darra, M. 2017. Quality management in higher education: review and perspectives. *Higher Education Studies*, 7(3): 132-147. Available: <https://files.eric.ed.gov/fulltext/EJ1151825.pdf> (Accessed 25 June 2017).

Parasuraman, A., Zeithaml, V. A. & Berry, L. L., 1994. Alternative scale for measuring service quality: a comparative assessment based on psychometric and diagnostic criteria. *Journal of Retailing*, 70(3): 201-230. Available:

https://www.researchgate.net/profile/Valarie_Zeithaml/publication/222479881_Alternative_Scales_for_Measuring_Service_Quality-A_Comparative-Assessment_Based_on_Psychometric_and_Diagnostic_Criteria/links/59f0e5

[3ba6fdcc1dc7b8f28c/Alternative-Scales-for-Measuring-Service-Quality-A-Comparative-Assessment-Based-on-Psychometric-and-Diagnostic-Criteria.pdf](https://www.researchgate.net/profile/Valarie-Zeithaml/publication/31757394_Moving_Forward_in_Service_Quality_Research_Measuring_Different_Customer-Expectation_Levels_Comparing_Alternative_Scales_and_Examining_the_Performance-Behavioral_Intentional_Links_A_Parasuraman_VZ_Zeithaml/links/55882aad08ead25f0ed055f/Moving-Forward-in-Service-Quality-Research-Measuring-Different-Customer-Expectation-Levels-Comparing-Alternative-Scales-and-Examining-the-Performance-Behavioral-Intentional-Links-A-Parasuraman-VZ.pdf) (Accessed: 24 February 2019).

Parasuraman, A., Zeithaml, V.A. and Berry, L. L. 1993. More on improving service quality management. *Journal of Retailing*, 69(1): 140-147. Available: [https://www.researchgate.net/profile/Valarie Zeithaml/publication/31757394_Moving_Forward_in_Service_Quality_Research_Measuring_Different_Customer-Expectation_Levels_Comparing_Alternative_Scales_and_Examining_the_Performance-Behavioral_Intentional_Links_A_Parasuraman_VZ_Zeithaml/links/55882aad08ead25f0ed055f/Moving-Forward-in-Service-Quality-Research-Measuring-Different-Customer-Expectation-Levels-Comparing-Alternative-Scales-and-Examining-the-Performance-Behavioral-Intentional-Links-A-Parasuraman-VZ.pdf](https://www.researchgate.net/profile/Valarie-Zeithaml/publication/31757394_Moving_Forward_in_Service_Quality_Research_Measuring_Different_Customer-Expectation_Levels_Comparing_Alternative_Scales_and_Examining_the_Performance-Behavioral_Intentional_Links_A_Parasuraman_VZ_Zeithaml/links/55882aad08ead25f0ed055f/Moving-Forward-in-Service-Quality-Research-Measuring-Different-Customer-Expectation-Levels-Comparing-Alternative-Scales-and-Examining-the-Performance-Behavioral-Intentional-Links-A-Parasuraman-VZ.pdf) (Accessed 17 March 2019).

Parasuraman, A., Zeithaml, V.A. and Berry, L. L. 1991. Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing*, 67(4): 420-450. Available: [https://www.researchgate.net/profile/Valarie Zeithaml/publication/247373898_Refinement_and_reassessment_of_the_SERVQUAL_instrument/links/5559ea3d08ae6fd2d82817fa/Refinement-and-reassessment-of-the-SERVQUAL-instrument.pdf](https://www.researchgate.net/profile/Valarie-Zeithaml/publication/247373898_Refinement_and_reassessment_of_the_SERVQUAL_instrument/links/5559ea3d08ae6fd2d82817fa/Refinement-and-reassessment-of-the-SERVQUAL-instrument.pdf) (Accessed 17 March 2019).

Parasuraman, A., Zeithaml, V.A. and Berry, L. L. 1991. Understanding customer expectations of service. *Sloan Management Review*, 32(3): 39-48. Available: [https://www.researchgate.net/profile/Valarie Zeithaml/publication/225084143_Understanding_Customer_Expectations_of_Service/links/02e7e53cd16b876407000000/Understanding-Customer-Expectations-of-Service.pdf](https://www.researchgate.net/profile/Valarie-Zeithaml/publication/225084143_Understanding_Customer_Expectations_of_Service/links/02e7e53cd16b876407000000/Understanding-Customer-Expectations-of-Service.pdf) (Accessed 16 July 2018).

Parasuraman, A., Zeithaml, V.A. and Berry, L. L. 1990. Guidelines for conducting service quality research. *Marketing Research*, 2(4): 34-44.

Available:

<http://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?vid=0&sid=f9d29a5f-0b56-44e5-9214-a485023e1b38%40pdc-v-sessmgr04> (Accessed 16 July 2018).

Parasuraman, A., Zeithaml, V.A. and Berry, L. L. 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1): 12-40. Available:

https://www.researchgate.net/profile/Valarie_Zeithaml/publication/225083802_SERVQUAL_A_multiple-Item_Scale_for_measuring_consumer_perceptions_of_service_quality/links/5429a4540cf27e39fa8e6531/SERVQUAL-A-multiple-Item-Scale-for-measuring-consumer-perceptions-of-service-quality.pdf (Accessed 16 July 2018).

Parasuraman, A, Ziethaml, V.A. and Berry, L. 1985. A conceptual model of service quality and its implications for future research. *The Journal of Marketing*, 49 (4): 41-50. Available:

https://www.researchgate.net/publication/225083670_A_Conceptual_Model_of_Service_Quality_and_its_Implication_for_Future_Research_SERVQUAL (Accessed 24 June 2018).

Pillay, M.A. (2011). Students' expectations and perceptions of the sport offering at the Durban University of Technology. M.Tech., Durban University of Technology. Available: <http://hdl.handle.net/10321/683> (Accessed: 15 August 2017).

Polyakova O and Mirza, M. 2014. Perceived service quality model: are they still relevant? *The Marketing Review*, 15(1): 59-82. Available:

http://shura.shu.ac.uk/10175/3/Polyakova_Mirza_PSQM.pdf (Accessed 09

March 2019).

Pouris A and Inglesi-Lotz R. 2014. The contribution of higher education institutions to the South African economy. *South African Journal of Science* 110, 3(4): pp. 1-5. Available: http://www.uct.ac.za/usr/news/downloads/2016/UniversitiesFundingSouthAfrica_FactSheet.pdf (Accessed 22 March 2019).

Prakash, A.V. and Muhammed, F.S. 2016. Service quality in higher education: an antecedent to satisfaction and behavioural intentions. *International Journal of Management and Applied Science*, 2(5): 73-79. Available: http://www.iraj.in/journal/journal_file/journal_pdf/14-256-146502054673-79.pdf (Accessed 28 May 2018).

Prakash, G. 2018. Quality in higher education institutions: insights from the literature. *The TQM Journal*, 23(3): 250-261. Available: <https://doi.org/10.1108/QAE-11-2012-0046> (Accessed 17 August 2018).

Ramya, N., Kowsalya, A. and Dharanipriya, K. 2019. Service quality and its dimensions. *EPRA International Journal of Research and Development (IJRD)*, 4(2): 38-41. Available: https://www.researchgate.net/publication/333058377_SERVICE_QUALITY_AND_ITS_DIMENSIONS (Accessed 20th December 2020).

Razinkina, E., Pankova, L., Trostinskaya, I., Pozdeeva, E., Evseeva, L. and Tanova, A. 2018. Student satisfaction as an element of education quality monitoring in an innovative higher education institution. *E3S Web of Conferences*, 33: 1-8. Available: https://www.e3s-conferences.org/articles/e3sconf/pdf/2018/08/e3sconf_hrc2018_03043.pdf (Accessed: 11 August 2018).

Randheer, K. 2015. Service quality performance scale in higher education: culture as a new dimension. *International Business Research*, 8(3): 29-41. Available: <http://www.ccsenet.org/journal/index.php/ibr/article/view/43307> (Accessed: 17 June 2018).

