FACTORS AFFECTING THE MOTIVATION OF FIRST-YEAR STUDENTS IN THE DEPARTMENT OF CONSTRUCTION MANAGEMENT AND QUANTITY SURVEYING AT THE DURBAN UNIVERSITY OF TECHNOLOGY

By

ANISHA PIRTHIRAJ

Student Number: 18950908

A dissertation submitted in compliance with the requirements for the Master's Degree in Management Sciences: Business Administration in the Department of Entrepreneurial Studies and Management, Faculty of Management Sciences

DECLARATION

I, **Anisha Pirthiraj,** hereby declare that this dissertation is my own work and has not been previously submitted for any degree or evaluation at any other institution. This dissertation is being submitted in fulfilment of the Master's Degree in Management Sciences: Business Administration for the Department of Entrepreneurial Studies and Management, Faculty of Management Sciences.

I further declare that the work reported in this dissertation, except otherwise indicated, is my original work. The graphical representations, data, pictures or any other information contained in this dissertation is the researcher's own, unless specifically acknowledged as being sourced from elsewhere.

Anisha Pirthiraj
Student Number: 18950908
Date: 24 July 2017

APPROVED FOR FINAL SUBMISION

Dr I G Govender
Supervisor
D Admin, B Sc, B Com, MBA, CFP, LLB

DEDICATION

To my children, Ashalya and Thashrik Pirthiraj, whom I wish to inspire through this study.

ACKNOWLEDGEMENTS

During 2015/2016 I experienced many setbacks and losses. I thank God for granting me the strength and wisdom to complete my studies.

I wish to express my gratitude towards the following people who, through their support, have made my studies possible:

Dr I G Govender, for your patience, guidance and constant motivation throughout my studies. More importantly, for imparting your knowledge and always assisting me. Without your supervision and guidance this study would not have been possible. Your inspiration will never be forgotten.

My late dad, who always motivated me in every aspect of my life – your presence was felt throughout my studies. You always encouraged me to pursue my studies and I thank you for everything that you made me to be. My late mum, whose wise words, encouragement and love gave me the strength to overcome so many obstacles in life and who sadly passed away a week before the conclusion of my research. I love you, mum, and even though you were unwell, you still cared to discuss my studies with me right to the very end! I am eternally grateful to my parents for my humble upbringing and support throughout my life.

My late mother-in-law, whose guidance and life lessons will always be part of my journey.

My colleagues from the Department of Construction Management and Quantity Surveying. Your support in this research is sincerely appreciated.

To all those that participated in my studies, thank you for your input, and Ms. U Narain for her statistical input.

To my siblings who supported me throughout my life's journey – I thank you!

My husband, Sanny, for his support and my children, Ashalya and Thashrik, who were my strength at all times.

ABSTRACT

Technology, student diversity, socio-economic factors, student attrition and retention has significantly affected the teaching and learning environment at university. A first-year student's life is significantly affected by this changing environment and many first-year students at universities experience difficulties adapting to the new environment and being successful in their academic tasks.

The aim of this study was to determine the factors affecting the motivation of first-year students in the Department of Construction Management and Quantity Surveying. The study used the quantitative method approach where questionnaires were given to the first-year students and the first-year lecturers (lecturing the first-year students). Questionnaires were administered to 126 first-year students comprising the target population but only 121 completed questionnaires were received.

Findings from this study emphasise the need for lecturers to engage in alternate study methods, such as the use of the blackboard and visual aids to assist students. Students need to be adequately informed about the support systems available to them so that they can have a satisfying cultural, social and academic life. There was also a need for better equipped lecturing facilities. The absenteeism of students had a negative impact on the morale of lecturers. Absenteeism has a two-fold effect, in that it disrupts the morale of the lecturer as well as that of the students who attend class. The marketing strategy of both the Department as well as the university needs to be re-visited in terms of recruiting students and in particular the misunderstanding that exists amongst students regarding the different programme offerings.

The above issues are critical to ensure a transformative higher education agenda and DUT's strategic goals of engagement and student centredness.

The study recommends that a greater extent of student centredness, student-lecturer engagement and innovative teaching and learning approaches could increase the motivational level of first-year students in the Department.

ABBREVIATIONS

CAO	Central Applications Office
CHE	Centre for Higher Education
CMQS	Construction Management and Quantity Surveying
DUT	Durban University of Technology
DVC	Deputy Vice-Chancellor
ECP	Extended Curriculum Programmes
FTE	Full-time Equivalent
FYE	First-year Experience
HEI	Higher Education Institution
HOD	Head of Department
IT	Information Technology
ITSS	Integrated Tertiary Software System
NBT	National Benchmark Test
NSC	National Senior Certificate
NSFAS	National Student Financial Aid Scheme
SPSS	Statistical Package for the Social Sciences
UoT	University of Technology
WIL	Work Integrated Learning

LIST OF FIGURES **PAGE NO**

LIST OF APPENDICES

TABLE OF CONTENTS

1. CHAPTER ONE

"Education is the most powerful weapon which you can use to change the world." – Nelson Mandela

1.1 INTRODUCTION

First year studies at a university can be a daunting, exciting and nervous experience as well as a rewarding experience, both personally and academically. A difference in cultural backgrounds, personal adjustments and personal attributes can affect a student at first year. This transition stage from school to university can bring about many challenges. Finding a balance between personal, academic and social challenges can become an intimidating experience for a first-year student. It is therefore important to a student to have the necessary support mechanisms to deal with issues pertaining to university life both personal and academic to make their first year experience a rewarding one.

1.2 BACKROUND TO THE STUDY

In modern societies, being a student is a culturally accepted responsibility of the maturing process of an adult (Jonasssen and Land 2012: 1). The traditional image of a first-year student at university is one of excitement, intellectual and personal discovery, independence in thought and behaviour, widening horizons and growth in confidence (Leibowitz, Van der Merwe and Van Schalkwyk 2009:17). However, this is a reality for only a few students since the majority of students' university experience is marred by failure, loss of confidence and disillusionment thereby impacting the social, economic and political development of the country in terms of the scarcity of skills. Many first-year students at universities continue to experience difficulties with their tertiary studies owing to their disadvantaged background that impacted from their secondary schooling education and social or economic status in society. More recently, students are experiencing violence on the campuses, leading to disruptions in their academic work.

The programmes offered by the institution and the manner in which academics deliver their lectures play a significant role in shaping the future of its students. Quality teaching has become an increasingly important issue in higher education since institutions are always striving towards excellence in education or finding suitable ways to improve it. In this regard there is a need to identify the factors that motivate first-year students and to identify whether students are intrinsically or extrinsically motivated to undertake their journey at Durban University of Technology (DUT).

1.2.1 STUDENT SUPPORT AND DEVELOPMENT SYSTEMS

The Student Counselling Centre is dedicated to providing students with support for any academic, social, personal, vocational and developmental difficulties they may experience. The Centre also focuses on psycho-educational training and advocacy issues that impact on student psycho-social development (www.dut.ac.za).

Faulconer, Geissler, Majewski & Terifilo (2013: 45) state that the retention of students is critical to a university's success, and employing student-centred, data-driven strategies is crucial for student retention. Faulconer et al. (2013) further state that getting students enrolled is only the first step but supporting students and intervening quickly and proactively to solve performance problems is key to student success. Despite the availability of student support services the Department of Construction Management and Quantity Surveying still experiences high first-year drop-out rate.

1.2.2 PHYSICAL ENVIRONMENT AND FACILITIES AT DUT

It is imperative that universities provide appropriate lecture environments and student support systems that could attract high-achieving students and retain existing students. Student evaluations regarding students' support services should be undertaken for all students to ascertain the level of services provided or if more student-orientated services should be introduced. Students who have support and pass tests and examinations may perceive the university more positively than those students who fail tests and examinations (Gruber et al.

2010). Students' transition to higher education seems an easier one when there is a supportive learning environment (Wilkes, Godwin and Gurney 2015).

1.2.3 LIBRARY FACILITIES AT DUT

Information literacy can be defined as the ability to recognise when information is needed and how to locate, evaluate and finally use the needed information effectively, according to Upcraft et al. (2005: 340). They further state that the goal is to give first-year students the tools with which to navigate scholarly narratives, understand discourse as a conversation over time and take part in critically assessing and evaluating information.

Students are not skilled to decipher what information is relevant or credible and need to be educated with regard to the tools available. The librarians play an important role in enabling students to be educated in this regard. Librarians must be involved with the first-year programme so that students have the ability to read through online books and journal articles to supplement their lectures.

Since information literacy is a key component of the educational experience, integration of information literacy activities into the first-year programmes is an important factor for first-year students. Institutions must ensure that all first-year students have the technological skills to assess information and liaise with librarians so that librarians can offer their services to individual departments. It is vital to develop an active partnership between first-year experience projects, organisations and programmes and library organisations. It is of utmost importance that individual departments set aside funds to support librarian-department partnerships for curriculum transformation. There is no previous studies at DUT indicating the role of the library services in motivating them to aid in their academic performance.

1.2.4 STUDENT AND STAFF WELLNESS CENTRE AT DUT

Students generally feel a sense of confusion and tension in their learning environment. Some students leave their homes and have to adjust and this can cause depression and anxiety because they cannot adapt. The start of university life can be daunting for some, thereby affecting their performance. It is therefore essential that students be informed of the student support departments at DUT at the beginning of their studies. The Health Clinic and HIV/AIDS Centre are two importance centres in supporting both students and staff. The Isolempilo Campus Health Clinic is staffed by professional nurses and doctors, whose primary purpose is to assist students medically in a professional and confidential manner. The HIV/AIDS Centre function is to transform the DUT community into an HIV/AIDS-competent community through effective knowledge and skills; to create a supportive and caring environment for people infected and/ affected by HIV; to develop an HIV/AIDS policy that addresses the human rights and dignity of people infected and affected by HIV/AIDS.

1.2.5 STUDENT HEALTH COUNSELLING SERVICES AT DUT

The primary purpose of the Student Health and Counselling Department is to provide critical, high-quality psycho-social, emotional, academic and medical support services to students to prepare them for the world, work and society as a whole. They also provide support to students during test and examination times. DUT provides students with the opportunity of using the sports facility. Here students unwind and use this as an opportunity to balance their studies with sport. Although this facility is seen as a social platform for students, this student facility can benefit students holistically, enabling a healthy lifestyle.

Upcraft et al. (2006: 340) highlight the importance of the student health services, as being much broader than simply treating students who are ill. Trained professionals provide guidance on a wide range of issues, including substance abuse prevention policies. Campus wellness programmes are useful in that they provide vital information about prevention programmes and social development.

Dunne and Somerset (2004: 364) suggest that there is a general consensus that students' health needs are linked to their adjustment to a new life at university. Difficulty with coping away from home and a new life of independence may be a difficult one and therefore institutions should have good support systems to assist these students. Students are also exposed to the real world in terms of drugs, alcohol and different lifestyle behaviours. Raising awareness of such issues is critical as students need to have as much information as possible. Mental health is a very important aspect of a first-year student's transition and appropriate guidance should be given to students. This is critical as the majority of DUT students are from previous disadvantaged communities.

1.2.6 FUNDING AT THE DURBAN UNIVERSITY OF TECHNOLOGY (DUT)

For prospective first-year students, financing their education is critical as it determines whether they enrol at a higher education institution or not. At DUT, bursaries are awarded based on predetermined criteria stipulated by donors/sponsors. Selection of bursary recipients is based on their financial needs, availability of funds, academic potential and field of study. The Vice-Chancellor's Award: This scholarship is awarded at the discretion of the Vice-Chancellor, not necessarily to top academic achievers, but to new students who have obtained good passes in the NSC examination, despite personal circumstances. This scholarship will be limited to each year and will usually take the form of a remission of tuition fees for the first-year of study only, except in deserving cases, where this may be reviewed (www.dut.ac.za).

The National Student Financial Aid Scheme (NSFAS) is a loan and bursary scheme operating in terms of Act 56 of 99 and funded by the National Department of Education and offers the means to obtain a tertiary qualification. Its mission is to transform NSFAS into an efficient and effective provider of financial aid to students from poor and working-class families in a sustainable manner that promotes access to, and success in, higher and further education and training in pursuit of South Africa's national and human resource development goals.

Mail and Guardian (2015) reported that every year as the academic calendar commences, South Africa experiences problems associated with the National Student and Financial Aid Scheme (NSFAS). Minister of Higher Education and Training, Blade Nzimande, refers to the current NSFAS scheme and states that the scheme cannot satisfy the ever-growing demand for financial assistance. The government is doing its best through the scheme to ensure that more poor students can pursue tertiary education. The reality is that our fiscus cannot fund free higher education and training. The government has many pressing social delivery needs that it cannot relegate to the back burner. NSFAS is the single biggest contribution the government can make. The department has called for the private sector to make its own contribution to the challenge of financing higher education and training. The government recognises and appreciate the role that some companies play in the skills levy training regime, recognises that some companies have bursary schemes and appreciates the companies who have responded to the minister's call to build partnerships with the training colleges to produce critical skills.

Scholarships and grants are administered to financially disadvantaged students by the Financial Aid Department that endeavours to provide the necessary available funds to students who lack financial resources in the pursuance of their studies. According to Kotler and Fox (1995) cited in De Shileds Jr et al. (2005: 132), attracting students, processing their applications, guiding admitted students through the enrolment process and treating students as partners are extremely important activities in ensuring the completion of their studies.

1.2.7 THE IMPORTANCE OF TEACHING ASSISTANTS/TUTORS

Tutors assist with course syllabi, reading and referencing. With an increase in student enrolment and change in technologies, it is necessary for assistance. Tutors play an important part in helping meet the needs of the undergraduate programme for quality learning to take place, since teaching large numbers has become a norm in universities. Tutors play an important role in the facilitation of learning as tutorials are conducted in small groups thereby facilitating a "hands-on" approach rather than asking questions in front of a lecture room full of students. This interactive communication and personal contact provides opportunity for tutors to make a difference to students in terms of students being motivated to take up learning challenges in a

particular course (Retna, Chong and Cavana 2009: 252-260). According to Nelson-Royer (2013: 48), tutors could reach students in ways that lecturers could not. They play an intermediate role between lecturer and student, facilitating group work and assessments.

Tutorship programmes can supplement the classroom experience, partly because tutors are able to react during a one-to-one situation that is impossible for a lecturer to do. Tutors have a major role in monitoring and supporting students and help to increase student achievement (Nelson-Royer: 2013: 49). They also play a vital role in student retention in that they enable learning within and beyond the course, encourage study of specific material and assist students in mastering the content of the course. According to Retna et al. (2009), tutors are also responsible for facilitating a learning environment that encourages the development of critical thinking, communication and leadership skills and creativity, and their roles can be summarised as follows:

- ► Facilitation of a learning environment that meets each student's learning needs;
- ► Provision of a positive and constructive feedback on students' progress and performance;
- ► Facilitation of intellectual growth that results in high quality-student learning.

Students identify with their peers and can feel free to pose a question to their tutor which can improve a student's understanding significantly in a subject. Tutor programmes can support a group of at-risk students, especially students who are academically disadvantaged and have come from previously disadvantages areas, students who have poor attendance and repeatedly fail tests. Once again, there is no current data available or research outputs at DUT highlighting the role of tutors in motivating first-year students' academic performance.

1.2.8 EXTENDED CURRICULUM PROGRAMMES (ECP) /FUNDAMENTAL COURSES AT DUT

The purpose of extended programmes is to create the curriculum space needed to enable talented but underprepared students to achieve sound foundations for success in higher education. Extended programmes are variants of regular undergraduate degree and diploma programmes that extend their duration, usually by a year, to enable substantial foundational provision to be incorporated. The foundational provision can take various forms, particularly introductory courses in key subjects as well as provisions that enable students to develop essential academic literacies and learning skills in areas such as academic argument and analysis, advanced reading and writing competences, numeracy, and information literacy.

1.2.9 TEACHING AND LEARNING THEORIES

Students register with different knowledge, beliefs and attitudes gained during their life and it influences how they behave. Students enter university and gain greater autonomy over what, when and how they study and learn. In this regard, motivation plays a critical role in guiding the direction, intensity, persistence and quality of the learning behaviours in which the students engage (Rodriguez 2010). According to Noddings (2007: 339), education does not try to produce a uniform product but is designed to develop the various talents and interests of students in terms of fulfilling the institution's mission with developed and educated students. At the undergraduate level of education, we can identify some ideal aims for graduates – critical thinking, heightened sensibility and self-actualisation (Noddings: 2007: 340). External factors such as teacher behaviour and the teaching situation associated with the learning environment could have an impact on the manner in which students perceive what they are learning.

According to Jones (2007: 1) learners in a student-centred class do not depend on their lecturer at all times or wait for instructions. They are active participants of the lecture, sharing and exchanging ideas with the lecturer being the facilitator of these discussions (Nagaraju, Madhavaiah and Peter 2013: 127). Teamwork between lecturer and student is established. They work independently and consult lecturers when they encounter problems. A student-centred

approach helps students to develop a "can-do" attitude and is effective, motivating and enjoyable as students may be working alone, in pairs or in a group. Jones (2007: 1) further states that a student-centred approach may be teacher-led while providing guidance. Once the students have completed the work, their lecturer will give them feedback, offer suggestions and advice, make corrections and answer questions. In this way, students interact more, share ideas, learn from each other, become more involved, feel secure and less anxious. Student-centred learning strategies contribute to keeping the student interested. Student feedback encourages students to bring new ideas to the classroom and should be seen as a valuable tool to ascertain the needs and wants of students. Teaching, learning and assessment strategies at DUT play a significant role in influencing the motivation of the first-year student.

1.3 LOCATION OF THE STUDY

The study is conducted in the Department of Construction Management and Quantity Surveying within the Faculty of Engineering and the Built Environment at the Durban University of Technology. The Department employs five full-time lecturers who lecture first-year level subjects. The programme offered is the National Diploma: Building, offered as a full-time programme.

1.4 PROBLEM STATEMENT

The previous apartheid system created educational and social inequalities through racist policies, and funding disparities in schools ensured contrasting access to higher education (Ocampo 2004: 1). Although post 1994 funding and resource inequalities in the public education system have been dramatically reduced, significant inequalities still remain. Many students coming from under-resourced school environments, when faced with university lifestyle as students, may feel inferior and lack the confidence to deal with their studies (Reschovsky: 2006). According to Starke, Harth and Sirianni, (2001) cited in Bowden (2013), the first-year of a student's tertiary experience is arguably the most important period for student retention since many students who drop out do so in their first-year of a tertiary programme.

According to the Green Paper for Post-School Education and Training (2012: 12), historical inequalities need to be addressed if the post-school system is to provide equitable and quality education for the majority of the population. The paper further comments that although "opening up" of former whites-only institutions has provided opportunities to at least some students from the previously disadvantaged communities, the poorer students have found themselves having to fit in with a system that was initially designed for students from relatively privileged backgrounds. Young students in rural area schools have particular challenges, including less infrastructure and fewer facilities. We need to be reminded that at one time those in the liberation struggle wanted education for black learners to be the same as that for white learners, until they understood that white education taught racial superiority, a false version of history and an intolerance of diversity. White education only seemed better because of the facilities and support lavished on it by the state (Gardiner 2008: 18).

While the Department of Construction Management and Quantity Surveying adheres to their admission criteria, there was a dropout rate of 39% and a throughput rate of 20% after students entered the system for the first time in 2012 (a minimum period of 3 years). After the first-year of study, many students do not register for their second year of study and this has an impact on the throughput rate of the department. In addition, students who complete their studies take more than the minimum of three years as stipulated by the Department of Higher Education.

A dropout rate has been increasing steadily over the years and the department has to collectively find innovative ways to reduce absenteeism and increase the motivation of students. In addition, once first-year students are accepted onto the programme some students cancel their registration after a few weeks. Reasons given for the cancellations include, a change of mind, relocation, financial problems and the programme "not being what they thought it would be". According to Newstead and Hoskins (1992: 1) some students chose to study in their registered field because they could think of nothing else to do, wanted to defer taking a decision, or simply wanted to enjoy themselves for three years. The student's personal reason other than that for obtaining a qualification at a higher education institution could affect the motivation and academic performance of that student. Educator and student morale is a very important component of a

student's success. Some students do not believe that extra effort will improve their performance and hence these students will not make an attempt to improve. The department must devise ways to increase student motivation. Perception of the course and a student's first encounter with academic staff may contribute to a student's disinterest, thereby affecting their motivation.

1.5 RESEARCH AIM

This study aims to determine the factors that affect student motivation at first-year level in the Department of CMQS.

1.6 RESEARCH OBJECTIVES

The research objectives for this study are as follows:

- ► Determine the factors that motivate students to choose CMQS as their career.
- ► Identify factors that affect students' motivation in academic performance.
- ► Identify factors that could improve students' performance in the Department of CMQS.

1.7 RESEARCH METHODOLOGY

The research methodology in this study used the quantitative methodology approach. Questionnaires were used to gather the required information from students and lecturers at first-year levels only. Permission from the Head of Department (CMQS) was obtained prior to administering questionnaires to 126 first-year students and seven full-time first-year lecturers. Only 121 completed questionnaires were received from students and seven completed questionnaires were received from lecturers. The primary data was obtained from both the student and lecturer questionnaires. The data was captured and analysed using the SPSS programme for both inferential and descriptive statistical analysis. Descriptive statistics was undertaken using pie graphs while inferential statistical analysis included Cronbach Alpha and factor analysis.

1.8 RELIABILTY AND VALIDITY

Leedy and Ormrod (2010: 28-29) define reliability as the consistency with which a measuring instrument yields a certain result when the entity being measured has not changed and validity is the extent to which the instrument measures what it is intended to measure. According to Paula, Priest, and Traynor (2006: 41), reliability and validity are ways of demonstrating and communicating the rigour of research processes and the trustworthiness of research findings. If research is to be helpful, it should avoid misleading those who use it. Paula et al. (2006), further state that trustworthiness depends on a number of research features: the initial research question, how data is collected including when and from whom, how data collected is analysed, and what conclusions are drawn.

Reliability of the questionnaire was tested using the Alpha Cronbach test which produced the same outcome under different conditions. Three lecturers who taught first-year students previously and who was not involved in the study was asked to check for inaccuracies and coherence of the questionnaire. The validity of the questionnaire was piloted by students and lecturers to ensure consistency of the questions.

1.9 LIMITATIONS OF THE STUDY

The findings from this research could be generalised to other departments within the Faculty of Engineering and the Built Environment due to common factors such as throughput rates, absenteeism of students, marketing and student-lecturer relationships that may be different. Time constraints and the cost factor did not permit the researcher to investigate the motivational levels of the second-third and fourth-year students registered in the Department.

1.10 DELIMITATIONS OF THE STUDY

This study was conducted on first-year students only, and seven full-time lecturers who lecture to first-year students in the Department of CMQS. Other levels of students and lecturers in the Department were not included in the study as the focus of the study is to investigate the experiences of first-year students.

1.11 DEFINITION OF TERMS

First-year student	According to Upcraft, Gardner and Barefoot (2009:8), the narrowest definition of a first-year student success is the successful completion of courses taken in the first-year and continuing enrolment into the second year. Upcraft et al. (2009), further state that most institutions would encompass a broader definition of first-year success, including one or more of the following: Developing academic and intellectual competence and intellectual skills necessary to become an educated person, such as critical thinking, problem-solving, reading, writing, technological and computational skills; establishing and maintaining interpersonal relationships as the first-year students express anxiety about transition into higher education. They must begin to develop effective interpersonal relationships; explore identity development; decide on a career; maintain health and wellness; develop values; multiculturalism awareness and civic responsibility.
Differentiated Classroom	Is the practice of adjusting the curriculum, teaching strategies, assessment strategies and the classroom environment to meet the needs of all students (Arends et al. 2010).
Stop out	Students temporarily take a break from their studies and return to the university after a long period of time (Pocock 2012).
Drop-out rate	A common terminology used in the literature to describe students who leave a specific university without completing a qualification in their chosen initial degree subject is ‘drop-out’ (Pocock 2012).

Extended curriculum	Extended curricula have been introduced in a number of programmes in South Africa, because of the low throughput rate in higher education and the need to articulate better the gap between school and higher education practices (Bass 2011). Extended curricula are designed to equip students who do not meet the minimum admission requirements with the necessary competencies to be successful in their studies.
At-risk students	At-risk students are students who are not experiencing success in school and are potential drop-outs. They are usually low academic achievers who exhibit low self-esteem (Donnelly 1987).
Attrition	Johnson (2012) describes attrition as departure from all forms of higher education prior to completion of a degree or other credentials. Student attrition is the reduction in numbers of students attending courses as time goes by.
Student centredness	Student-centred instruction is an instructional approach in which students influence the content, activities, materials, and pace of learning. This learning model places the student (learner) in the centre of the learning process. The instructor provides students with opportunities to learn independently and from one another and coaches them in the skills they need to do so effectively (Froyd and Simpson 2014).
Learning	Learning is a relatively permanent change of behaviour brought about by practise or experience (Lachman 1997). It can also be defined as the acquisition of knowledge or skills through study, experience, or being taught.

Self-efficacy	Self-efficacy is a personal belief in one's capability to organise and execute courses of action required to attain designated types of performances. Often described as task-specific self-confidence, self-efficacy has been a key component in theories of motivation and learning in varied contexts (Artino 2012).
Scaffolding	Refers to a variety of instructional techniques used to move students toward better understanding and greater independence in the learning process (www.edglossary.org).
Flipped classroom	In a traditional instructor-centred classroom, the lecturer delivers lectures and students are given tasks to complete at home. In flipped or inverted classroom, the lecturer "delivers" lectures before class in the form of pre-recorded videos and spends class time engaging students actively in class (Mok 2014: 7).
B-learning	Known as blended learning, B-learning can be defined as structured opportunities to learn, which use more than one learning or training method, inside or outside the classroom. This definition includes different learning or instructional methods, different delivery methods, and different levels of guidance (Pankin, Roberts and Savio 2012: 1).

1.12 RATIONALE OF THE STUDY

The study is significant in that it would determine the factors which affect the motivation of first year students in the Department of Construction Management and Quantity Surveying. Completion of tasks, enthusiasm level and disinterest of students in certain subjects may contribute to the absenteeism rate which can impact the pass rate of students at first year level. This study aims to determine the factors which contribute to the motivation of students at first-year level which currently creates a bottlenecks in higher education institutions by using additional resources.

1.13 OUTLINE OF THE RESEARCH

The dissertation comprises five chapters and is outlined below:

Chapter One: Introduction

Chapter one covers the introduction of the research and research problem, its aims and outlines the reasons for the study undertaken. It also outlines the rationale of the study. It briefly states the methodology employed and its impact on this study.

Chapter Two: Literature review

The review of literature presents a conceptual framework for the study. It discusses various writings on the factors that motivate students to perform at Higher Education Institutions (HEIs). It also makes mention of the various teaching and learning models that could impact the student outcomes.

Chapter Three: Research methodology

This chapter includes the research paradigm, sample, sampling technique and data analysis. This chapter presents the research methodology within which the data was collected. It also makes mention of confidentiality and discusses the issues of reliability and validity.

Chapter Four: Analysis and results

Data from the questionnaires was captured and analysed using the SPSS programme. Student information from both the lecturer and student have been translated into meaningful information which is easily understood using graphic representations.

Chapter Five: Conclusion and recommendations

This chapter presents the conclusions and recommendations of the study. The conclusion is primarily drawn from the research gathered in the literature review and the analysis and results from the data collected. It also makes recommendations to the Department of CMQS to implement strategies to improve the attendance of first-year students which could positively impact the pass rate of the first-year level of students. Further research into the area and importance of student motivation are made in this concluding chapter.

1.14 CONCLUSION

This chapter gives an introduction to the topic, the background to the research being undertaken, the problem statement, the aim, research objectives, research questions, limitations, delimitations, definitions of key terms and the rationale for the research. The next chapter outlines the theories associated with the topic under discussion.

CHAPTER TWO: LITERATURE REVIEW

"I attribute my success to this: I never gave or took excuses". – Florence Nightingale

2.1 INTRODUCTION

Chapter One gave an overview of the background to the study and discussed the problem statement. The purpose of this chapter is to discuss the different views and factors affecting the motivation of first-year students at higher education institutions. This chapter will explore factors which influence career choice and more importantly it will focus on pertinent issues regarding the effect of student motivation, particularly at a student's first-year level of study at a higher education institution.

Motivation theories of Abraham Maslow, McClelland and Hertzberg's Two-Factor Theory will be discussed to ascertain factors influencing student motivation. A study of Bloom's Taxonomy will be used to understand the teaching and learning process which is useful for educators to know and understand how students react in a lecture room situation.

2.2 HIGHER EDUCATION IN SOUTH AFRICA

The South African higher education system comprises universities (including research-intensive universities), comprehensive universities, and universities of technology. While the higher education system is differentiated in the sense that different institutions offer different types of qualifications at different levels of the HEQF, most South African higher education institutions, across the sector, pride themselves on providing career-focussed education.

The divisions along racial groups that apartheid created resulted in an inefficient system that lacked the ability to meet the moral, social and economic demands of the country. The apartheid system also created educational and social inequalities through racist policies. For example, the policies and funding disparities in schools ensured contrasting access to higher education

(Ocampo 2004: 1). Funding was allocated according to the population group and this was a major disparity. Settlements designated for blacks were characterised by poor socio-economic conditions and poor educational infrastructure and resources. This also meant that pupils were not exposed to innovative teaching methods and were not familiar with the recent technology which is used in a higher education environment. Further, the development and promotion of the Afrikaans language also contributed to the establishment of institutions whose medium of instruction was Afrikaans, which was not the language of the masses.