Reddy, E.L and Karim, S. 2014. Service quality and student satisfaction: A case study in private management institutions in Chittoor district of Andhra Pradesh. *International Journal of Human Resource*, 4(2): 1-8. Available: https://www.academia.edu/7339976/SERVICE_QUALITY_AND_STUDENT_SATISFACTION_A_CASE_STUDY_IN_PRIVATE_MANAGEMENT_INSTITUTIONS_IN_CHITTOOR_DISTRICT_OF_ANDHRA_PRADESH?email_work_card=title (Accessed: 03 January 2021).

Rouf, A., Rahman, M. and Uddin, M. 2016. Students' satisfaction and service quality of HEIs. *International Journal of Academic Research in Business and Social Sciences*, 6(5): 376-390. Available: https://www.academia.edu/26400020/Students_Satisfaction_and_Service_Quality_of_HEIs?email_work_card=title Accessed: 03 January 2021).

Ryan, T. 2015. Quality assurance in higher education: A review of the literature. *Higher Learning Research Communications*, 5(4). Available: <https://files.eric.ed.gov/fulltext/EJ1132941.pdf> (Accessed 07 April 2019).

Saif, N.I. 2014. The effect of service quality on student satisfaction. A field study for health services administration students. *International Journal of Humanities and Social Science*, 4(8): 172-181. Available: http://www.ijhssnet.com/journals/Vol_4_No_8_June_2014/18.pdf (Accessed 24 July 2017).

Saleem, M., Hussain. A. and Ahmad, S. 2017. Identification of gaps in service quality in higher education. *Bulletin of Education and Research*, 39 (2), 171-182. Available:

<https://search.proquest.com/docview/1986751501/fulltextPDF/F9A9B19C016B4F0DPQ/1?accountid=10612> (Accessed 9 July 2018).

Salkind, N.J. 2014. *Exploring Research*. 8th Ed. Harlow, Essex: Pearson Education Limited.

Scherbaum, C. and Shockley, K. 2015. *Analysing quantitative data for business and management students*. Sage Publications, United Kingdom.

Schreiber, B. 2013. Constructions of students as clients or partners in knowledge creation. *Journal of Psychology in Africa*, 23(4): 617-621.

Available:

<http://repository.uwc.ac.za/xmlui/bitstream/handle/10566/1131/SchreiberKnowledgeCreation2013.pdf?sequence=1&isAllowed=y> (Accessed: 02 March 2013).

Sekaran, U. and Bougie, R. 2016. *Research methods for business*. 7th Ed. West Sussex, United Kingdom: John Wiley and Sons.

Sharma, N. 2011. Customer's perception on MTNL services: an Indian viewpoint. *Global Journal of Enterprise Information System*, 3(111): 14-27.

Available:

https://www.academia.edu/5437645/Global_Journal_of_Enterprise_Information_System_Volume_3_Issue_III_Customers_Perception_on_MTNL_Services_An_Indian_Viewpoint_Customers_Perception_on_MTNL_Services_An_Indian_Viewpoint_Customers_Expectations_Customers_Perceived_Value_Mobile_MTNL_Practices (Accessed 15 December 2020).

Shauchenka, H and Busłowska, E. 2010. Methods and tools for higher education service quality assessment (survey). *Zeszyty Naukowe Politechniki Białostockiej. Informatyka*, 5: 87-102. Available:

<http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.baztech-article-BPB1-0047-0014> (Accessed 11 November 2018).

Silva, D.S., de Moraes, G.H.S.M., Makiya, I.K. and Cesar, F.I.G. 2017. Measurement of perceived service quality in higher education institutions: a review of HEdPERF scale use. *Quality Assurance in Education*, Vol. 25(4): 415-439. Available:

https://www.researchgate.net/profile/Gustavo_Herminio_Moraes/publication/318574932_Measurement_of_perceived_service_quality_in_higher_education_institutions_A_review_of_HEdPERF_scale_use/links/5a058fd2458515edd_b86c549/Measurement-of-perceived-service-quality-in-higher-education-institutions-A-review-of-HEdPERF-scale-use.pdf?origin=publication_detail

(Accessed 08 February 2019).

Singh, B.S.P. 2016. Using HiEduQual to assess student satisfaction in selected higher educational institutions in North India. *International Research in Education*, 4(1): 67-85. Available:

<http://www.macrothink.org/journal/index.php/ire/article/view/8439> (Accessed: 20 May 2018).

South Africa. Council on Higher Education. 2011. *Framework for the second cycle of quality assurance 2012-2017: Consultation Document*. Pretoria.

Available:

https://www.ufs.ac.za/docs/librariesprovider42/sasse-documents/workshops-documents/second-cycle-of-quality-assurance-43-eng.pdf?sfvrsn=2c66c921_0 (Accessed 16 June 2018).

South Africa. Higher Education South Africa. 2014. *South African higher education in the 20th year of democracy: context, achievements and key challenges*. Available:

<http://pmg-assets.s3-website-eu-west-1.amazonaws.com/140305hesa.pdf>

(Accessed 17 June 2018).

South Africa. Department of Higher Education and Training. 2013. *White Paper for Post-school Education and Training: Building an Expanded, Effective*

and Integrated Post-school System. Pretoria: Department of Higher Education and Training. Available: <https://www.gov.za/documents/white-paper-post-school-education-and-training-building-expanded-effective-and-integrated> (Accessed: 05 July 2018).

Speckman, M. and Mandew, M. eds. 2014. *Perspectives on Student Affairs in South Africa*. African Minds. South Africa.

Stander, E. and Herman, C. 2017. Barriers and challenges private higher education institutions face in the management of quality assurance in South Africa. *South African Journal of Higher Education*, 31 (5): 206-224. Available: <http://www.journals.ac.za/index.php/sajhe/article/view/1481> (Accessed 23 June 2018).

Statistics How To. 2019. Internal validity: *definition and examples*. Available: <https://www.statisticshowto.datasciencecentral.com/internal-validity/> (Accessed: 11 August 2019).

Statistics How To. 2019. Purposive sampling (deliberate sampling). Available: <https://www.statisticshowto.datasciencecentral.com/purposive-sampling/> (Accessed: 17 August 2019).

Statistics Solutions. 2019. *Data analysis plan*. Available: <https://www.statisticssolutions.com/exploratory-factor-analysis> (Accessed: 23 July 2019).

Statistics Solutions: 2020. *Conduct and Interpret a Factor Analysis*. Available: <https://www.statisticssolutions.com/factor-analysis-2/> (Accessed: 28 December 2020).

Statistics South Africa. 2017. Education Series Volume V: *Higher Education and Skills in South Africa*. Pretoria: Stats SA Library Cataloguing-in-Publication (CIP) Data. Available:

<http://www.statssa.gov.za/publications/Report-92-01-05/Report-92-01-052017.pdf> (Accessed 13 December 2020).

Strand, K.J., Britz, J. 2018. The evolving role of public libraries in South Africa in addressing information poverty: a historical context. *Library Management*, 39(6-7): 364-374. Available: <https://doi.org/10.1108/LM-08-2017-0072> (Accessed 17 August 2018).

Sultan, P. and Wong, H.Y. 2013. Antecedents and consequences of service quality in a higher education context: A qualitative research approach. *Quality Assurance in Education*, 21(1): 70-95, Available: <https://doi.org/10.1108/09684881311293070> (Accessed 19 July 2017).

Strydom, B. 2016. South African University history: a historiographical overview. *African Historical Review*, 48 (1), 56-82. Available: <https://doi.org/10.1080/17532523.2016.1236886> (Accessed 27 August 2018).

Tan, A.H.T., Muskat, B. and Johns, R. (2019). The role of empathy in the service experience. *Journal of Service Theory and Practice*, 29(2), 142-164. Available: <https://www.researchgate.net/publication/333056908> [The role of empathy in the service experience](https://www.researchgate.net/publication/333056908) (Accessed 04 January 2021).

TTi Global. 2017. *Mind the gap: understanding the gap between customer expectation and customer perception* (blog). Available: <https://www.TTi-global-research.co.uk/customer-expectation-customer-perception-gap-analysis-pzb> (Accessed 25th July 2017).

Teeroovengadum, V., Kamalanabhan, T.J. and Seebaluck, A.K. (2016). Measuring service quality in higher education: development of a hierarchical model (HESQUAL). *Quality Assurance in Education*, 24(2), 244-258. Available: <https://www.emeraldinsight.com/doi/full/10.1108/QAE-06-2014-0028> (Accessed 17 June 2018).

Terrell, S.R. 2012. Mixed methods research methodologies. *The Qualitative Report*, 17(1): 254-280. Available: <http://www.nova.edu/ssss/QR/QR17-1/terrell.pdf> (Accessed: 07 July 2019).

Thai, V.V. 2015. Determinants of customer expectations of service: implications for fostering customer satisfaction. *International Journal of Management and Applied Science*, 1(4): 146-151. Available: http://www.iraj.in/journal/journal_file/journal_pdf/14-134-1431348440146-151.pdf (Accessed 21 October 2018).

Tóth, Z.E and Jónás, T. 2014. Enhancing student satisfaction based on course evaluations at Budapest University of Technology and Economics. *Acta Polytechnica Hungarica*, 11(6): 96-112. Available: https://www.researchgate.net/profile/Tamas_Jonas/publication/272022671_Enhancing_Student_Satisfaction_Based_on_Course_Evaluations_at_Budapest_University_of_Technology_and_Economics/links/5523f7250cf2b123c5166c1d/Enhancing-Student-Satisfaction-Based-on-Course-Evaluations-at-Budapest-University-of-Technology-and-Economics.pdf?origin=publication_detail (Accessed: 25 April 2018).

Tsoaledi, D.T. 2013. History of apartheid education and the problems of reconstruction in South Africa. *Sociology Study*, 3(1): 1-12. Available: https://www.researchgate.net/profile/Tsoaledi_Thobejane/publication/275348289_History_of_Apartheid_Education_and_the_Problems_of_Reconstruction_in_South_Africa/links/553a05910cf2239f4e7dbcd9/History-of-Apartheid-

[Education-and-the-Problems-of-Reconstruction-in-South-Africa.pdf](#)

(Accessed: 27 August 2018).

Uiso, H., Magali, J. 2017. Service quality variables for assessing students' satisfaction in higher learning institutions: evidence from empirical literature reviews. *The Pan-African Journal of Business Management*, 1(1): 71-82. Available:

https://www.researchgate.net/publication/317235048_Service_Quality_Variables_for_Assessing_Students%27_Satisfaction_in_Higher_Learning_Institutions_Evidence_from_Empirical_Literature_Review (Accessed 17 July 2018).

Uka, A. (2014). Student satisfaction as an indicator of quality in higher education. *Journal of Educational and Instructional Studies in the World*, 4(3): 6-10. Available:

<http://www.ijonte.org/?pnum=32&pt=2013%20Volume%204%20Number%203> (Accessed October 2017).

Unuvar, S. and Kaya, M. 2016. Measuring service quality by Servperf method: A research on hospitality enterprises. *Australian Academy of Accounting and Finance Review*, 2(4): 354-362. Available:

<https://pdfs.semanticscholar.org/f048/c1723d605c61da98e36a07ba3cfbd70e6b02.pdf> (Accessed: 09 February 2019).

Vijaya S. M., (2016). Constructs of quality in higher education services. *International Journal of Productivity and Performance Management*, 65(8): 1091-1111. Available:

<https://doi.org/10.1108/IJPPM-05-2015-0079> (Accessed 07 August 2017).

Vnoučková L., Urbancová H. and Smolová H. 2017. Factors describing students' perception of education quality standards. *Journal on Efficiency and Responsibility in Education and Science*, 10(4): 109-115. Available:

https://www.researchgate.net/profile/Lucie_Vnouckova/publication/32215795

[6 FACTORS DESCRIBING STUDENTS PERCEPTION ON EDUCATION QUALITY STANDARDS/links/5aeae0caaca2725dabb65ab9/FACTORS-DESCRIBING-STUDENTS-PERCEPTION-ON-EDUCATION-QUALITY-STANDARDS.pdf?origin=publication_detail](#) (Accessed 20 July 2018).

Weideman, R. 2008. Evaluation criteria for selected administrative and support systems in South African higher education institutions. M.Tech. The Cape Peninsula University of Technology. Available: <http://etd.cput.ac.za/handle/20.500.11838/1207> (Accessed 10 June 2018).

Williams, A.S. 2018. An exploratory study of students' expectations and perceptions of service quality in a South African higher education institution. M.Tech., Rhodes University. Available: http://encore.seals.ac.za/iii/encore_ru/record/C_Rx1080217_SAn%20exploratory%20study%20of%20students%E2%80%99%20expectations%20and%20perceptions%20of%20service%20quality%20in%20a%20South%20African%20higher%20education%20institution_Orightresult_U_X4?lang=eng&suite=ru (Accessed 07 March 2019).

Wilkins, S. and Balakrishan, SM. (2013). Assessing student satisfaction in transnational higher education. *International Journal of Education Management*, 27(2): 143-156. Available : <https://doi.org/10.1108/09513541311297568> (Accessed 07 July 2017).

Wilson, A., Zeithaml, V.A., Bitner, M.J and Gremler D.D. 2016. *Services marketing: Integrating customer focus across the firm*. 3rd ed. McGraw Hill: New York.

Yarimoglu, E.K. 2014. A review on dimensions of service quality models. *Journal of Marketing Management*, 2(2): 79-93. Available: https://www.researchgate.net/publication/303974860_A_Review_on_Dimensions_of_Service_Quality_Models (Accessed: 03 March 2019).

Yusof, A.M. and Ghouri, A.M. 2013. Educational service quality and customer satisfaction index at public higher educational institutions. *Indian Journal of Commerce and Management Sciences*, 4(1): 43-49. Available: <http://www.scholarshub.net/index.php/ijcms/article/view/422/386> (Accessed 18 June 2018).

Yusoff, M., McLeay, F. and Woodruffe-Burton, H. 2015. Dimensions driving business student satisfaction in Higher Education. *Quality Assurance in Education*. 23(1), pp.86-104. Available: <https://doi.org/10.1108/QAE-08-2013-0035> (Accessed 06 July 2017).

Zajda, J. 2014. Understanding the quality debate in education. In: *The Australian College of Educators National Conference*. Adelaide, Australia. September 2014. Australia: 1-7. Available: https://www.researchgate.net/publication/270583246_Understanding_the_quality_debate_in_education (Accessed: 15 June 2018).

APPENDICES

APPENDIX 1

Section C: Ethics								
Note: Ethics requirements are faculty specific. Kindly ensure that you are aware of and have complied with the relevant ethics requirements.								
Tick as appropriate:								
Humans		Organisations		Animals		Environment		
Yes	No	Yes	No	Yes	No	Yes	No	
X		X		X	X		X	
Indicate Category (X)								
1.	Exempt from Ethics and Biosafety Research Committee Review (straightforward research without ethical problems)							
2.	Expedited review (minimal risk to humans, animals or environment)						X	(Generally)
3.	Full Ethics and Biosafety Research Committee review recommended (possible risk to humans, animals, environment, or a sensitive research area)							

Attach Addendums (if any)

ETHICAL ISSUES CHECKLIST FOR RESEARCH APPROVAL

To be completed by all people wishing to research under the auspices of the Durban University of Technology.

1. Use the Durban University of Technology's Research Ethics Policy and Guidelines to ensure that ethical issues have been identified and addressed in the most appropriate manner before finalising and submitting your research proposal.
2. Please indicate [by an X as appropriate] which of the following ethical issues could impact on your research.
3. Please type the motivations/further explanations where required in the cell head COMMENTS.
4. The highlighted response cells indicate those responses which are of particular interest to the Ethics Committee.