The end of apartheid rule in 1994 provided a new set of challenges for higher education, namely, the integration of different race groups and use of "previously segregated facilities" for the entire population. The challenge in higher education was to redress the inequalities of the apartheid years and to restructure the educational system to rise to the challenges of a modern country that could be competitive in the 21st century (Harmen and Pistorius 1998).

Higher education is an essential component of any country's development as it depends on a skilled workforce. Hence, knowledge production is a crucial component of this development. Higher education institutions are increasingly recognising that higher education is a service industry, and are placing greater emphasis on meeting the expectations and needs of the participating customers, that is, the students (De Shileds , Kara and Kaynak 2005: 128). It is also imperative that universities create programmes which retain their students and differentiate them from other universities and higher education institutions.

2.2.1 Transformation of Higher Education in South Africa

Despite South Africa achieving much since the demise of the apartheid system and reducing historical inequalities brought about many economic, social and technological challenges, graduates are not technologically advanced and equipped with the necessary skills and knowledge for the real world, especially that of construction.

The term "transformation" can assume multiple meanings and definitions dependent on the context from which it emerges. Within higher education it may imply either transformation of the student via learning, transformation of the institution to enable transformative outcomes or both (Seabi, Seedat, Khoza-Shangase and Sullivan: 2012: 66). Political change in the country has placed pressure on the historically white institutions to transform with regard to staff and student demographics.

Transformative learning entails creating and enabling an environment within universities for transforming the politics of the production, circulation and distribution of knowledge, and rethinking what constitutes a "good university" in the South African context. Favish (2015: 3) and Maimela (2015: 4) further report that higher education transformation has been a terrain of struggle for various entities and for the purpose of understanding the broader aspect of transformation within higher education with regard to the socio-economic development of the country, one needs to contextualise and understand education transformation in terms of the political situation of the country within its political regime. In the present democracy the inequality that exists today speaks to all manner of social deprivation of the vast majority of the black people from earning better incomes, gaining skills, enjoying social mobility and being part of development, and that long before apartheid, white minority interests had always sought to use education as one of the key levers for social engineering.

Historically disadvantaged institutions such as Mangosuthu University of Technology in KwaZulu-Natal were also situated in rural areas and were further disadvantaged by their separations. Generations of black students had restricted access to quality higher education (Gravett and Geyser 2004) because of segregation and the social and political restraints which prevented the underprivileged from registering in "advantaged" HEIs. In order to achieve transformation in higher education, the new democratic government had to place an enormous emphasis on institutions to provide quality education to those previously denied and for each student to be given the opportunity to obtain a qualification.

Although post-1994, funding and resource inequalities in the public education system have been dramatically reduced, significant inequalities still remain. While some schools have highly qualified teachers and a full range of educational facilities, such as science laboratories and well-stocked libraries, other schools must rely on unqualified teachers and lack even basic facilities and supplies such as working toilets and a sufficient number of classrooms for their students (Reschovsky: 2006). Coming from their old environment poses a challenge when faced with university lifestyle. Students may feel that they are inferior to their colleagues and have a low morale.

The National Higher Education Transformation Summit took place from 15-17 October 2015 in Durban, KwaZulu-Natal. A media statement issued by the Minister of Higher Education and Training, Dr BE Nzimande on the Higher Education Summit (ww.dhet.gov.za), reiterated the importance of the summit in that it will provide the space for re-imaging higher education transformation, tackling the difficult issues that are currently explosive on our campuses, and building a vision for what a South African university should look like today and in the future. Engagements will focus on transformation with respect to areas and issues such as curriculum, institutional environments, access and success, including transitions into and through higher education; research and engagement and leadership, management and governance, and matters relating to funding and financing of higher education in our country.

2.3 LEGISLATION AND POLICIES REGARDING HIGHER EDUCATION

Education in South Africa is governed by a number of statutes; the Constitution is the supreme law of the country that provides guidance to the provision of education services to the masses.

2.3.1 CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA 108 of 1996

The Bill of Rights in the Constitution of the Republic of South Africa (108 of 1996), stipulates that everyone has the right to basic education, including adult basic education and further education, which the State, through reasonable measures, must progressively make available and

accessible. The Department of Basic Education has a crucial leadership, policy-making and monitoring responsibility in improving the quality of learning and ensuring sustained education quality improvement across the education sector. In a similar view, the Department of Higher Education and Training has the responsibility (www.dhet.gov.za) to develop capable, well-educated and skilled citizens who are able to compete in a sustainable, diversified and knowledge-intensive international economy, which meets the development goals of our country. It also sets out in its mission to reduce the skills bottlenecks, especially in priority and scarce skills areas, improving low participation rates in the post-school system, correcting distributions in the shape, size and distribution of access to post-school education and training and improving the quality and efficiency in the system, its sub-systems and institutions.

2.3.2 GREEN PAPER FOR POST-SCHOOL EDUCATION AND TRAINING

The Green Paper (2012: 3) provides a vision for a single, coherent, differentiated and highly articulated post-school education and training system. This system will contribute to overcoming the structural challenges facing our society by expanding access to education and training opportunities and increasing equity, as well as achieving high levels of excellence and innovation. Although progress in transforming the post-school institutions has been made since 1994, the system still bears the marks of apartheid. This manifests itself in inequalities, poor quality of education in former black institutions and lingering discrimination (www.che.ac.za).

This Green Paper also aims to align the post-school education and training system with South Africa's overall development agenda, with links to various development strategies such as the New Growth Path, the Industrial Policy Action Plan 2, the Human Resource Development Strategy for South Africa 2010-2030, and South Africa's Ten-Year Innovation Plan. This will allow it to contribute more effectively to the goal of inclusive economic growth and development, and to contribute to fundamentally reduce unemployment and poverty (www.che.ac.za). According to the Green Paper for Post-School Education and Training (2012: 12), historical inequalities need to be addressed if the post-school system is to provide equitable and quality education for the majority of the population. The paper further states that although "opening up" of former whites-only institutions has provided opportunities to at least some from

the previously disadvantaged, poorer students have found themselves having to fit in with a system which was initially designed for students from relatively privileged backgrounds. Young people in rural areas have particular challenges especially where rural areas have fewer infrastructure and facilities.

The empowerment of the previously disadvantaged group through non-sexist, non-racist and democratic policies and practices will ensure fair access to universities and motivate students to succeed. Therefore, an understanding and mutual respect between student-lecturer and student-student must prevail at all times. The Green Paper for Post-School Education and Training outlines that there must be equity in student enrolments and funding especially of students who were previously disadvantaged. This, in essence, is a motivation for students to excel and take advantage of the opportunities available as the previously disadvantaged segment was previously excluded from a good quality education. Statistics reveal that 59% of the first-year students registered in the first-year level were Blacks. Students must take advantage of the opportunities available to them with regard to their higher education.

2.3.3 WORK INTEGRATED LEARNING (WIL): GOOD PRACTICE GUIDE (2011)

According to the Council on Higher Education, Work Integrated Learning (WIL): Good Practice Guide (2011), the report highlights important aspects as to what is WIL and the expectations from the WIL programme. Each university differs with regard to the offerings. Universities have found it necessary and useful to prepare students for the world of work, and to help students to gain practical experience through, for example, work placements or service learning projects. WIL, in various forms, has always been a distinguishing feature of professional education, even if it has not been called 'WIL'. In the South African higher education system, professional education has been strongly influenced by professional councils, many of which contribute to curriculum development and the assessment of students in their respective fields. WIL, in various forms, has always formed an important part of technical, vocational and professional higher education.

As a means of addressing concerns around student development and graduate attributes, there has been interest in fostering university learning that is more situated, participative, and 'real world' oriented. WIL is used as an umbrella term to describe curricular, pedagogic and assessment practices across a range of academic disciplines that integrate formal learning and workplace concerns. The integration of theory and practice in student learning can occur through a range of WIL approaches, apart from formal or informal work placements.

At DUT, The Department of Co-operative Education liaises between the University, employers, professional bodies, professional societies and other relevant organisations, including student bodies. It includes experiential learning/in-service training (IST) that requires the placement of a student in a relevant industry for integrated workplace learning, with the emphasis being on the student learning by doing. This may be mandatory, i.e. the student cannot complete the qualification unless the required time is satisfactorily completed in industry – or it may be voluntary (www.dut.ac.za).

The Department of Construction Management works closely with industry both in the Quantity Surveying and Construction Management fields. It is compulsory that a student fulfils the prescribed amount of time in industry in their second year of study in order to be awarded the qualification at the end of the third year of study. Therefore, students coming out of their first-year of study must be well-motivated to enter the workplace equipped with the necessary knowledge and skills. Students need to approach their first-year of study with a good attitude and an openness to learn and to develop both academically and socially at first-year level.

2.4 DURBAN UNIVERSITY OF TECHNOLOGY

The Councils of the former ML Sultan Technikon and Technikon Natal set the trend in the transformation of higher education by merging in 2002, enabling the Durban Institute of Technology (DIT) to be the first merged institution in the country. The year 2003 was DIT's first full year as a meaningfully merged Institute of Technology. The consistent focus was on strengthening its academic fundamentals, that is, quality teaching, learning and research. While

the institution has a rich history of more than one hundred years as a place of vocational and higher education, it is the fact that DUT is now a university that makes strategic planning process a defining milestone (Strategic Plan 2015-2019). As DUT moves forward, it has to manage research, teaching, learning, funding and transformation of the higher education sector.

2.4.1 VISION OF DUT

The vision of DUT is as follows:

A preferred university for developing leadership in technology and productive citizenship (www.dut.ac.za).

The challenge for any institution is to be a learning university amongst its competitors and this involves motivation at every level. Being a higher education institution and incorporating the core values of the institution, motivating students firstly, will ensure that lecturing staff are enjoying what they do, that is, teaching and disseminating information. A vision is particularly important in that it is a constant reminder for both staff, lecturers and students and acts as a motivation to accomplish the institution's goals. DUT students, lecturers and staff need to work collectively to assist with the transition process of the first-year students, especially in realising the potential of these students.

2.4.2 MISSION OF DUT

The mission statement defines how the university will accomplish its vision and achieve. DUT is to excel through:

- A teaching and learning environment that values and supports the university community;
- Promoting excellence in learning and teaching, technology transfer and applied research;
- External engagement that promotes innovation and entrepreneurship through collaboration and partnership.

Graduates reflect the image of the university, and hence, students need to be aspired holistically, reflecting their academic performance, and this motivation is necessary for a student's accomplishment. In keeping with the mission of the university and the job dynamics of the country, it is paramount that graduates have the necessary knowledge and life skills to set them apart from other university graduates.

The previous Vice-Chancellor and Principal, Prof Bawa, encapsulates the notion of student-centredness in that DUT exists to provide its students with the kind of learning environment that helps them grow intellectually, socially and emotionally. In keeping with the DUT's motto, "LEARN, THINK, DO" a student-centredness workshop (Building Strategy and Alignment) of the Faculty of Engineering was held in April 2013. The university identified the following strategies/strategic areas: people-centredness, student admission, pleasant working environment, safety and security, conducive and safe environment, maintaining effective learning, safe and pleasant institutional environment, eliminating plagiarism and improving throughput (www.dut.ac.za).

According to the DUT Strategic Plan (2015 – 2019), DUT's purpose is about improving the life chances and aspirations of our students and helping them to reach their maximum potential. Taking this statement into account, it is important that aspiring students, especially at first-year level, will ensure that the successive year of study is one of fulfilment. Success can be achieved, through motivation, hard work and dedication from both student and lecturer. For students to be successful at their studies and be proud of DUT, students need to encapsulate the values of the university motivation is of extreme importance especially at first-year level.

2.4.3 GRADUATE ATTRIBUTES OF DUT

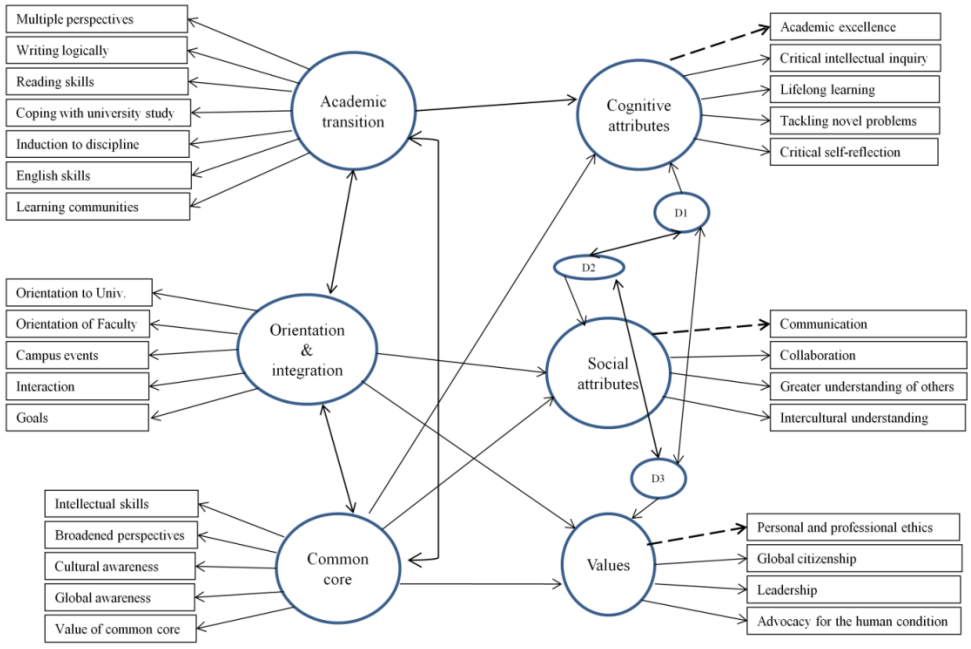
According to Bowden (2000) as cited by Barrie (2006: 215-241), graduate attributes are the qualities, skills and understandings a university agrees its students should develop during their studies. These are qualities that prepare graduates to be good and responsible society members. These qualities are defined and described differently from university to university, but despite

the differences, terms such as "skills" and "attitudes" remain the same. The list of attributes typically includes but is not limited to technical skills, ethical values and intellectual abilities.

With regard to graduate attributes at DUT, its goal is to produce "globally portable citizens, able to engage effectively with knowledge generation and management in increasingly diverse and globalised workplaces" Kift (2010) cited in Sattar and Cooke (2014: 2), stated that DUT's curriculum and pedagogy must be intentionally designed to produce graduates for employment, while simultaneously preparing them for critical citizenship in an emergent and still fragile democracy (General Education Guidelines, 2012).

Graduate attributes will equip graduates with the necessary life and social skills required in the real world when they leave the university. It is therefore necessary and essential that skills be developed at first-year level so that these skills can be carried through to the remaining part of their study. In a multi-cultural and multi-racial construction industry, ethical practices and responsibilities are a necessity for students as they become part of a global society interrelating with the rest of the world.

Figure 2.1 DEVELOPMENT OF GRADUATE ATTRIBUTES



Source: Leung and Kember (2013:234)

Figure 2.1 shows the hypothesised model relating to the first-year experience to development of graduate attributes. It makes mention of factors such as academic transition, orientation and integration, common core, cognitive attributes, social attributes and values which contribute to the holistic development of a graduate.

2.5 GENERAL EDUCATION AND MOTIVATION OF FIRST YEAR STUDENTS

General education is introduced to promote student motivation as they would selected courses aligned to their aptitudes. General education is the foundation of undergraduate education, and the assessment of general education can focus an entire institution on student learning. The main goal of General Education is attaining the foundations for lifelong learning. General Education can be incorporated at different levels, such as in secondary or at tertiary level of one's educational career but emphasis should be placed especially at first-year level at tertiary level. Huber (2002: 26) questions the idea of having focus on promoting general abilities or key qualifications. Should the content be sufficient to prepare young people for life in a so-called knowledge society in a rapidly changing society? According to Huber (2002: 26) the aims of general education should foster critical and systematic thinking, ability to learn, inform and adapt oneself, creativity and flexibility especially in methodology, ability to communicate, to co-operate and work in teams, possess leadership skills and the ability to conclude projects.

The Durban University of Technology (General Education Guidelines 2012); graduates demonstrate evidence, as appropriate to their disciplines, of the following attributes:

- Basic proficiency and competencies, including: information literacy, communication (oral and written), numeracy and technology applications;
- Innovation, including: entrepreneurship and leadership;
- Social responsibility, including: ethics, diversity and critical and engaged citizenry embedded in a local and global context;
- Personal development, including: self-awareness and self-directed and life-long learning;

- Broad understanding of their chosen discipline and/or profession, including an appropriate discipline or professional approach to knowledge production and workplace adaptability.

The aims of General Education (DUT) (2012: 8) are:

- to build a student-centred educational experience embedded in the local context;
- to prepare students for an increasingly diverse and complex globalised work environment;
- to cultivate an engaged and critical citizenry in the context of an emerging and fragile democracy in an ever-changing world order.

It is expected that students at DUT will develop and gain capacity in knowledge, skills and attitudes such as intellectual and practical skills, innovative and creative initiative, understand and appreciate diversity, develop social responsibility, develop personally and develop learning strategies in their chosen fields. As South Africa has low pass rates for mathematics at school, the general education courses can give students a boost for success in a student's first-year study. The General Education Curriculum is at the heart of a student's educational journey. Students are able to apply their general education to real world occasions and to reflect upon its value beyond the university.

2.6 DEPARTMENT OF CONSTRUCTION MANAGEMENT AND QUANTITY SURVEYING (CMQS)

The Department of CMQS is one of several departments within the Faculty of Engineering and the Built Environment. The vision of the Department of CMQS is to be the preferred Centre in Africa for career-orientated study, research and consultancy in Construction Management and Quantity Surveying, and a key stakeholder in the reconstruction and development of our province and country. The Department of CMQS is committed to the following values: pursuit

of excellence, academic and intellectual freedom, creativity and innovation, mutual respect, cooperation and communication, community engagement, accountability and diversity (www.dut.ac.za).

The mission of the Department of Construction Management and Quantity Surveying is to undertake internationally relevant teaching, study, research and consultancy that supports the advancement of its students and the Construction and Quantity Surveying Professions. The department strives to provide a coherent, quality-driven academic course of study which is relevant to the needs of employers in these disciplines and to society at large (www.dut.ac.za). Taking into consideration the relevance of the Department of CMQS mission statement, it is important for lecturing staff to provide motivation to their first-year students in a manner which is beneficial to the department in attaining its goals. Lecturer-student engagement is very important to ensure students' difficulties are resolved, as a positive and well-motivated student will ensure a high success rate, especially at first-year level. Student attitudes towards their studies also contribute to their academic success. Motivation is therefore essential especially at first-year.

Students register in the Department of CMQS with a view to a career in construction and development. In performing their duties, quantity surveyors need to be innovative, ambitious and able to "think on their feet" and willing to take risks. They should also have an aptitude for arithmetic, and the ability to express themselves clearly and competently in the spoken and written word. Quantity surveying is a progressive career for men and women who have the desire to involve themselves in the exciting world of construction and property development. A quantity surveyor is a highly trained, independent professional with outstanding analytical and organisational abilities. Quantity surveyors are construction economists who fulfil varied and comprehensive duties to support cost-effective construction and property development projects. They enjoy the challenges of the dynamic construction industry and they offer essential, expert project management skills. Quantity surveyors are expected to maintain the highest level of professionalism, ensuring fair and accurate finalisation of projects. They should be able to cope with pressure and should have excellent negotiation skills (www.asaqs.co.za). The quantity

surveyor acts as the financial and development consultant to the construction and property development industries, advising clients on the optimal use of funds as well as deriving strategies to maximise human and physical resources.

The Construction Project Manager is responsible for tracking projects and performance until successfully completed. As the project manager is the business leader, one should establish and manage the collaboration and communication processes for the project including the project team, client and consultants (Shaker: 2007). Therefore, students who register in the department need to be highly motivated so that they can meet the demands of the programme and later the construction industry. The Department of CMQS plays a significant role in KwaZulu-Natal with regard to the graduate outputs, therefore the quality of graduates is very important. First-year studies form the basis of a student's tertiary studies, and it is at this level that students need to be motivated. Students who are enthusiastic and are positive about their studies are likely to carry this attitude in the subsequent years of study.

The National Diploma programme offered in the Department of Construction Management and Quantity Surveying at DUT is aimed at providing a higher level, general education in CMQS. After completion of this instructional programme the diplomate should be able to coordinate all the production activities on site or function adequately as a Trainee Quantity Surveyor under the control of a qualified Quantity Surveyor. The programme aims to produce graduates with the management skills and technical knowledge required for a diverse and complex industry.

As the demand within industry for graduates from the department far exceeds the production of graduates, there is a huge demand for the programme. The department boasts an excellent reputation in industry as has been highlighted at many industry liaison meetings. Therefore, it is of paramount importance that the problem be identified and possible solutions as to why students become demotivated during their course, especially during the first-year of study. This situation necessitates the need for this study.

The diversity of students means that no two students are alike and thus they come with different traits and personalities and form an important part of the environment. A mutual respect between lecturer and student must be created to ensure that there is an opportunity for optimal learning. The lecturer's responsibility is to give students strategies to improve learning and help them further their own learning. A conducive and well controlled environment can improve students' active participation and the effectiveness of lecturing.

2.7 SELECTION OF FIRST-YEAR STUDENTS MOTIVATED TO UNDERTAKE CONSTRUCTION MANAGEMENT AND QUANTITY SURVEYING STUDIES

The recruitment and admissions function is a critical aspect of an institution's ability to manage its resources and plans for the future (Upcraft et al. 2005) and from their findings the key attributes of enrolment management are defined. The use of institutional research for positioning in the student marketplace ensures that institutions target and recruit students to fit their particular programme with sound and tested marketing strategies. Devising programmes or strategies to monitor student interests and academic programmes that are in demand would place the institution in a competitive edge over other institutions who have similar programme offerings. It is important to match student demand with curricular offerings that are consistent with the institutional mission, and paying attention to academic, social and institutional factors that can affect student persistence is imperative to obtaining high-calibre students.

As places are limited for the National Diploma offered by the Department of CMQS, a selection process is implemented, based on the following: NSC results, Performance in the Standardised Assessment tests for Access and Placement (SATAP); level of achievement in English and Mathematics, interest in/aptitude for a career in the construction or allied industries professions; employment status or relevant experience (if any). The department may require applicants to undergo an interview to establish aptitude and interest. However, more recently, the SATAP test has been discontinued by the Department of CMQS and students apply via the Central Applications Office (CAO) in Grade 12 and are provisionally accepted based on their grade 11 final results and grade 12 mid-year and trial examination results. However, the final selection is based on the student's final Grade 12 results.

Students register with different knowledge, beliefs and attitudes gained during their life and it influences how they behave. Students register at a higher education institution and gain greater autonomy over what, when and how they study and learn. In this regard, motivation plays a critical role in guiding the direction, intensity, persistence and quality of the learning behaviours in which the students engage (Rodriguez: 2010). According to Noddings (2007: 339), education does not try to produce a uniform product but is designed to develop the various talents and interests of students in terms of fulfilling the institution's mission with developed and educated students. At the undergraduate level of education, we can identify some ideal aims for our graduates – critical thinking, heightened sensibility and self-actualisation (Noddings 2007: 340).

2.8 FACTORS AFFECTING STUDENT MOTIVATION TO ACHIEVE STUDENT SUCCESS

The first-year is an important year for the undergraduate student and the manner in which these students are lectured to plays a critical part in their motivation to succeed. When students develop a positive attitude towards a lecturer, they are likely to enjoy that subject and will be motivated further to do well. This will impact the department positively thereby giving the institution favourable recognition in industry and the community at large. Extending knowledge from the outside world especially in the Department of CMQS will assist students visualise what is being taught through exposure from visual aids, personal experience in industry and models. The idea is to make the lecture exciting and stimulate the interest of the student.

2.8.1 The five key ingredients impacting student motivation according to Williams & Williams (2011) are:

Student: The students' role is crucial as they are considered "raw materials" in the educational cycle. They need to be transformed into an effective labour force taking into consideration that students come from different cultures, social and economic backgrounds, possess different levels of maturity and concentration levels and possess different learning styles. Some are more

motivated than others. According to Kembler, Ho and Hong (2009: 43), students are reluctant to seek assistance with regard to the course material unless they felt the lecturer was approachable. Therefore it is important especially at first-year level that a good student-lecturer relationship to be formed and maintained, based on mutual trust and respect. This encourages students to feel at ease, forming two-way discussions and enabling question and answer sessions. Feedback can also eliminate confusion.

Lecturer: The role of lecturer seems to be shifting from the traditional way of teaching to being facilitators of information in the academic environment. Being the facilitators of knowledge it is important that lecturers are sufficiently motivated to influence the students' internal state of mind in a positive way. Therefore, ongoing engagement between student and lecturer is a key to academic motivation and ultimately the completion of a qualification. When a lecturer becomes enthusiastic about a topic, students will be more inclined to believe that a topic has value for them. According to Noddings (2007: 341), students are motivated to learn if their lecturers listen to their students and plan to work with their expressed needs. Maslow's theory of motivation concentrates on intrinsic motivation, and when students are interested, they want to learn and succeed and the ideal situation would be for lecturers to maintain that intrinsic interest. Close lecturer-student relationship has a positive influence on the motivation of students in their learning and while some academics consider motivation to be a function of the students, lecturers also have a major impact on the level of motivation of their students. (Kember et al. 2009: 43, Trigwell 2001: 66, and Ramsden and others citied in Leibowitz 2009: 256) highlights what qualities lecturers should encompass:

- Be good learners, prepared to learn from their own practise, through reflection;
- Be enthusiastic about their subject;
- Be aware of context, and teach accordingly;
- Facilitate "learning for understanding" by focusing on critical thinking and problem-solving skills;
- Show that they are able to "transform and extend knowledge";

- Present clear goals, apply fair assessment methods and offer "high quality feedback";
- Demonstrate respect for students.

Students come from different social backgrounds and ethnicity. More often there is a mismatch between what students expect after school and what they actually receive from an educational perspective. Hence, lecturers must take this into account when lecturing.

Content: Content of the curriculum should be accurate, timely, relevant and useful to the student. Students should take ownership of their studies and provide input to the subject content which will further motivate them to succeed at what they do. In order to build students' competency, course work or assignments that challenge students' beliefs and involves both creative and critical thinking should be set. Subject content should incorporate the latest technology such as cellular phone applications (apps) to supplement the knowledge of a subject. With regard to curriculum development, the following questions should be taken into account (Bloom et al 1956: 25):

- What educational purposes or objectives should the institution or course seek to attain?
- What learning experiences can be provided that are likely to bring about the attainment of these purposes?
- How can these learning experiences be effectively organised to help provide continuity and sequence for the learner and to help him in integrating what might otherwise appear as isolated learning experiences?
- How can effectiveness of learning experiences be evaluated by the use of test and other systematic evidence-gathering procedures?

According to Brophy (2010: 297), academic departments, if necessary, could modify their curriculum to infuse a multi-cultural perspective and expose students to multimedia content

where the minority groups could identify with aspects being taught. Brophy (2010: 297) further states that bringing speakers or current events to the classroom could be beneficial in bringing the outside world into the class.

Methods/Process: This is the approach in which the content is presented. The two basic approaches for supporting and cultivating motivation are the classroom structure for optimal motivation and engagement for help. The student develops skills that would add value in the work environment. Experiential or in-service training (IST) requires the placement of a student in a relevant industry for integrated workplace learning, with the emphasis being on the student "learning by doing". Stimulating the mind of a student will expand their concentration during a one-hour lecture period and should include ideas, discussions or interactive tools during the lecture.

Environment: The learning environment should be easily accessible, have a good setting and be safe. Students come from different social backgrounds and should be able to foster positive peer interactions which will eventually contribute to positive attitudes. The availability of tutors as a source of further assistance should be available so that a student's performance is enhanced. When students participate in the learning process they become team leaders and role models and work more effectively and efficiently in completing their studies.

A "mixed bag" class consists of students from different cultural and ethnic backgrounds who come with language differences. Students come together with different personalities, some more opinionated than others. Therefore, it is important that lecturers take these factors of multiculturalism into consideration during their lecture delivery as students may not be on the same level as their peers. Some students tend to grasp terms quicker than others due to their exposure and experiences in life and lecturers need to derive innovative and simple ways to transfer knowledge. It is therefore important that lecturers take into consideration a student's cultural and socio-economic background when conducting lectures.