NO.	QUESTION	YES	NO	N/A
	DECEPTION			
1.	Is deception of any kind to be used? If so, motivate acceptability.		X	
	COMMENTS:			
NO.	QUESTION	YES	NO	N/A
2.	Will the research involve the use of no-treatment or placebo control conditions? If yes, explain how the participant's interests will be protected.		X	
	COMMENTS			
	CONFIDENTIALITY			
3.	Does the data collection process involve access to confidential personal data (including access to data for purposes other than this particular research project) without the prior consent of participants? If yes, motivate the necessity		X	
	COMMENTS			
4.	Will the data be collected and disseminated in a manner that will ensure confidentiality of the data and the identity of the participants? Explain your answer	X		
	COMMENTS Data will be collected under strict conditions of anonymity. The respondents' identities will be kept confidential			
5.	Will the materials obtained be stored and ultimately disposed of in a manner that will ensure the confidentiality of the participants? If no, explain. If yes, specify how long the confidential data will be retained after the study and how it will be disposed of.	X		
	COMMENTS Questionnaires will be stored in safe storage for five years and, after that, be shredded. Electronic records will be kept for 5 years and, after that, be deleted.			
6.	Will the research involve access to data banks that are subject to privacy legislation? If yes, specify and explain the necessity.		X	
	COMMENTS			
	RECRUITMENT			

7	Does recruitment involve a direct personal approach from the researchers to the potential participants? Explain the recruitment process	X		
	COMMENTS Respondents will be approached personally by the researcher, and it will be explained that the process is entirely voluntary. The researcher will ensure confidentiality.			
8	Are participants linked to the researcher in a particular relationship, for example, employees, students, family? If yes, specify how.		X	
	COMMENTS			
9	If yes to 8, is there any pressure from researchers or others that might influence the potential participants to enrol? Elaborate.			X
	COMMENTS			
10	Does recruitment involve the circulation/publication of an advertisement, circular, letter etc.? Specify		X	
	COMMENTS			
11	Will participants receive any financial or other benefits as a result of participation? If yes, explain the nature of the reward and safeguards		X	
	COMMENTS			
12	Is the research targeting any particular ethnic or community group? If yes, motivate why it is necessary/acceptable. If you have not consulted a representative of this group, give a reason. In addition, explain any consultative processes, identifying participants. Should consultation not take place, give a motivation.		X	
	COMMENTS			
	<i>INFORMED CONSENT</i>			
13	Does the research fulfil the criteria for informed consent? [See guidelines]. If yes, no further answer is needed. If not, please specify how and why.	X		
	COMMENTS			
14	Does consent need to be obtained from special and vulnerable groups (see guidelines)? If yes, describe the nature of the group and the procedures used to obtain permission.			

	COMMENTS <u>The nature of the group is full-time B-Tech students registered in the Faculty of Management Sciences at the DUT. Consent letter attached.</u>			
15	Will a Letter of Information be provided to the participants, and written consent be obtained? If no, explain. If yes, attach copies to the proposal. In the case of participants who are not familiar with English (e.g. it is a second language), explain what arrangements will be made to ensure comprehension of the Letter of Information, Informed Consent Form and other questionnaires/documents.	X		
	COMMENTS Letter of information attached			
16	Will the results of the study be made available to those interested? If no, explain why. If yes, explain how	X		
	COMMENTS Those interested in the results of the study will be pointed to the DUT repository where the dissertation can be accessed, approximately 12 months after the survey			
	RISKS TO PARTICIPANTS			
17	Will participants be asked to perform any acts or make statements that might be expected to cause discomfort, compromise them, diminish self-esteem or cause them to experience embarrassment or regret? If yes, explain.		X	
	COMMENTS			
18	Might any aspect of your study reasonably be expected to place the participant at risk of criminal or civil liability? If yes, explain.		X	
	COMMENTS			
19	Might any aspect of your study reasonably be expected to place the participant at risk of damage to their financial standing, social standing, or employability? If yes, explain.		X	
	COMMENTS			
20	Does the protocol require any physically invasive or potentially harmful procedures [e.g. drug administration, needle insertion, rectal probe, pharyngeal foreign body, electrical or			

	electromagnetic stimulation, etc.?) If yes, please outline below the procedures and safety precautions will be used.		X	
	COMMENTS			
21	Will any treatment be used with potentially unpleasant or harmful side effects? If yes, explain the nature of the side effects and how they will be minimised.		X	
	COMMENTS			
22	Does the research involve any questions, stimuli, tasks, investigations, or procedures experienced by participants as stressful, anxiety-producing, noxious, aversive or unpleasant during or after the research procedures? If yes, explain.		X	
	COMMENTS			
23	Will any samples of body fluid or body tissues be explicitly required for the research, which would not be required in the case of standard treatment? If yes, explain and list such procedures and techniques.		X	
	COMMENTS			
24	Are any drugs/devices to be administered? If yes, list any drugs/devices to be used and their approved status.		X	
	COMMENTS			
	GENETIC CONSIDERATIONS			
25	Will participants be fingerprinted or DNA "fingerprinted"? If yes, motivate why necessary and state how such is to be managed and controlled.		X	
	COMMENTS			
26	Does the project involve genetic research, e.g. somatic cell gene therapy, DNA techniques etc.? If yes, list the procedures involved		X	
	COMMENTS			
	BENEFITS			
27	Is this research expected to benefit the participants directly or indirectly? Explain any such benefits.		X	
	COMMENTS			

28	Does the researcher expect to obtain any direct or indirect financial or other benefits (not including a qualification) from conducting the research? If yes, explain.		X	
	COMMENTS			
	SPONSORS: INTERESTS AND INDEMNITY			
29	Will this research be undertaken on behalf of or at the request of a pharmaceutical company, other commercial entity or any other sponsor? If yes, identify the entity.		X	
	COMMENTS			
30	If yes to 29, will that entity undertake in writing to abide by Durban University of Technology's Research Committees Research Ethics Policy and Guidelines? If yes, do not explain further. If no, explain.			X
	COMMENTS			
31	If yes to 30, will that entity undertake in writing to indemnify the institution and the researchers? If yes, do not explain further. If no, explain.			X
	COMMENTS			
32	Does permission need to be obtained in terms of the location of the study? If yes, indicate how permission is to be obtained.	X		
	COMMENTS Gatekeeper's consent will be obtained from Institutional Research and Innovation Committee.			
33	Does the researcher have indemnity cover relating to research activities? If yes, specify. If no, explain why not.	X		
	COMMENTS DUT indemnity cover.			
34	Does the researcher have any affiliation with, or financial involvement in, any organisation or entity with direct or indirect interests in this research's subject matter or materials? If yes, specify.	X		
	COMMENTS The researcher is an employee of the organization.			

APPENDIX 2



*Directorate for Research and Postgraduate Support
Durban University of Technology
Tromso Annex, Steve Biko Campus
P.O. Box 1334, Durban 4000
Tel.: 031-3732576/7
Fax: 031-3732946*

10th July 2019

Ms Lutchmee Naidu
c/o Public Management and Economics
Faculty of Management Sciences
Durban University of Technology

Dear Ms Naidu

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research and Innovation Committee (IRIC) has granted full permission for you to conduct your research "Service Quality of Administrative Staff for Student Satisfaction at a KZN University of Technology" at the Durban University of Technology.

The DUT may impose any other condition it deems appropriate in the circumstances having regard to nature and extent of access to and use of information requested.

We would be grateful if a summary of your key research findings can be submitted to the IRIC on completion of your studies.

Kindest regards
Yours sincerely

PROF KEVIN DUFFY
ACTING DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT DIRECTORATE

APPENDIX 3



20 November 2019

Ms L Naidu
15 Amvale Place
Rydalvale
Phoenix
4068

Dear Ms Naidu

Service Quality of Administrative Staff for Student Satisfaction at a KZN University of Technology
Ethical Clearance number IREC 017/19

The Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of your data collection tool.

Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the IREC acknowledges receipt of your gatekeeper permission letter.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC SOP's.

Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Yours Sincerely,

Professor J K Adam
Chairperson: IREC



2019-11-2

1007447014

APPENDIX 4



Institutional Research Ethics Committee
Research and Postgraduate Support Directorate
2nd Floor, Berwyn Court
Gate 1, Steve Biko Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375

Email: lavishad@dut.ac.za

http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

28 July 2020

Ms L Naidu
15 Amvale Place
Rydalvale
Phoenix
4068

Dear Ms Naidu

Application for Amendment of Approved Research Proposal

Service Quality of Administrative Staff for Student Satisfaction at a KZN University of Technology

I am pleased to inform you that your application amendments have been approved.

Yours Sincerely

Dr M A Sathar
Deputy Chairperson: IREC

APPENDIX 5



LETTER OF INFORMATION

Dear Participant

I am currently registered for the Masters in Management Sciences: Specialising in Public Management: Higher Education: Management at the Durban University of Technology. This involves me conducting a study on the quality of service of administrative staff for student satisfaction at the University.

Title of the Research Study: Service Quality of Administrative Staff for Student Satisfaction at a KZN University of Technology

Principal Investigator/s/researcher:

Lutchmee Naidu

(B-Tech: Management)

Supervisor

Professor MS Bayat

(Ph.D -University of Stellenbosch)

Brief Introduction and Purpose of the Study: This study seeks to assess the quality of service delivery to enhance student satisfaction of the Faculty of Management Sciences at the Durban University of Technology.

Outline of the Procedures: Your participation in this study is voluntary. The questions are based on the expectations and perceptions of the services you receive at the Faculty of Management Sciences. It is envisaged that understanding your expectations and perceptions of the quality of service received will assist in making recommendations that will afford you a more rewarding teaching and learning experience. Survey questionnaires will be handed out to you in the lecture theatres.

Risks or Discomforts to the Participant: There are no known risks involved to you in this study.

Benefits: Publications and/or conferences. It is anticipated that processes can then be put in place such that it benefits you in gaining your full academic potential to graduate with high levels of employable skills and successfully compete in industry, while at the same time improving the integrity and reputation of the DUT.

Reason/s why the Participant May Be Withdrawn from the Study: Should you not wish to participate in this study, you may, at any, time withdraw without any consequences.

Remuneration: Please note that there is no monetary value attached to your participation in this study.

Costs of the Study: You bear no costs as a participant in this study.

Confidentiality: Any information provided by you will be treated with the strictest of confidence.

Research-related Injury: This study will not result in any injuries to yourself.

Persons to Contact in the Event of Any Problems or Queries:

Please contact the researcher (tel no. 031 – 373 5479), my supervisor (tel no. 083 786 1326) or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: Research and Postgraduate Support, Prof CE Napier on 031-373 2326/2577 or carinn@dut.ac.za.

APPENDIX 6



Faculty of Management Sciences
Department of Public Management and Economics

6 August 2018

Dear Participant

Questionnaire to assess the quality of service delivery with the Faculty of Management Sciences.

I am a registered student for the Masters in Management Sciences: specialising in Public Management: Higher Education: Management at the Durban University of Technology. As part of the requirements for the Masters' degree, I am doing a study entitled "Service Quality of Administrative Staff for Student Satisfaction at a KZN University of Technology". This study aims to assess students' expectations and perceptions of the quality of service delivery of the Faculty of Management Sciences. This will help the faculty to assess and improve on the services that they provide to you.

The survey findings will be used to identify whether the services are satisfactory or dissatisfactory and will also assist in evaluating exactly which dimensions of service delivery require improvement. Your participation is thus integral to this study.

Please note that while you are under no obligation to participate in this survey, it would be most appreciated if you could dedicate approximately 10 minutes to complete the attached questionnaire without revealing your identity. All information procured will be treated with the strictest of confidence, and the result of the survey will be made available upon personal request.

Thanking you for your time and patience.

Kind Regards

Ms L Naidu
Tel: 031 – 373 5479
Fax: 0866741046
Email: peggyn@dut.ac.za

Supervisor / Promoter
Professor MS Bayat
Tel: 083 786 1326
Email: mbmsaheed@gmail.com

APPENDIX 7



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Ms L Naidu about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: 017 / 19.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my gender, age, and nationality will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Date

Time

Signature

I, Ms L Naidu (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Lutchmee Naidu

Full Name of Researcher

Date

Signature

APPENDIX 8

MODIFIED SERVQUAL INSTRUMENT

QUESTIONNAIRE

This survey determines if you are satisfied with the current level of service based upon your interactions with the **Faculty of Management Sciences** at **The Durban University of Technology**. This will assist the faculty in providing the best possible service to current and prospective students. This survey is **confidential and anonymous**, so please feel free to indicate your honest opinion. There are four sections (A, B, C and D) and all sections are compulsory. Thanking you in advance for your participation.

PART A

This section involves questions about yourself. Please put a cross **[X]** next to your choice:

GENDER

MALE	
FEMALE	

AGE

21-25	
26-30	
31-35	
36-40	
Over 40	

NATIONALITY

African	
Coloured	
Indian	
White	

My previous qualification was completed at the Durban University of Technology:

YES	
NO	

PART B

This section determines the quality of service that you think an ideal Faculty at a University should offer you. Please put a cross [X] in the column that best describes your “EXPECTATIONS” (what you personally want) of the level of service quality that you would like to receive.

		I expect an ideal faculty to:-	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
REL	1.	Provide service at the time they promise to do so					
	2.	Keep error-free records					
	3.	Show a sincere interest in solving a problem					
	4.	Provide a dependable and accurate service					
	5.	Perform services right the first time					
A	6.	Be polite and courteous with students					
	7.	Be knowledgeable					
	8.	Inspire confidence and trust					
	9	Makes students feel safe in their transactions					
T	10.	Have physical facilities that are visually appealing					
	11.	Have material associated with service (e.g. statements and pamphlets) that is visually appealing					
	12.	Have staff that are well-dressed and neat					
	13	Have up to date equipment					
E	14.	Have the student's best interest at heart					
	15.	Provide individual attention					
	16.	Show sincere interest in solving queries					
	17.	Understand the needs of the students					
	18.	Have convenient operating hours					
RES	19.	Give prompt service					
	20.	Never be too busy to respond to requests					
	21.	Always willing to hep					
	22.	Advise precisely when services will be performed					

PART C

This section is to determine the quality of service currently being delivered to you by your University's Faculty of Management Sciences. Please put a cross [X] in the column that best describes your "PERCEPTIONS" (your experience) of the level of service quality currently provided.

		The Faculty currently:-	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
REL	1.	Provides service at the time they promise to do so					
	2.	Keeps error-free records					
	3.	Shows sincere interest in solving a problem					
	4.	Is dependable and accurate					
	5.	Performs services right the first time					
A	6.	Is polite and courteous with students					
	7.	Is knowledgeable					
	8.	Inspires confidence and trust					
	9.	Makes students feel safe in their transactions					
T	10.	Have physical facilities that are visually appealing					
	11.	Has material associated with service (e.g. statements and pamphlets) that is visually appealing					
	12.	Has staff that are well-dressed and neat					
	13.	Has up to date equipment					
E	14.	Has the student's best interest at heart.					
	15.	Provides individual attention					
	16.	Shows sincere interest in solving queries					
	17.	Understands the needs of the students					
	18.	Has convenient operating hours					
RES	19.	Gives prompt service					
	20.	Is never too busy to respond to requests					
	21.	Is always willing to help					
	22.	Advises students exactly when services will be performed					

SECTION D

GENERAL

		Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
23.	Overall, I am satisfied with the services provided by the faculty staff					
24.	I will recommend the DUT to prospective students					

APPENDIX 9

Factor analysis was done only for the Likert scale items. Certain components are divided into finer components. This is explained in the rotated component matrix below.

Coding Sheet

Reliability	REL 1	Provide service at the time they promise to do so
	REL 2	Keep error-free records
	REL 3	Show a sincere interest in solving a problem
	REL 4	Provide a dependable and accurate service
	REL 5	Perform services right the first time
Assurance	A 6	Be polite and courteous with students
	A 7	Be knowledgeable
	A 8	Inspire confidence and trust
	A 9	Makes students feel safe in their transactions
Tangibles	T 10	Have physical facilities that are visually appealing
	T 11	Have material associated with service (e.g. statements and pamphlets) that is visually appealing
	T 12	Have staff that are well-dressed and neat
	T 13	Have up to date equipment
Empathy	E 14	Have the student's best interest at heart
	E 15	Provide individual attention
	E 16	Show sincere interest in solving queries
	E 17	Understand the needs of the students
Responsiveness	E 18	Have convenient operating hours
	RES 19	Give prompt service
	RES 20	Never be too busy to respond to requests
	RES 21	Always willing to help
	RES 22	Advise exactly when services will be performed