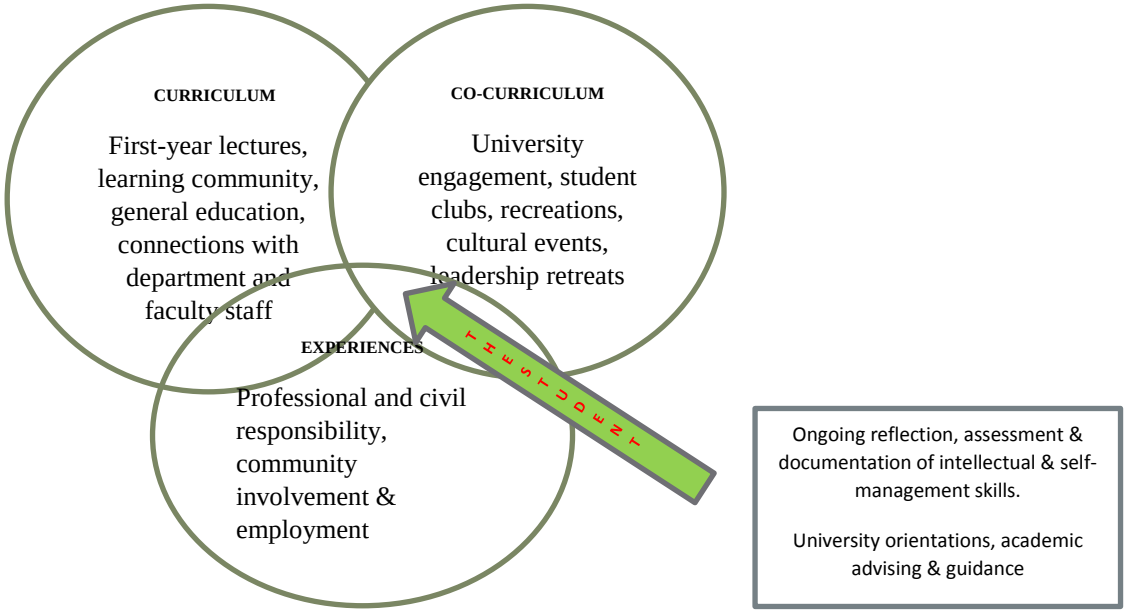
Dorneyi (2001: 150-155) cited in Bahramy and Araghi (2013) also state that the demotivating factors that affect student motivation are lecturer behaviour such as teachers' personalities, commitments, competence, teaching methods, teaching situation and class environment (inadequate school facilities, large class sizes) or frequent change of lecturers, attitudes of group members and course books used in class. Approaches to the way students are lectured and an environment lacking facilities or an infrastructure not conducive to a learning environment may cause students to lose interest in their studies and have a negative impact on their performances, while a positive, well-controlled environment may actually increase the attention of students.

2.9 FIRST-YEAR STUDENT EXPERIENCE (FYSE) AT A HIGHER EDUCATION INSTITUTION

The greatest challenge for first-time students entering university is their ability to adapt to the greater freedom and fulfil the expectations of the academic programme. First-year experience is an important foundation year that can determine a student's success and completion of the course within the prescribed time, which will inevitably result in an increased throughput rate for the department. First-year requires the need for a student to make the transition into tertiary studies an easier one. This will however, depend on the support structure available to the student by the institution to develop holistically.

The figure below highlights some of the issues that could assist students to successfully graduate.

Figure 2.2: Gateway to Graduation



Source: Leibowitz, Van der Merwe, and Van Schalkwyk: 2009

Figure 2.2 makes mention of three important aspects that contribute to student success:

- **Curriculum matters:**

  First-year students who belong to a learning community enable a diverse range of views, opinions and knowledge, which broadens the knowledge of both the student and the instructor.

  General education programmes equip students to deal with a diversity of people with ethnic and cultural differences. This exposure can assist students to blend easily in the workplace.

Unfamiliarity with departmental and institutional rules can lead to frustration and disinterest in subjects and the programmes. Relationships with the department and the faculty staff is important to a first-year student to increase motivation.

General education: Students gain significantly through general education courses which prepare students for the real world. Skills gained through these courses offered in the programme help students to evaluate, deal with and find solutions in the real world, taking into account the cultural and religious perspectives of people.

Connections with the department and faculty: It is important that good student/lecturer/faculty relationships be developed to ensure that the student is well aware of departmental and institution rules and to adhere to them. This also contributes to a positive transition of a first-year student.

Institution specific requirements: Some students find transition from school to university a difficult one. It is important that students familiarise themselves with the institution rules and regulations during first-year so that they can make the correct decisions at all times.

- **Co-curriculum:**

University engagement: This involves both the academic and non-academic aspect of a student's academic life. The institution's role in providing a conducive learning environment makes learning a more meaningful experience. However, students must make every effort to make use of the institution's resources available to them.

Student clubs, recreations, cultural events and leadership retreats: Students have the option of engaging with various religious and cultural clubs on campus. Social interaction provides first-year students with the opportunity to foster new relationships.

Leadership retreats help students develop skills that can assist them throughout their study. Interaction also enables students to learn from each other.

- **Experiences:**

  Professional and civil responsibility: It is the duty of every student to develop into a responsible citizen in a democratic country. Community can, and does, mean anything from a university's own staff and students and a community of practice to civic organisations, schools, townships, citizens at large and "the people" in general (CHE: 2010:2). Community engagement programmes are an important component of a programme to develop and promote social responsibility through community engagement programmes. Community involvement also gets students involved in impoverished areas and make a difference in the lives of the poor.

The first-year university experience is the most significant time in a student's higher education experience and hence the first-year curriculum must be addressed with good lecturing styles that incorporate student support so that students can be equipped with the necessary skills to succeed. The transition from school to first-year to subsequent years will definitely make it easier for the student, as well as making a student a responsible person in industry and becoming a better citizen in society.

Figure 2.3 illustrates the importance of the curriculum and student experience for the success of a first-year student. The curriculum should be interesting, with the student engaged in many cultural and recreational activities. Together with various institutional practices, the student should succeed and graduate within the minimum permitted time. As stated by Leibowitz, Van der Merwe & Van Schalkwyk (2009), the student-learning experience can be marred by failure, loss of confidence and perhaps disillusionment and thus can create negative implications for the social, economic, and political well-being of the country

First time students enter their tertiary studies with preconceived ideas that may influence their decisions about university life. According to Tinto (1993) cited in Nel et al. (2013), the extent to which students are able to integrate academically and socially into a higher education context is determined, in part, by their preconceived attributes such as prior learning and teaching experience, family background, skills and abilities and aspirations. Universities therefore have an obligation to ensure that better-prepared students are enrolled for increased success rate. HEIs need to understand that students' needs are met and their commitment to the institution is a positive one. A good relationship needs to be formed by department and student as this would increase the perception of the university.

The first-year experience begins during the application process and it is critical that the proper recruitment process and department's selection process and criteria be adhered to. Results conducted from an investigation conducted by Nel et al. (2013) regarding enrolment trends of first-year applicants, showed that the following factors played a pivotal role:

- Financial resources played an important role with regard to affordability of higher education;
- School performance - universities should liaise with schools to improve school performance thereby making the teaching and learning experience at universities a fulfilling one;
- Subject choices should be addressed at an early stage in a student's life as a means for academic success. The apartheid system created inequalities in the education system especially for students who came from rural areas where they were not exposed to adequate resources and had unqualified teachers.

Efforts to attract, admit and retain a diverse student body should continue, primarily because students from diverse experiences, ethnicities and backgrounds are valuable in themselves and because these students need others like themselves to feel comfortable and to help them shape their own identities (Beyer, Gillmore and Fischer 2007: 140). Beyer et al. (2007) further

emphasise that diversity of students from multicultural backgrounds who come with different perspectives and experience make the learning experience richer. This obviously requires students to be more acceptable to others' views and opinions.

The development of a student is vital and key for his/her advancement in the course and therefore, extra attention should be given to these students. In many institutions the curriculum remains unchanged and the teaching methods have not changed with the advancement of technology, bearing in mind that students come from diverse cultural backgrounds that leaves some of them unprepared for tertiary education (Gravett and Geyser 2004: 78).

For students to be successful, they need to be developed both academically and emotionally in order to cope with the challenges of university life. The services of some academic departments at HEIs are there to support the students in a holistic manner, thereby aiding students to cope with the challenges of first-year students in a tertiary environment. Increasingly, HEIs are realising that higher education could be regarded as a business-like service industry and they are beginning to focus more on meeting or exceeding the needs of their students (Gruber, Fub, Voss and Glaser-Zikuba 2010: 105-119).

2.10 STUDENT MOTIVATION

According to Ryan and Deci (2000: 54), to be motivated means to be moved to do something. A person who feels no inspiration to do or act is characterised as unmotivated. Motivation is used to explain behaviour and a person's direction to actions, desires and needs. People can be generalised as having not only different amounts of motivation, but different kinds of motivation. Koseoglu (2013:418) described learning as a process that entails many issues. The most potent of these issues is motivation, which may be defined as an internal state that arouses, directs and maintains behavior.

Intrinsic and extrinsic motivation are two major categories with which college students are engaged in the process of learning new knowledge and skills. Both types of motivation may not have the exact same effect on student learning and performance at the college level (Omrod 2008) as cited in Lei (2010: 159). Different types of motivation are described as being rather extrinsic (those that arise from outside of the individual and often involve rewards such as recognition or praise), and intrinsic motivation, which are those that arise from within the individual (personal gratification, such as solving a problem) (http://psychology.about.com).

According to Biggs and Tang (2011:37), the key to motivation is to ensure that academic activities are meaningful and worthwhile. Problem-based learning where real-life problems become the context in which students learn academic content and professional skills. Using social motivation can be a strategy used by lecturers to inspire their students and perceive value in what they are doing which can positively impact students. Lecturers can also create a positive learning environment through personal and professional interactions to assist them establish how students feel about the learning process. Thereafter, lecturers can strategise how to create a learning environment to increase students' motivation.

Motivation is also affected by the strength of one's belief that the amount of effort a person puts in can affect one's motivation. Blerkom (2006: 16) states that if someone attributes their successes and their failures to their level of effort, they are more likely to be motivated to work harder to complete a task. Blerkom (2006: 16) further states that study skills experts believe that students need to work hard at the beginning of the semester so that they can see that the amount of effort they put towards their academic tasks does have a positive effect on their performance. Early success is very motivating to new university students. The eagerness to pass can have a direct impact on students' motivation positively.

2.10.1 INTRINSIC MOTIVATION

Intrinsic motivation is related to 'psychological' rewards such as the opportunity to use one's ability, a sense of challenge and achievement, receiving appreciation, positive recognition and

being treated in a caring and considerate manner. Intrinsic motivation comes from within and students feel a sense of responsibility and enjoy their tasks as they have a sense of personal growth when they are praised for tasks completed. A task is performed to attain satisfaction of doing a certain task because we want to. Goals also influence motivation. Students who foster relationships with peers, feel they are competent to reach their goals and those who work collaboratively with their peers develop their sense of competence intrinsically, which results in increased student motivation.

According to Williams and Stock (2004: 2), intrinsic motivation seems to have a practical advantage over extrinsic motivation. Intrinsic motivation is not dependent on the lecturer's presence, guidance or encouragement because trying to keep students motivated in class is time and energy consuming. Williams and Stock (2012: 2) further state that extrinsically motivated students may only pay attention to certain tasks to improve their marks. Intrinsically motivated students focus on the subject matter and the knowledge being gained rather than the rewards.

Intrinsic and extrinsic motivation facilitates learning and achievement. Learning and intrinsic motivation complement each other. When students develop new skills and develop growth, they feel more successful and their intrinsic desire to learn increases. Intrinsically motivate students prefer challenging tasks which require them to work independently so that they can themselves take responsibility for their own work. Lecturers can develop learning activities that are enjoyed by students to motivate them intrinsically.

According to Kusurkar, Croiset, and Olle (2011: 978), the following suggestions are made with regard to stimulating intrinsic motivation amongst students:

- Identify what students want out of the lecture and structure the lesson around those needs. This stimulates positive interest in the subject;
- Have students' internal states guide their behaviour and promote interest in students, thereby promoting an internally motivated and interested student;

- Encourage active participation in making the learning process more autonomous, thereby encouraging feedback and increasing relatedness in the subject;
- Encourage students to accept more responsibility for their learning by giving students topics to work on for the next lesson, thereby transferring some responsibility to students;
- Lecturers should provide structured guidance by always being the facilitator but allowing students to bring their expertise into the subject being discussed;
- Lecturers should provide optimal challenges during their lectures by providing students with topics and encouraging group work;
- Always provide timely, positive and constructive feedback to students to identify the gaps between what is lectured and what the students understand;
- Emotional support should be available and positive interaction should be encouraged; students should feel safe to ask questions;
- The lecturer should acknowledge student's expressions of a topic or method of teaching which they are not satisfied with. If the lecturers refuses to accept negative feelings from students, the students are likely to lose interest in further lectures;
- The ability to communicate value in uninteresting activities is vital for lecturers so that students do not become demotivated. Make students part of the teaching-learning activity;
- Direct with "can, may, could" instead of "must, need, should", encouraging students to study by not being too authoritative.

Motivation directs a student's desire to attain his/her goals and hence this leads to an increased effort to accomplish this. Intrinsically motivated students have an inherent desire to complete tasks and feel satisfaction from this. Lecturers' approachability towards their students plays a pivotal role in shaping the manner in which these first-year students approach their studies. This has a two-fold effect in that the student and lecturer have a responsibility towards a common goal: that is student success.

2.10.2 EXTRINSIC MOTIVATION

Ryan and Deci (2000: 54), describe extrinsic motivation as something that leads to a separable outcome such as doing an activity for the enjoyment of it rather than its value. In the lecture room context, the concept of student motivation is used to explain the degree in which students invest attention and effort in various pursuits, which may or may not be the ones desired by their lecturers. Extrinsic motivators include parental expectations, expectations of other trusted role models, earning potential. It is involved with performing some sort of action or task to attain a reward because we have to.

Extrinsically motivated people are driven by external factors, such as the need for tangible rewards as opposed to the internal drivers of intrinsic motivation. They are more interested in their status. Rewards can decrease internal motivation as students work to gain the reward rather than because they like doing the work or believe it is a good thing to do.

Extrinsic motivation occurs when there are factors external to the individual and unrelated to the tasks that they are performing, for example, money and rewards. Extrinsic motivation is related to tangible rewards such as salary and fringe benefits, security, promotion, contract of service, the work environment and conditions of work. According to Ryan and Deci (2000: 54), understanding these different types of extrinsic motivation, is an important issue for educators who cannot always rely on intrinsic motivation to foster learning.

Many of the tasks that educators want their students to perform are not inherently interesting or enjoyable. Knowing how to promote more active forms of extrinsic motivation becomes an essential strategy for successful teaching. Learning theories allow lecturers to better understand the process of learning. Together with the modern-day technology and aids, these theories have made an impact on classroom activities.

Extrinsic rewards have been shown to be effective when used with students who were not intrinsically motivated, but only when rewards were given initially followed by increasingly longer periods of time in which no rewards were given, to reinforce effort and persistence. Extrinsic rewards must be given immediately following the success, as people in general and middle school students in particular are not motivated by rewards that are too far in the future. Researchers have also found that extrinsic praise or positive reinforcement of behaviours such as effort or persistence rather than fixed traits such as intelligence can increase behaviours associated with motivation.

People have used external rewards at one time or another because it can result in short-term improvement in student behavior. However, if our goal is to build life-long, independent learners, it is important to be aware of the dangers of extrinsic rewards and punishments, and to use them sparingly and carefully as a means to build intrinsic motivation in only those individual students who may need it. Indeed, instilling intrinsic motivation is a longer process that may use some external rewards but really focuses on self-improvement and helps students to shift from doing something for a reward or for a teacher or parent to doing something for themselves. Intrinsic motivation can be long-lasting and self-sustaining. Efforts to build this kind of motivation should be fostered by lecturers to promote student learning. Students who have high self-efficacy for a particular task believe that they have the necessary skills and knowledge to do so.

2.10.3 MOTIVATIONAL THEORIES

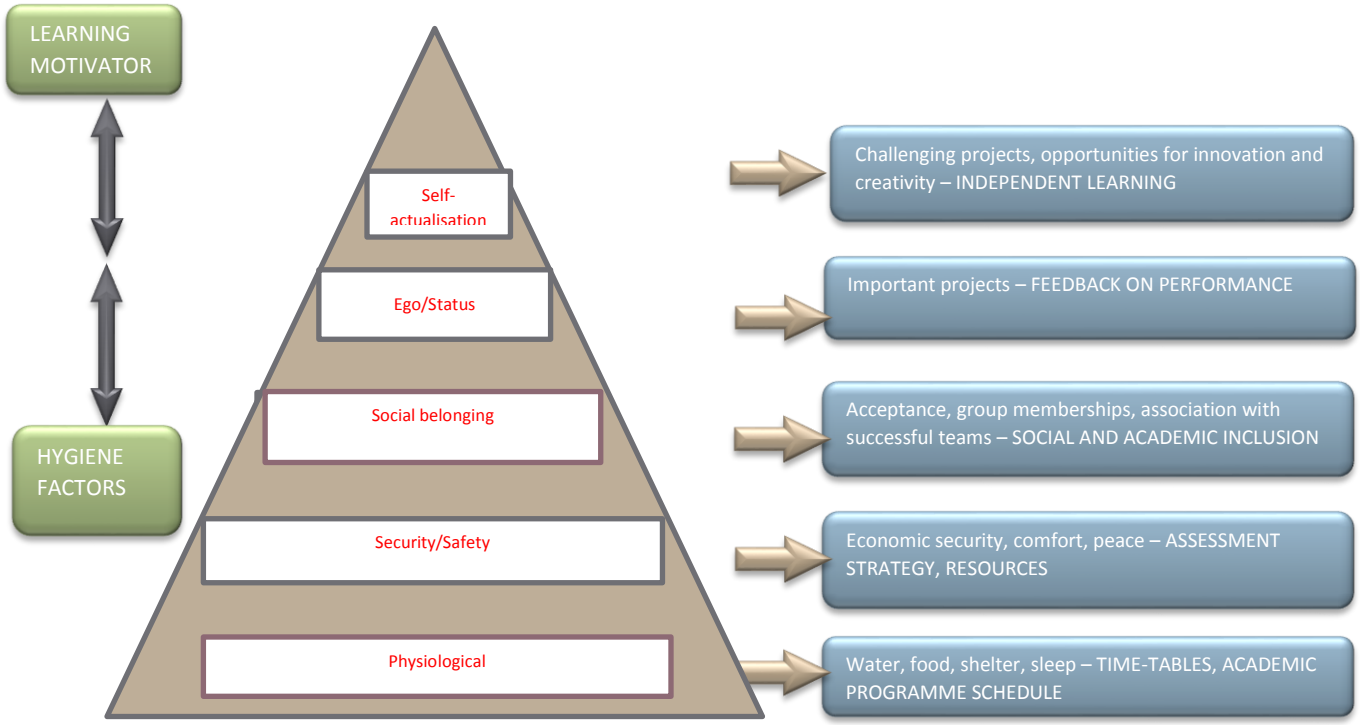
In attempting to explain and predict behaviour, scientists and philosophers often develop theories which describe and explain behaviours that we see (Gravetter et al. 2012), and further explain that constructs can be influenced by external stimuli and, in turn can influence external behaviours. It is necessary to have a good understanding of what motivates students to decide that they wish to apply to become a university student. The nature of their motivation and degree of determination to enter university will affect their commitment to study prior to university. The form of motivation to enroll for a degree and the intensity of it will influence their dedication and approach towards their studies (Kember, Ho and Hong: 2010: 263).

2.10.3.1 ABRAHAM MASLOW'S THEORY OF HUMAN MOTIVATION

Motivation of students at university:

People are motivated by their individual needs to address certain concerns which can be ranked in order. Maslow has proposed that motivation is hierarchical and the lower-order needs need to be fulfilled before attaining the higher-order needs.

FIGURE 2.3 MASLOW'S HIERARCHY OF NEEDS MODEL



Adapted from: Prescott and Simpson (2004:247)

Abraham Maslow's hierarchy of human needs is one of the most discussed theories of motivation. Maslow's theory is based on the principle that:

- Human beings have wants and needs which impact on their behaviour. Only unsatisfied needs influence behaviour.
- Needs are arranged from the basic to the most complex and a person goes from one level to the other only when the lower-level need is satisfied.

The first four needs are called deficiency needs, because they come from things people lack. These needs can be met only by external sources, by the environment, people or things going on around them.

Physiological needs

Individuals are motivated to satisfy needs that ensure our physical survival. Needs in this group include food, water, air, shelter and clothing. Most people have satisfied their physiological needs allowing them to concentrate on higher level needs. For some though, physiological needs are dominant and are the biggest needs in their lives. For a student, the correct lecture room temperatures and toilet breaks if the lecture is for a few hours, should promote a sense of belonging and create a higher level of concentration.

Safety needs

Safety and security needs include order, stability, routine, familiarity, control over one's life and environment, certainty and health. Well-planned lectures carried out in an orderly and professional manner should instil a student's confidence in a particular programme. Being a first-year student brings all sorts of anxieties and stresses, so having a well-controlled classroom behaviour makes for a relaxed student. Emergency procedures should be planned and discussed and the attitude of a lecturer should be pleasant and non-threatening.

Social needs

These needs include love, affection, belonging and acceptance. People look for these needs in relationships with other people and are motivated for these needs by the love from their families. Lecturers should be empathetic, considerate and interested in their students and have a positive attitude. Positive comments should give students a sense of belonging and lecturers should be available for consultation when a student encounters problems. Student-centred relationships

include class meetings and discussions and peer tutoring, and a sense of mutual trust amongst students should always be fostered.

Esteem needs

All people have a need for a stable, firmly based, usually high evaluation of themselves and for the esteem of others. These needs may therefore be classified into two subsidiary sets. These are, first, the desire for strength, achievement, adequacy, mastery of competence, confidence, independence and freedom. Second, we have what we call the desire for reputation or prestige (defining it as respect from other people), status, fame, glory, dominance, importance, recognition, dignity or appreciation.

Scaffolding should be encouraged by the lecturer to ensure student success. Lessons should be planned with the needs and abilities of students taken into consideration and this should be prepared in conjunction with the learning outcomes of a subject. Lecturers should be alert when students find a particular section difficult and interventions should take place immediately. A lecture room environment where students show mutual respect should be developed.

Need for self-actualisation/fulfilment

This level of hierarchy is concentrated on an individual being able to reach their full potential as a human being. Once someone has satisfied the first four levels of needs then they have the ability to concentrate on functioning to their highest potential. The first four needs are called deficiency needs, because they come from things we are lacking. These needs can be met only by external sources, by the environment, people or things going on around us.

Self-actualisation is a growth need. This does not just address what we are lacking in our lives, but it gives us room to grow and develop as individuals. This need is always intrinsically motivated, because we do it out of pure enjoyment and desire to grow. Parents, teachers, educators and managers struggle with how to motivate those whom they mentor and individuals

struggle to persist with the tasks of life and work. People are also often moved by external factors such as reward systems, grades, evaluations, or the opinions they fear others might have of them. People are motivated from within, by interests, curiosity, care or abiding values. These intrinsic motivations are not necessarily externally rewarded or supported; they can sustain passions, creativity, and sustained efforts.

With regard to understanding this model in relation to an academic environment, unfortunately the physiological needs of the students cannot be totally met, as these are basic necessities, such a food and clothing. There are however, students who have been funded financially. Based on Maslow's hierarchy, students cannot study if they are hungry, so students may not be able to concentrate if they are hungry. Rules and procedures define what a student's programme would be like for the day and students will feel that they have control over their day. The Department needs to make students feel safe within the institution. The belonging needs can be fulfilled by recognizing students as adults and this can be enforced by lecturers in a positive way. This can boost a student's self-esteem especially during the transition from school to university life. In fulfilling all the different levels of the hierarchy, this will make for happier and motivated students.

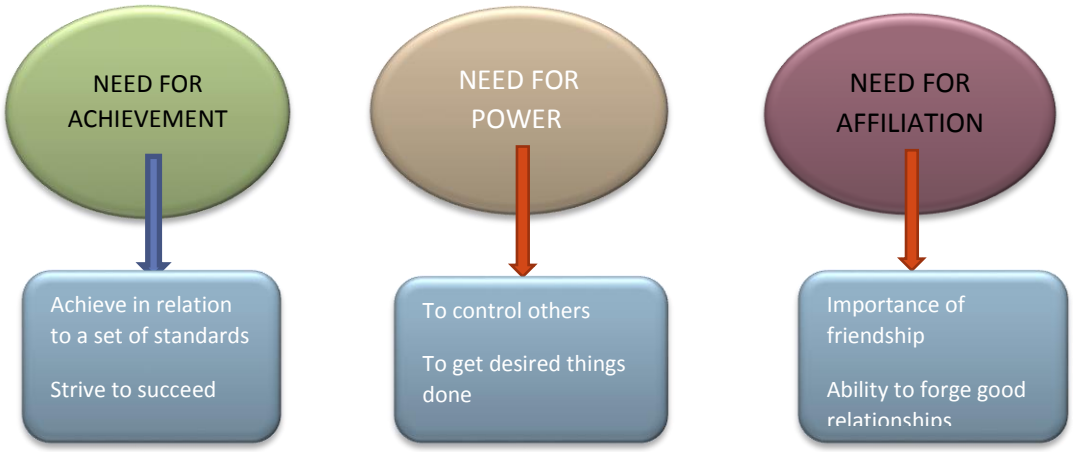
It is important for higher education institutions to have conditions where students satisfy basic needs for food and safety if they are missing in their lives. It is also important for lecturers to lecture in ways that help students satisfy needs such as self-realisation/fulfilment, self-determination, to have influence, and to experience achievement and affiliation (Arends et al., 2010: 62).

2.10.3.2 McCLELLAND'S MOTIVATIONAL THEORY (THEORY OF NEEDS/ACHIEVEMENT MOTIVATIONAL THEORY)

McClelland's theory can help lecturers to identify the dominant motivators of students in class. Lecturers can then use this information to influence how they set goals and provide feedback, and how to motivate and reward students. Rewards can be by means of certificates for the

highest scoring test or the best assessment, thereby increasing the motivation of students. This According to McClelland, the need for achievement, power and affiliation could motivate individuals and groups.

FIGURE 2.4 McCLELLAND'S MOTIVATIONAL THEORY



Source: Adapted from www.mindtools.com (2014:2)

The need for students to achieve through competition with fellow students motivates students to perform well. The desire to attain success and succeed at tasks also contributes to student motivation. Students' control of a situation or challenge in class influences other students to do well, whereby they feel a sense of authority over the situation and fellow students. Affiliation involves the need to maintain positive relationships amongst a group or class members. This also necessitates the need to avoid conflict. Students develop a high degree of motivation their need for achievement, power and affiliation is strong. The balance of academic achievement and socialising contribute to an increased level of motivation. According to Todd and Hall (2012: 25-27), the need for achievement describes an individual's need to excel with respect to some established standards. Todd et al. (2012) further states that the need for power denotes individuals' desires to be influential. Those high in power needs prefer being in competitive status-driven situations. The need for affiliation reflects the desire to have close relations with others which assists in team activities where co-operation and interdependence is important.

The implications of McClelland's theory:

Achievement: students motivated by this theory need challenging but not with impossible projects because they thrive on overcoming difficult tasks and assignments;

Affiliation: students motivated by affiliation work best in the group situation and do not like uncertainty and taking risks. Lectures that provide feedback to students in this category require balanced feedback as they do not like to stand out in a particular group;

Power: students with a high need for power work best when they are in charge. They enjoy competitive tasks and giving direct feedback will help these students stay motivated.

The concept of McClelland's theory does include the motivational level of students and contributes to the achievement level of students. Motivational strategies must be devised by the Department of CMQS to ensure that the pass rate increases. Strategies must be put in place to improve the overall performance in the programme, especially bottleneck subjects.

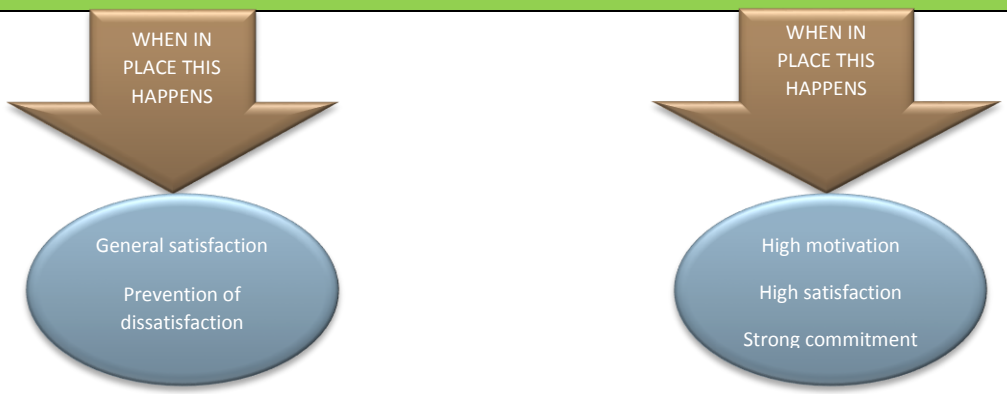
2.10.3.3 HERZBERG'S TWO-FACTOR THEORY

In 1959 Frederick Herzberg developed the Two-Factor theory of motivation. His research showed that certain factors were the true motivators or satisfiers. Hygiene factors, in contrast, created dissatisfaction if they were absent or inadequate. Dissatisfaction could be prevented by improvements in hygiene factors but these improvements would not alone provide motivation.

FIGURE 2.5 HERZBERG'S TWO-FACTOR THEORY

Herzberg argued that to truly motivate students, an institution needs to create conditions that make students feel fulfilled in their learning environment. Herzberg distinguished between motivators (challenging work, recognition, responsibility) which give positive satisfaction and hygiene factors/dissatisfiers (status, security, interpersonal relations, benefits) that do not motivate if present, but, if absent result in demotivation.