Source: Own Compilation

Rotated Component Matrix

		Component - Expectations					Component - Perceptions				
		1	2	3	4	5	1	2	3	4	5
Reliability	Rel 1	0.141	0.249	0.170	0.869	0.064	0.424	0.698	0.108	0.249	0.095
	Rel 2	0.260	0.252	0.145	0.415	0.680	0.228	0.798	0.169	0.080	0.245
	Rel 3	0.342	0.505	0.338	0.442	0.357	0.485	0.667	0.235	0.171	0.140
	Rel 4	0.224	0.534	0.351	0.393	0.416	0.323	0.744	0.327	0.227	0.072
	Rel 5	0.274	0.637	0.093	0.416	0.264	0.358	0.588	0.396	0.134	0.049
Assurance	A 6	0.269	0.797	0.168	0.250	0.148	0.417	0.166	0.716	0.172	0.138
	A 7	0.301	0.796	0.276	0.167	0.214	0.316	0.287	0.775	0.111	0.167
	A 8	0.422	0.647	0.437	0.029	0.129	0.293	0.375	0.621	0.343	0.093
	A 9	0.434	0.529	0.491	0.093	0.194	0.317	0.465	0.496	0.227	0.341
Tangibles	T 10	0.270	0.118	0.795	0.154	0.174	0.170	0.256	0.153	0.828	0.185
	T 11	0.268	0.195	0.757	0.117	0.262	0.266	0.119	0.247	0.784	0.164
	T 12	0.337	0.229	0.412	-0.121	0.601	0.168	0.138	0.271	0.195	0.840
	T 13	0.309	0.453	0.625	0.224	0.084	0.442	0.249	-0.045	0.427	0.568
Empathy	E 14	0.428	0.540	0.545	0.263	0.099	0.724	0.345	0.285	0.146	0.185
	E 15	0.542	0.386	0.547	0.115	0.092	0.809	0.232	0.224	0.235	0.088
	E 16	0.613	0.424	0.460	0.193	0.177	0.734	0.381	0.329	0.154	0.063
	E 17	0.514	0.404	0.533	0.163	0.164	0.746	0.425	0.241	0.117	0.083
	E 18	0.423	0.453	0.373	0.067	0.352	0.599	0.214	0.143	0.135	0.426
Responsiveness	Res 19	0.702	0.331	0.246	0.091	0.370	0.722	0.308	0.301	0.153	0.205
	Res 20	0.792	0.302	0.266	0.128	0.221	0.805	0.199	0.203	0.248	0.170
	Res 21	0.780	0.242	0.352	0.180	0.176	0.745	0.242	0.382	0.131	0.203
	Res 22	0.805	0.247	0.264	0.190	0.153	0.700	0.388	0.215	0.203	0.160

Source: Statistician: Mr D Singh

Concerning the table above:-

- The principal component analysis was used as the extraction method, and the rotation method was Varimax with Kaiser Normalization. This orthogonal rotation method minimises the number of variables that have high loadings on each factor. It simplifies the interpretation of the factors.

- Factor analysis/loading show inter-correlations between variables.
- Items of questions that loaded similarly imply measurement along with a similar factor. An examination of the content of items loading at or above 0.5 (and using the higher or highest loading in instances where items cross-loaded at more significant than this value) was effectively measured along with the various components.

The statements that constituted sections on Assurance and Responsiveness loaded perfectly with a single component for both Expectations and Perceptions (colour code is the same down a column). In addition, Reliability and Empathy also loaded perfectly for Perceptions. This denotes that the statements that constituted these sections perfectly measured what it set out to measure.

Furthermore, it is noted that Empathy and Responsiveness are loaded along with the same component for Perceptions. This implies that respondents did not differentiate between these dimensions. Also noted is that the variables that constituted the other sections loaded along 2 or 3 components (sub-themes). This means that respondents identified different trends within the section. Within the section, the splits are colour coded.

APPENDIX 10

PEARSON'S CHI-SQUARE TEST

Test Statistics	Chi-Square	df	Asymp. Sig.
Gender	27.249 ^a	1	0,000
Age	57.946 ^b	4	0,000
Race	353.919 ^c	3	0,000
My previous qualification was completed at the Durban University of Technology	48.784 ^a	1	0,000
Provide service at the time they promise to do so	145.514 ^b	4	0,000
Provide service at the time they promise to do so	63.622 ^b	4	0,000
Keep error-free records	105.784 ^b	4	0,000
Keep error-free records	62.324 ^b	4	0,000
Show a sincere interest in solving a problem	151.297 ^b	4	0,000
Show a sincere interest in solving a problem	50.919 ^b	4	0,000
Provide a dependable and accurate service	165.838 ^b	4	0,000
Provide a dependable and accurate service	80.270 ^b	4	0,000
Perform services right the first time	139.207 ^d	4	0,000
Perform services right the first time	50.108 ^b	4	0,000
Be polite and courteous with students	167.405 ^b	4	0,000
Be polite and courteous with students	75.405 ^b	4	0,000
Be knowledgeable	201.784 ^b	4	0,000
Be knowledgeable	102.324 ^b	4	0,000
Inspire confidence and trust	179.622 ^b	4	0,000
Inspire confidence and trust	60.865 ^b	4	0,000
Makes students feel safe in their transactions	195.297 ^b	4	0,000
Makes students feel safe in their transactions	87.730 ^b	4	0,000
Have physical facilities that are visually appealing	110.757 ^b	4	0,000
Have physical facilities that are visually appealing	77.676 ^b	4	0,000
Have material associated with service (e.g. statements and pamphlets) that is visually appealing	147.351 ^b	4	0,000
Have material associated with service (e.g. statements and pamphlets) that is visually appealing	54.919 ^b	4	0,000
Have staff that are well-dressed and neat	152.811 ^b	4	0,000
Have staff that are well-dressed and neat	129.135 ^b	4	0,000
Have up to date equipment	133.568 ^b	4	0,000
Have up to date equipment	86.757 ^b	4	0,000
Have the student's best interest at heart	171.189 ^b	4	0,000
Have the student's best interest at heart	88.000 ^b	4	0,000
Provide individual attention	126.108 ^b	4	0,000
Provide individual attention	62.649 ^b	4	0,000
Show sincere interest in solving queries	164.649 ^b	4	0,000
Show sincere interest in solving queries	58.324 ^b	4	0,000

Understand the needs of the students	171.838 ^b	4	0,000
Understand the needs of the students	76.378 ^b	4	0,000
Have convenient operating hours	183.243 ^b	4	0,000
Have convenient operating hours	104.486 ^b	4	0,000
Give prompt service	153.135 ^b	4	0,000
Give prompt service	82.216 ^b	4	0,000
Never be too busy to respond to requests	123.838 ^b	4	0,000
Never be too busy to respond to requests	43.189 ^b	4	0,000
Always willing to help	156.541 ^b	4	0,000
Always willing to help	76.486 ^b	4	0,000
Advise exactly when services will be performed	148.811 ^b	4	0,000
Advise exactly when services will be performed	71.514 ^b	4	0,000
Overall I am satisfied with the services provided by the faculty staff	76.757 ^b	4	0,000
I will recommend the DUT to prospective students	122.811 ^b	4	0,000

Source: Statistician Mr D Singh

APPENDIX 11

FREQUENCY TABLE

Rel_2_P Age *								
Crosstab								
			Age					Total
			21 - 25	26 - 30	31 - 35	36 - 40	> 40	
Rel_2_P	Strongly Disagree	Count	4	1	0	4	1	10
		% within Age	6,3%	1,8%	0,0%	21,1%	10,0%	5,4%
	Disagree	Count	4	13	8	2	4	31
		% within Age	6,3%	23,2%	22,2%	10,5%	40,0%	16,8%
	Uncertain	Count	18	14	7	2	0	41
		% within Age	28,1%	25,0%	19,4%	10,5%	0,0%	22,2%
	Agree	Count	30	20	13	8	4	75
		% within Age	46,9%	35,7%	36,1%	42,1%	40,0%	40,5%
	Strongly Agree	Count	8	8	8	3	1	28
		% within Age	12,5%	14,3%	22,2%	15,8%	10,0%	15,1%
Total		Count	64	56	36	19	10	185
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Chi-Square Tests								
	Value	df	Asymptotic Significance (2-sided)					
Pearson Chi-Square	29.864 ^a	16	0,019					
Likelihood Ratio	31,115	16	0,013					
Linear-by-Linear Association	1,591	1	0,207					
N of Valid Cases	185							
a. 12 cells (48.0%) have an expected count of less than 5. The minimum expected count is .54.								