HYGIENE FACTORS	MOTIVATOR FACTORS
University policies and administration	Sense of personal achievements example, scoring on tests and advancement
Good interpersonal relationship amongst peers and lecturer	Status
Quality of lecturing	Recognition
Physical environment	Challenging/stimulating work/growth



Source: Adapted from http: //www.pininterest.com (2015: 4)

Numerous educational reforms in different parts of the world strongly emphasise the importance of student-centred education and lifelong self-learning to the development of multiple intelligent citizens and a learning society to meet the challenges of rapid changes in the new millennium. For self-learning to take place, the learner has to be motivated to initiate the learning task and engage in commitment, or motivation (Garrison, 1997; Meece, 1994; Schunk, 1998). This refers to the learner's sustained motivation and perseverance in the engagement in learning in spite of difficulties and setbacks.

Motivational factors yield positive satisfaction and are called satisfiers. These factors include recognition, sense of achievement, growth, responsibility and meaningfulness of work. Motivators are typically intrinsic factors and they are part of the students' learning and impact the student. The hygiene factors are extrinsic factors and are under the control of the lecturer. De Shield Jr (2005: 132) further explains that student performance and classes are directly related to the outcome from a university experience and may be considered similar to hygiene factors or satisfiers, i.e. growth and achievement. On the other hand, the performance of lecturers may be considered similar to hygiene factors or dissatisfiers that may cause dissatisfaction. Maslow's theory was based on the concept of human needs and their satisfaction. Hertzberg's theory is based on the use of motivators which include achievement, recognition and opportunity for growth.

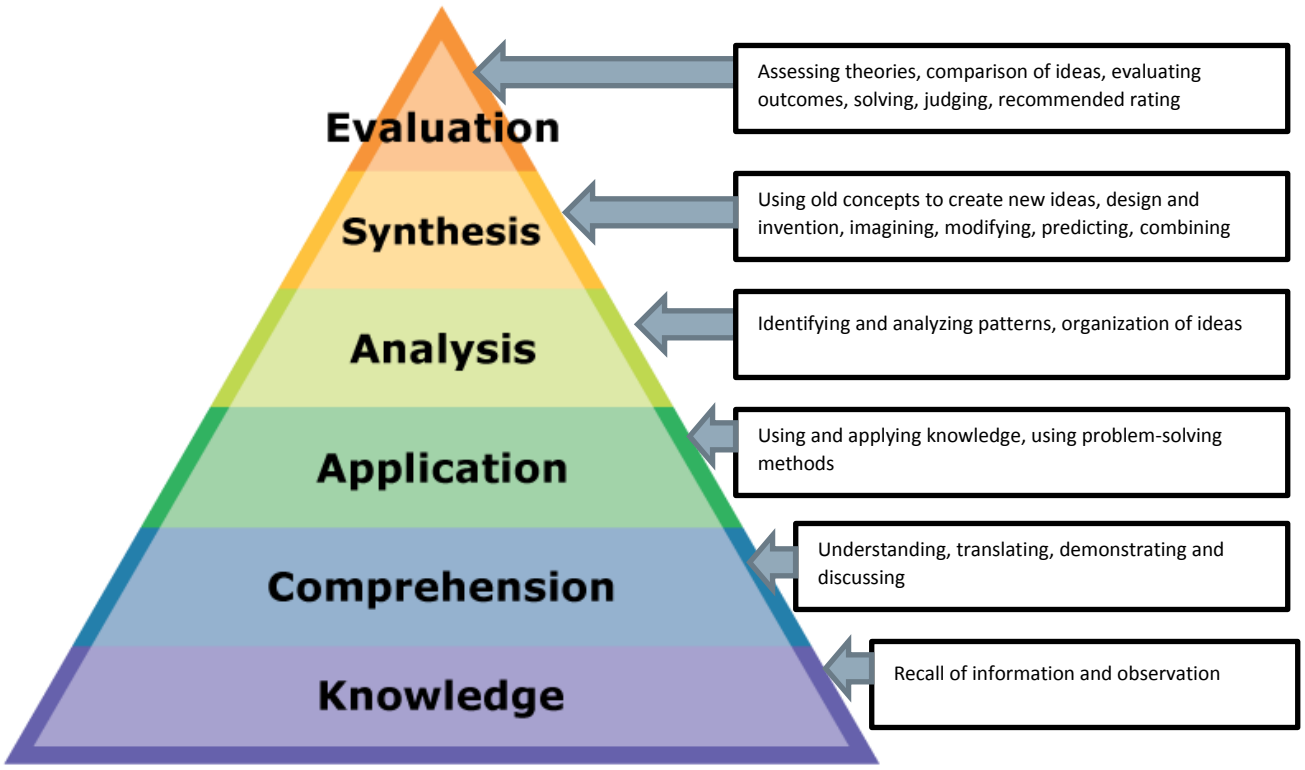
When applying this theory to the Department of CMQS, the admittance of first-year students to the Department and the enrolment processes are extremely important right through to graduation. Student satisfaction is of utmost importance and service delivery as well. Therefore, the absence of hygiene factors can affect students' attitudes towards their studies and the satisfiers could affect the manner in which students relate to their studies. Thus, student satisfaction will influence the students' intentions to stay at or leave the department if students are not really happy with the service received from the academic department.

2.11 TEACHING

Teaching methods should shift the focus of activity from the teacher to the learners. These methods include active learning, in which students solve problems, answer questions, formulate questions of their own, discuss, explain, debate, or brainstorm during class; cooperative learning, in which students work in teams on problems and projects under conditions that assure both positive interdependence and individual accountability; and inductive teaching and learning, in which students are first presented with challenges (questions or problems) and learn the course material in the context of addressing the challenges. Inductive methods include inquiry-based learning, case-based instruction, problem-based learning, project-based learning, discovery learning, and just-in-time teaching.

2.11.1 BLOOM'S TAXONOMY AND ITS RELEVANCE TO STUDENT MOTIVATION

FIGURE 2.6 BLOOM'S TAXONOMY



Adapted from**:** https://juliace.wordpress.com (2011: 1**)**

Bloom's taxonomy can be used extensively in the lecture room by providing a framework for critical thinking. Lecturers can be more student-centred than lecturer-centred by getting students actively involved in the learning process. When students get involved, they feel a sense of belonging and develop interest and this results in an increase in student motivation. Bloom recognised that what was important in education was not that students should be compared, but they should be assisted to achieve their educational goals and make learning a pleasant and successful one.

Bloom's taxonomy is a multi-tiered model of classifying thinking according to six cognitive levels of complexity and was primarily created for academic institutions. Bloom's Taxonomy in its various forms represents the process of learning, and it is relevant to all types of learning. The taxonomy is intended to provide a classification of the goals of our educational system and is expected to be of general assistance to professionals, educators, administrators and researchers who deal with the development of curricular and evaluation methods and procedures (Bloom, Engelhart, Furst, Hill and Krathwohl 1956: 1). The taxonomy was developed to help instructors in assessing students' performance in a given course. The taxonomy supports the need to differentiate the curriculum so that all students can participate in the lesson. The taxonomy was designed to assist lecturers to define learning objectives to meet students' needs. Students generally develop a better attitude to their work if they enjoy and understand what is being taught to them.

What do students do when they understand a particular concept and what do they do when they do not understand a concept being taught? Through reference to the taxonomy, educators can find a concise method for the analysis of outcomes in the area of remembering, thinking and problem-solving. According to Bloom et al. (1956: 2-31), the purpose in constructing the taxonomy of educational objectives is to foster communication amongst learners and educators.

Educators encourage their students to obtain the highest level of thoughts. The higher-order thinking that Bloom addresses is also fundemental to the development of managerial skills.

Antanassiou, McNett and Harvey (2003: 534) state that the use of the taxonomy has made their lessons more student-centred as it has assisted their students by becoming more aware and increased their development and caused less frustration as to what students are expected to know. Antanassiou et al. (2003: 534) supports students' critical development and higher order thinking and uses the taxonomy as a scaffolding device that provides support to allow students to develop themselves, thereby developing their own level of work.

The base of the pyramid is the foundation of all cognition, knowledge. Each ascending level of the pyramid depends on the one below it. Knowledge and comprehension are often referred to as lower-order thinking skills. The skills above them are termed higher-order or critical thinking skills. Bloom's ideas have provided a basis to be used by academics, educational institutions, teacher and training institutions for the preparation of learning evaluation materials. This learning model places emphasis on the following:

Before anyone can understand a concept, it needs to be remembered. Test practices, quizzes, practice tests and descriptive diagrams are applicable in this level. Students can recall the information they have been exposed to. Discussions, writing and presentations done by students will enable students to explain what they have learned. Before we can apply the concept we must understand **i**t. Students can explain what they have learned by creating flowcharts and concept diagrams. Before we analyse it we must be able to apply it. Students can apply the ideas that they have learned by creating posters and conference posters. Before we can evaluate its impact we must have analysed it and students can use their knowledge to break complex problems into parts for it to be meaningful. Before we can create we must have remembered, understood, applied, analysed**,** and evaluated. Students can use their knowledge to make value judgements in society and relevant situations. Synthesising/evaluating allows students to bring multiple ideas together to do something new or to include ideas from acknowledged sources.

BLOOM'S REVISED TAXONOMY

An updated version of Bloom's Taxonomy was published in 1999 which takes into account a broader range of factors that have impacted on teaching and learning. This version differentiates between "knowing what", the content of thinking, and "knowing how", the procedures used in solving problems. The "knowing what" has four categories, namely, factual, conceptual, procedural and metacognitive.

Factual information includes information about specific details; conceptual knowledge consists of systems of information; procedural knowledge includes methods as well as knowledge about when to use these procedures, while metacognitive knowledge consists of information about how to manipulate these processes effectively. According to Krathwohl (2002: 212-218), Bloom also saw the original Taxonomy as more than a measurement tool as it could serve as a common language:

- ► To facilitate communication amongst people, subject content matter and grade levels;
- ► Forms basis for curriculum development;
- ► Means of developing educational objectives, activities and assessments in a curriculum;
- ► Developing a range of educational possibilities against what is expected.

The greatest strength in Blooms Taxonomy is that the structure is usable by educators who can keep a list of questions relating to the various levels. This encourages high level thinking amongst students and learning activities can be built upon those levels.

Higher-level cognitive skills require teaching techniques to master a particular level. Lecturers can decide the appropriate level where students are expected to master the content and then use appropriate teaching methods.

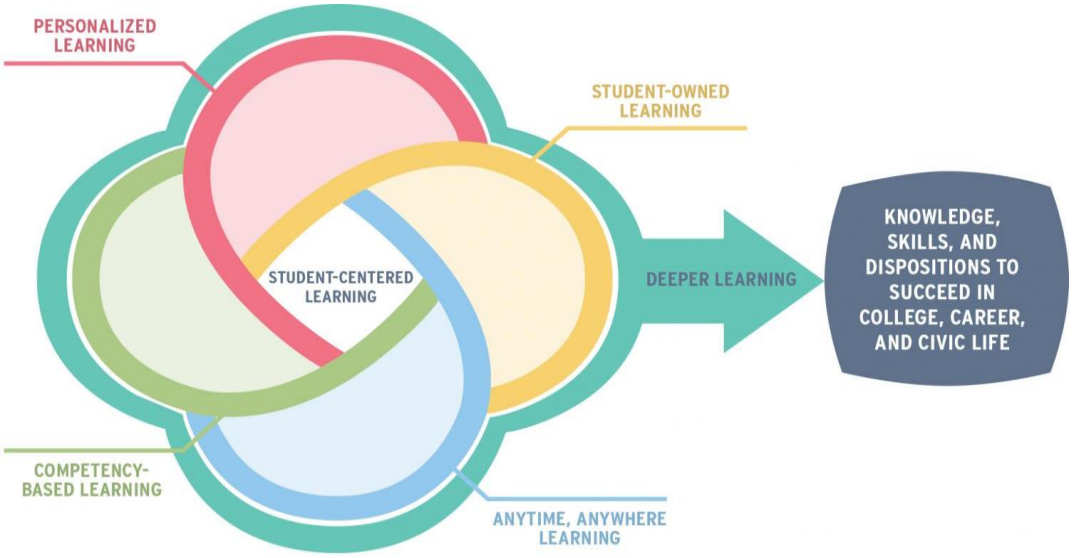
Starting at the lower-end level – graphic explanations can make it simpler for students to understand. Understanding concepts by means of discussions and explanations by students would be beneficial. Application of case studies to assist the student for instructional purposes would be advantageous. Analysing – breaking down problems and complex issues. Evaluating – students are given the chance by means of assignment and projects to evaluate problems and situations. Synthesizing – students come up with new ideas from acknowledged sources (but are their own work) by submitting assignments or projects.

Within different classes, lecturers can ascertain how much students know already on a subject and then reorganise teaching materials (http: //blogs.unb.ca). Athannassiou, McNett and Harvey (2003: 533) state that Bloom's original Taxonomy has a six-level classification system where students' behaviour is observed to determine their level of achievement. Athannassiou et al. (2003: 533) suggest that the use of the Taxonomy has helped lectures become more student-centred and students become more cognitively developed and less frustrated. A need to develop students' critical thinking, to increase lecturer-student communication and building students' responsibility into the courses was necessary. Atthannassiou et al. (2003: 533), being academics used Taxonomy in two ways, namely, to assist students appreciate the importance of course work and also used the content as a self-assessment tool and; used it as a feedback mechanism to understand the demands of tertiary education.

2.11.2 STUDENT CENTREDNESS

Student centredness is a central concept in the literature and practice associated with the first-year study in higher education according to Taylor (2013: 3). Recently, student centredness has been questioned in many levels at universities to ascertain whether traditional lecturing methods such as talk and chalk by lecturers, or rather including students as the focal point of the lesson enable a better transition into their tertiary studies. Chickering and Gamson (1987) as cited in Cullen and Harris (2009: 115-125), provide guidelines for an enhanced undergraduate teaching and the goal of achieving greater student-centredness as having an increase in contact between lecturer and student, developing co-operation amongst students, employing active learning strategies and providing prompt feedback.

FIGURE 2.7: STUDENT-CENTRED LEARNING



Source: www.studentsatthecenter.org

The students at the centre framework include four research-backed tenets, or principles, for powerful teaching and learning, meant to ensure that all students develop the sort of high-level knowledge and skills they need to succeed in college, careers, and civic life. Drawn from the mind/brain sciences, learning theory, and research on youth development, these tenets are overlapping and complementary (www.studentcenterhub.org). In combination, and when guided by a coherent and rigorous set of educational goals, they provide a strong foundation for the pursuit of deeper learning.