D1 * Age								
Crosstab								
			Age					Total
			21 - 25	26 - 30	31 - 35	36 - 40	> 40	
D1	Strongly Disagree	Count	3	2	1	2	0	8
		% within Age	4,7%	3,6%	2,8%	10,5%	0,0%	4,3%
	Disagree	Count	8	15	5	2	6	36
		% within Age	12,5%	26,8%	13,9%	10,5%	60,0%	19,5%
	Uncertain	Count	16	9	9	5	1	40
		% within Age	25,0%	16,1%	25,0%	26,3%	10,0%	21,6%
	Agree	Count	32	21	18	5	3	79
		% within Age	50,0%	37,5%	50,0%	26,3%	30,0%	42,7%
	Strongly Agree	Count	5	9	3	5	0	22
		% within Age	7,8%	16,1%	8,3%	26,3%	0,0%	11,9%
Total		Count	64	56	36	19	10	185
		% within Age	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Chi-Square Tests								
	Value	df	Asymptotic Significance (2-sided)					
Pearson Chi-Square	27.285 ^a	16	0,038					
Likelihood Ratio	25,310	16	0,065					
Linear-by-Linear Association	1,036	1	0,309					
N of Valid Cases	185							
a. 13 cells (52.0%) have an expected count of less than 5. The minimum expected count is .43.								

Res_20_P * My previous qualification was completed at the Durban University of Technology					
Crosstab					
			My previous qualification was completed at the Durban University of Technology		Total
			Yes	No	
Res_20_P	Strongly Disagree	Count	16	3	19
		% within My previous qualification was completed at the Durban University of Technology	11,4%	6,7%	10,3%
	Disagree	Count	22	7	29
		% within My previous qualification was completed at the Durban University of Technology	15,7%	15,6%	15,7%
	Uncertain	Count	41	11	52
		% within My previous qualification was completed at the Durban University of Technology	29,3%	24,4%	28,1%
	Agree	Count	50	14	64
		% within My previous qualification was completed at the Durban University of Technology	35,7%	31,1%	34,6%
	Strongly Agree	Count	11	10	21
		% within My previous qualification was completed at the Durban University of Technology	7,9%	22,2%	11,4%
Total		Count	140	45	185
		% within My previous qualification was completed at the Durban University of Technology	100,0%	100,0%	100,0%
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)		
Pearson Chi-Square	7,436 ^a	4	0,115		
Likelihood Ratio	6,675	4	0,154		
Linear-by-Linear Association	2,926	1	0,087		
N of Valid Cases	185				
a. 1 cells (10.0%) have an expected count of less than 5. The minimum expected count is 4.62.					

Source: Statistician: Mr D Singh

APPENDIX 12

EXPECTATIONS vs PERCEPTIONS TABLES

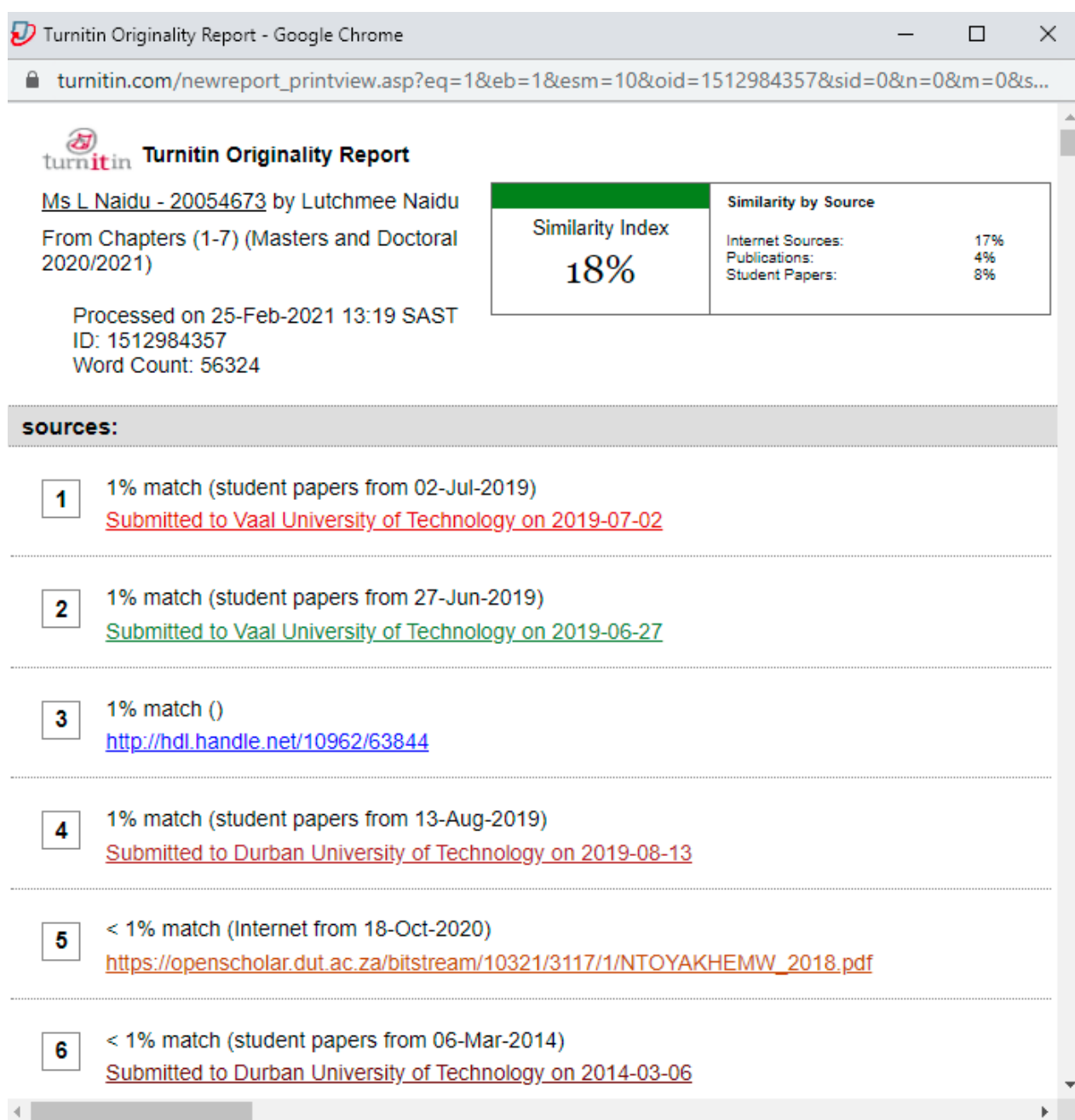
The tables below summarises the scoring patterns for each of the RATER dimensions.

<p>RELIABILITY</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>E</th> <th>P</th> <th>Gap</th> <th>p-value</th> </tr> </thead> <tbody> <tr> <td>Rel 1</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Rel 2</td> <td>4.0</td> <td>3.4</td> <td>-0.6</td> <td>< 0.001</td> </tr> <tr> <td>Rel 3</td> <td>4.2</td> <td>3.3</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Rel 4</td> <td>4.3</td> <td>3.5</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Rel 5</td> <td>4.2</td> <td>3.3</td> <td>-0.9</td> <td>< 0.001</td> </tr> <tr> <td>Overall</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> </tbody> </table>		E	P	Gap	p-value	Rel 1	4.2	3.4	-0.8	< 0.001	Rel 2	4.0	3.4	-0.6	< 0.001	Rel 3	4.2	3.3	-0.8	< 0.001	Rel 4	4.3	3.5	-0.8	< 0.001	Rel 5	4.2	3.3	-0.9	< 0.001	Overall	4.2	3.4	-0.8	< 0.001	<p>ASSURANCE</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>E</th> <th>P</th> <th>Gap</th> <th>p-value</th> </tr> </thead> <tbody> <tr> <td>A 6</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>A 7</td> <td>4.3</td> <td>3.7</td> <td>-0.6</td> <td>< 0.001</td> </tr> <tr> <td>A 8</td> <td>4.3</td> <td>3.6</td> <td>-0.7</td> <td>< 0.001</td> </tr> <tr> <td>A 9</td> <td>4.3</td> <td>3.5</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Overall</td> <td>4.3</td> <td>3.6</td> <td>-0.8</td> <td>< 0.001</td> </tr> </tbody> </table>		E	P	Gap	p-value	A 6	4.2	3.4	-0.8	< 0.001	A 7	4.3	3.7	-0.6	< 0.001	A 8	4.3	3.6	-0.7	< 0.001	A 9	4.3	3.5	-0.8	< 0.001	Overall	4.3	3.6	-0.8	< 0.001
	E	P	Gap	p-value																																																														
Rel 1	4.2	3.4	-0.8	< 0.001																																																														
Rel 2	4.0	3.4	-0.6	< 0.001																																																														
Rel 3	4.2	3.3	-0.8	< 0.001																																																														
Rel 4	4.3	3.5	-0.8	< 0.001																																																														
Rel 5	4.2	3.3	-0.9	< 0.001																																																														
Overall	4.2	3.4	-0.8	< 0.001																																																														
	E	P	Gap	p-value																																																														
A 6	4.2	3.4	-0.8	< 0.001																																																														
A 7	4.3	3.7	-0.6	< 0.001																																																														
A 8	4.3	3.6	-0.7	< 0.001																																																														
A 9	4.3	3.5	-0.8	< 0.001																																																														
Overall	4.3	3.6	-0.8	< 0.001																																																														
<p>TANGIBLES</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>E</th> <th>P</th> <th>Gap</th> <th>p-value</th> </tr> </thead> <tbody> <tr> <td>T 10</td> <td>4.0</td> <td>3.4</td> <td>-0.6</td> <td>< 0.001</td> </tr> <tr> <td>T 11</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>T 12</td> <td>4.2</td> <td>3.8</td> <td>-0.4</td> <td>< 0.001</td> </tr> <tr> <td>T 13</td> <td>4.1</td> <td>3.5</td> <td>-0.6</td> <td>< 0.001</td> </tr> <tr> <td>Overall</td> <td>4.1</td> <td>3.5</td> <td>-0.6</td> <td>< 0.001</td> </tr> </tbody> </table>		E	P	Gap	p-value	T 10	4.0	3.4	-0.6	< 0.001	T 11	4.2	3.4	-0.8	< 0.001	T 12	4.2	3.8	-0.4	< 0.001	T 13	4.1	3.5	-0.6	< 0.001	Overall	4.1	3.5	-0.6	< 0.001	<p>EMPATHY</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>E</th> <th>P</th> <th>Gap</th> <th>p-value</th> </tr> </thead> <tbody> <tr> <td>E 14</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>E 15</td> <td>4.1</td> <td>3.3</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>E 16</td> <td>4.2</td> <td>3.4</td> <td>-0.9</td> <td>< 0.001</td> </tr> <tr> <td>E 17</td> <td>4.2</td> <td>3.4</td> <td>-0.9</td> <td>< 0.001</td> </tr> <tr> <td>E 18</td> <td>4.3</td> <td>3.6</td> <td>-0.7</td> <td>< 0.001</td> </tr> <tr> <td>Overall</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> </tbody> </table>		E	P	Gap	p-value	E 14	4.2	3.4	-0.8	< 0.001	E 15	4.1	3.3	-0.8	< 0.001	E 16	4.2	3.4	-0.9	< 0.001	E 17	4.2	3.4	-0.9	< 0.001	E 18	4.3	3.6	-0.7	< 0.001	Overall	4.2	3.4	-0.8	< 0.001
	E	P	Gap	p-value																																																														
T 10	4.0	3.4	-0.6	< 0.001																																																														
T 11	4.2	3.4	-0.8	< 0.001																																																														
T 12	4.2	3.8	-0.4	< 0.001																																																														
T 13	4.1	3.5	-0.6	< 0.001																																																														
Overall	4.1	3.5	-0.6	< 0.001																																																														
	E	P	Gap	p-value																																																														
E 14	4.2	3.4	-0.8	< 0.001																																																														
E 15	4.1	3.3	-0.8	< 0.001																																																														
E 16	4.2	3.4	-0.9	< 0.001																																																														
E 17	4.2	3.4	-0.9	< 0.001																																																														
E 18	4.3	3.6	-0.7	< 0.001																																																														
Overall	4.2	3.4	-0.8	< 0.001																																																														
<p>RESPONSIVENESS</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>E</th> <th>P</th> <th>Gap</th> <th>p-value</th> </tr> </thead> <tbody> <tr> <td>Res 19</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Res 20</td> <td>4.1</td> <td>3.2</td> <td>-0.9</td> <td>< 0.001</td> </tr> <tr> <td>Res 21</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Res 22</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Overall</td> <td>4.2</td> <td>3.3</td> <td>-0.9</td> <td>< 0.001</td> </tr> </tbody> </table>		E	P	Gap	p-value	Res 19	4.2	3.4	-0.8	< 0.001	Res 20	4.1	3.2	-0.9	< 0.001	Res 21	4.2	3.4	-0.8	< 0.001	Res 22	4.2	3.4	-0.8	< 0.001	Overall	4.2	3.3	-0.9	< 0.001	<p>OVERALL GAP SCORE</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>E</th> <th>P</th> <th>Gap</th> <th>p-value</th> </tr> </thead> <tbody> <tr> <td>Reliability</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Assurance</td> <td>4.3</td> <td>3.5</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Tangibles</td> <td>4.2</td> <td>3.5</td> <td>-0.6</td> <td>< 0.001</td> </tr> <tr> <td>Empathy</td> <td>4.2</td> <td>3.4</td> <td>-0.8</td> <td>< 0.001</td> </tr> <tr> <td>Responsiveness</td> <td>4.2</td> <td>3.3</td> <td>-0.9</td> <td>< 0.001</td> </tr> </tbody> </table>		E	P	Gap	p-value	Reliability	4.2	3.4	-0.8	< 0.001	Assurance	4.3	3.5	-0.8	< 0.001	Tangibles	4.2	3.5	-0.6	< 0.001	Empathy	4.2	3.4	-0.8	< 0.001	Responsiveness	4.2	3.3	-0.9	< 0.001					
	E	P	Gap	p-value																																																														
Res 19	4.2	3.4	-0.8	< 0.001																																																														
Res 20	4.1	3.2	-0.9	< 0.001																																																														
Res 21	4.2	3.4	-0.8	< 0.001																																																														
Res 22	4.2	3.4	-0.8	< 0.001																																																														
Overall	4.2	3.3	-0.9	< 0.001																																																														
	E	P	Gap	p-value																																																														
Reliability	4.2	3.4	-0.8	< 0.001																																																														
Assurance	4.3	3.5	-0.8	< 0.001																																																														
Tangibles	4.2	3.5	-0.6	< 0.001																																																														
Empathy	4.2	3.4	-0.8	< 0.001																																																														
Responsiveness	4.2	3.3	-0.9	< 0.001																																																														

Source: Own Compilation

APPENDIX 13

Turnitin Report



Turnitin Originality Report - Google Chrome

turnitin.com/newreport_printview.asp?eq=1&eb=1&esm=10&oid=1512984357&sid=0&n=0&m=0&s...

turnitin Turnitin Originality Report

Ms L Naidu - 20054673 by Lutchmee Naidu

From Chapters (1-7) (Masters and Doctoral 2020/2021)

Processed on 25-Feb-2021 13:19 SAST
ID: 1512984357
Word Count: 56324

Similarity Index		Similarity by Source	
18%		Internet Sources:	17%
		Publications:	4%
		Student Papers:	8%

sources:

- 1% match (student papers from 02-Jul-2019)
[Submitted to Vaal University of Technology on 2019-07-02](#)
- 1% match (student papers from 27-Jun-2019)
[Submitted to Vaal University of Technology on 2019-06-27](#)
- 1% match ()
<http://hdl.handle.net/10962/63844>
- 1% match (student papers from 13-Aug-2019)
[Submitted to Durban University of Technology on 2019-08-13](#)
- < 1% match (Internet from 18-Oct-2020)
https://openscholar.dut.ac.za/bitstream/10321/3117/1/NTOYAKHEMW_2018.pdf
- < 1% match (student papers from 06-Mar-2014)
[Submitted to Durban University of Technology on 2014-03-06](#)