Student-centred methods have repeatedly been shown to be superior to the traditional teacher-centred approach to instruction, a conclusion that applies whether the assessed outcome is short-term mastery, long-term retention, or depth of understanding of course material, acquisition of critical thinking or creative problem-solving skills, formation of positive attitudes toward the subject being taught, or level of confidence in knowledge or skills methods of teaching that shift the focus of instruction from the teacher to the student (www4.ncsu.edu). Allen (2006: 208)

suggests that most institutions should endorse the following characteristics if they claim to be student-centred.

Learning should strive to ensure that students meet the requirements for employment. The intention of student-centred lecturing strategies is to allow the student to mix in the real world and not panic when out of university where there is no support from a lecturer or tutor. Essentially, student-centredness has the student at heart but in contrast to a strong emphasis on lecturer control, stresses reliance on active rather than passive learning, increased responsibility and accountability of students' interdependence on the lecturer in contrast to being dependent on the lecturer. Students should be consulted about the learning and teaching approach moves from the conventional approach of teaching. The move from "inside out" to an "outside in" approach should have a direct impact on admission and retention of students. Students will be attracted to and be more inclined to stay with the programme that has their learning needs. If education is to be truly student centred, students should be consulted about the process of learning and teaching and it is imperative with the higher education climate that institutions move from an "inside out" approach where those on the inside know that is best to an "outside in" approach where customers' expectations are researched and serviced (Lea, Stephenson, Troy 2003: 321).

Researching students' expectations, attitudes and perception is therefore important and responding to the needs of industry is paramount. Therefore it is imperative to adopt an "inside out" approach according to Sandler et al. (2000) as cited in Lea et al. (2013:321), under the assumption that an "inside out" approach takes into consideration what is best in terms of students' needs and what the students' expectations are of their lecturers. However, as Sandler et al. points out, successful service industry thinks "outside in", researching the needs and expectations of their target market and responds accordingly with regard to which students are employable.

Paris and Combs (2006) as cited by Taylor (2013: 41), researched extensively as to what student centredness should incorporate and identified the following:

- Instruction that is individualised through the use of interactive computer-delivered materials;
- Standard-based multi-measured assessment criteria;
- Teaching approaches described in opposition to those that are content focused;
- Interactive learning experiences as opposed to individual student work;
- On-going discussions with students and lecturers.

Assessments are an essential process and should be flexible and creative when developing solutions where the faculty and staff see institutional effectiveness as a goal, contribute to it, and work collegially to promote student success. Campus policies and procedures, including programme reviews and budgeting, support learning. Faculty and staff development programmes provide ongoing support for the development of effective strategies and the sharing of ideas. Students are given repeated opportunities to practice, receive feedback and reflect on their learning as well as to integrate what they are learning in different courses. Lecturers recognise that students come with different backgrounds and learn in different ways, and they develop a certain style of lecturing strategies to address this diversity. They also have been exposed to different educational opportunities with different expectations, needs and desires.

According to Cullen and Harris (2009: 115-125), a syllabus for a course that is striving to be learner-centred should include some of the key elements that define the learner-centred approach, namely, an attempt to create community, a sharing of power and control over what is learned and how it is learned as well as a focus on assessment and evaluation.

To facilitate transformative learning in higher education, an academic must know how to value the person as the student in the learning process (Blackie, Case and Jawitz: 2010: 637-639). Institutions' academic staff development programmes should offer the skills and knowledge to enable the academic to be student-centred in their teaching. In this type of approach the aim is to produce mature and responsible people in society through learning. Blackie et al. (2010) argue

that the key element in facilitating a student-centred educative process is empathy. There should be an interest in the empathy for the student and an interest in the student's learning as well, especially in a first-year student's experience of university life.

Ellis and Goodyear (2010) cited in Taylor (2013: 44) describe the following principles that characterise effective student learning at universities:

- Learning is individual as each learner constructs their own knowledge using their past experiences and existing knowledge to make sense of new information. This does not mean that learning is an isolated process but a combination of other students' ideas and knowledge;
- Learning is challenging as each learner steps into an unknown space of knowledge, concepts or skills. Challenge is essential but the lecturers need to put strategies in place as to avoid the student from feeling overwhelmed;
- Learning is active as each student has to undertake a mental effort to understand a new concept being taught;
- Learning is self-regulated as each student needs to be aware of what they know, what they do not know and have the ability to take action based on this;
- Learning is goal-orientated as students require explicit goals for learning to be effective.

A student must be motivated to feel a deep approach to a subject as this stimulates a positive attitude towards a subject and assists in developing a keen interest in what is being taught. A diversified student population which includes international and foreign students, would require universities to change the culture in which they educate students.

FIGURE 2.8:

A COMPARISON OF TRADITIONAL AND DIFFERENTIATED CLASSROOMS

Traditional classroom	**Differentiated classroom**
Teacher centred and teacher organised	Student centred and student organised
Planning involves choosing content, designing assignments and constructing an assessment	Planning involves identifying standards, diagnosing student readiness, interests and preferences and designing multiple pathways for learning and assessment
Linguistic and logical-mathematical intelligences are most important	Multiples forms of intelligence are recognised and respected
Curriculum guides and textbooks drive instruction	Student readiness, interests and learning profiles shape instruction
Limited instructional strategies are used	A variety of teaching and learning strategies are employed
Lecturer directs student behaviour most of the time	Lecturer facilitates development of student independence and decision making
Common assessments are used for the whole class	Student assessment takes many forms
Assessment is the final stage of the lesson	Assessment is ongoing

Source: Arends and Kilcher (2010)

Figure 2.8 differentiates what the traditional and differentiated classroom entails. Differentiation will require the adjustment of the curriculum, teaching and assessment strategies which provide students with different ways of attaining knowledge.

Students come together with different abilities, interests and knowledge with preferences on the type of instruction they prefer to be taught. These differences will influence the students' rate of learning, motivation and also the support or challenge they will require for success (Grant and Lerer 2011: 24). In the traditional setting, the educator gives direction concerning what and how a particular lecture should incorporate and the students attempt to meet these expectations. To ensure students think critically, lecturers must devise ways to engage students fully. According

to Grant et al. (2011), all students in the differentiated classroom should be engaged in rigourously exploring important and challenging ideas. The idea is to ensure students do understand what the lecturer wants them to know. Grant et al. (2011), further state that if we want our students to know that they are equally valued and respected, then we also need to provide choices and tasks that address the same learning goal and success criteria.

2.11.3 THE USE OF TECHNOLOGY IN TEACHING AND LEARNING

Universities have been emphasising student-centred, project-based, group work with academics as a guide-on-the-side for generations. Macbride (2013: 8) states that the mix of technology and student-centred work is particularly ineffective with less-motivated students. He further states that struggling students need much more lecturer-directed instruction. It is true that technology can be very useful in the classroom, but educators should be careful how to integrate technology with their subject. The idea is to maintain or stimulate interest in a subject. Ames (1990: 1) states that "if we evaluate our institutions by how much students achieve, we can easily lose sight of these other educational goals and values". Students need to willingly put forth the necessary effort to develop and apply their skills and knowledge and develop themselves holistically. According to Oja (2011: 1), supportive relationships between student success and student satisfaction allows higher education professionals to indirectly improve student success.

Students of the 21st century are proficient with the use of technologically savvy electronic gadgets such as tablets and smartphones, in comparison with students generations ago. Their familiarity with technology such as surfing the internet, instant messaging, e-mails and applications have changed the manner in which they think and function and more importantly their dependence on these electronic devices. The manner in which students are taught is no exception.

Technology provides many opportunities for issues like learning styles, student-centred teaching instruction and promotion of higher learning thinking. The lecturer's attitude and beliefs often stop lecturers from fully integrating technology into their course design (Gilakjani, Leong and

Ismail 2013: 49). Students place greater emphasis on the lecturer than jotting notes. Leibowitz et al. (2009: 163) emphasises the importance of audio-visual aids being used as lecturing tools as this equipment tends to assist in maintaining silence and greater focus during lecture presentation. Technology enhances and facilitates the lecture process and promotes critical thinking. It also facilitates the ease of dissemination of information to students to remote locations and as technology can be an exciting and dynamic part of the instructional process, it can also motivate students.

The use of computer technology in lecture rooms makes students grasp ideas quicker, understand better and makes a dull topic interesting. Changes have a positive impact on students by creating an atmosphere centred around the student rather that the lecturer. The lecture room becomes an active setting full of meaningful activity where the student is made responsible for his or her learning and is engaged in problem-solving learning projects, preparation of reports and computer packages. Together with the hardware it becomes a collaborative tool (Gilakjani et al. 2013: 51). However, it must be noted, although technology is crucial at this era of education, students must be educated and informed about plagiarism and it should not be used to eliminate that personal interaction which is important between lecturer and student.

Facilities designed for tertiary education are required to provide learning opportunities to the modern student and also play an important role in attracting and retaining students in a competitive demand-driven tertiary environment (McLaughlin 2012: 141). McLaughlin further states that interactive, collaborative and innovative learning spaces also impact upon staff and indirectly convey the university mission.

DUT aspires to be a digital university. The notion of e-learning occurs when technology is used to support teaching and learning. What may be considered e-learning can take many different forms. A training course that is delivered entirely online; a teacher showing students a video within a lesson; live assessment of students' work online; students using interactive technology such as social media to work together on a project; students using their tablets to access worksheets and course materials off campus are all manifestations of e-learning.

According to Macfaden and Dawson (2009: 588), higher education around the world is undergoing rapid changes as it adapts to the new realities of the knowledge society. Societal and global changes are forcing institutions to change the manner in which knowledge is disseminated. Student populations have changed due to increased numbers and through diversity as well, coupled with the technological advancement.

E-learning assists both the lecturer and student and develops a better understanding of the course work as well as forges better lecturer-student relationships (http://e-learning.dut.ac.za):

Student Engagement: Students engaged with online tasks by connecting to a central hub for access to coursework, campus organisations and important campus information. The use of Blackboard will assist students to get information easily and this can be retrieved anytime. Surveys of their learning experience can also be done online and this method of feedback can be useful to the lecturer.

Academic Efficiency: Technology assists the lecturers in that they can manage their teaching, non-teaching and personal interests at the institution. Instructors in the new world of higher education are therefore critically in need of new tools and strategies that will allow instructors to quickly identify at-risk students and devise ways of supporting their learning (Macfaden et el., 2009: 589). Early warning systems allow instructors to devise interventions with regard to poor performance of students.

Foster an online presence for faculty and academic staff to collaborate: This can be done not only for instructional purposes but also for better communication between departments.

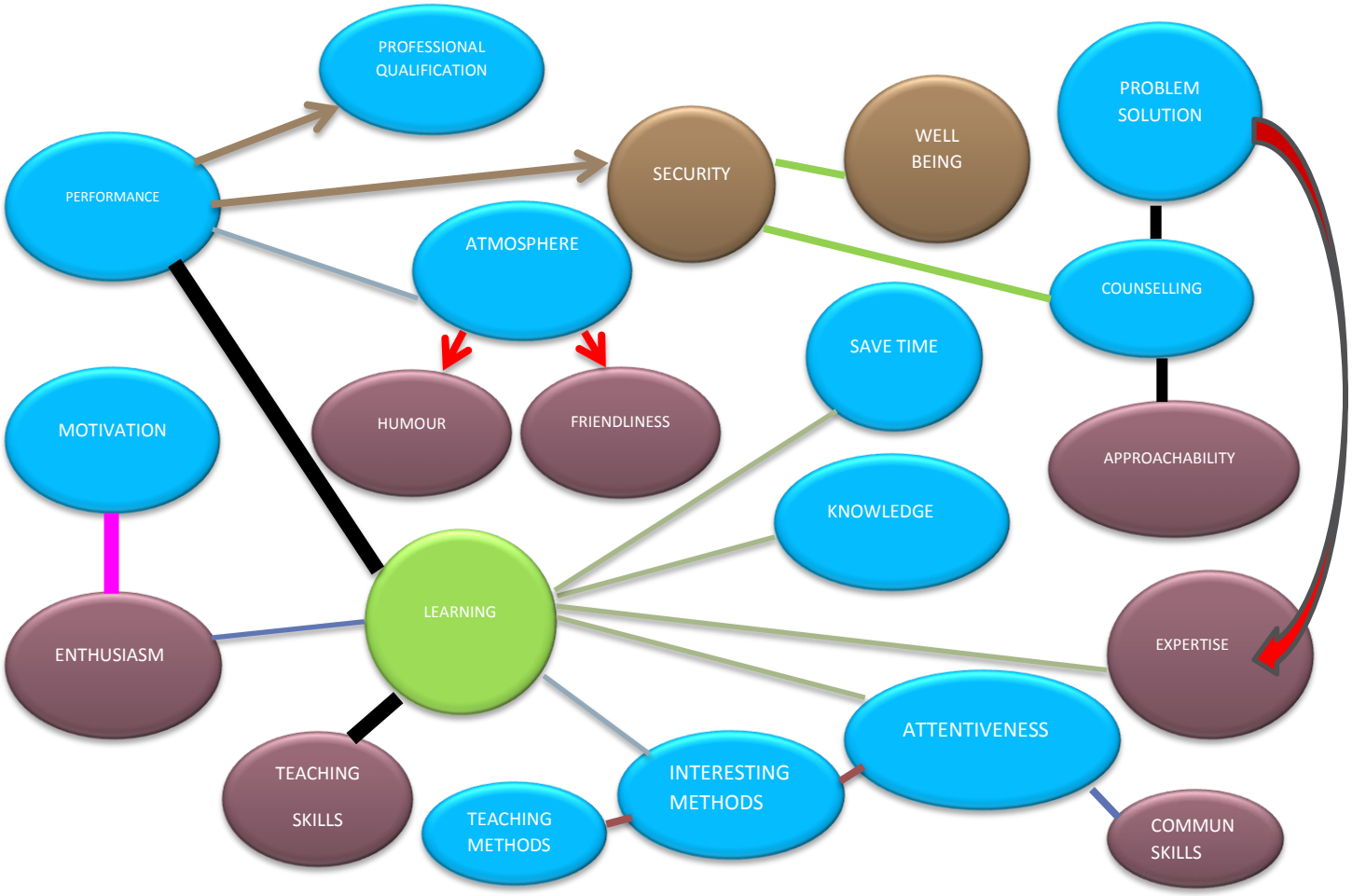
Save time and share quality academic resources across courses and departments: These tools are effective for an individual instructor as well as an academic department (or institution) that is using a more centralised approach to developing and maintaining quality course content. It is also a cost-effective approach to forward subject material to students.

Facilitate collaboration outside the institution: Secure links allow users to easily collaborate and share files or folders of content outside of the institution.

Blackboard mobile: Integrates the academic world with technology that brings virtually every facet of campus life into the palm of their hands and engages audiences in a new, powerful way by bringing them all of the campus services they need, on the mobile devices they love.

E-learning is an efficient and effective way of distributing coursework from remote areas and allows students to gain access from anywhere. Many universities are using these methods during the #FEESMUSTFALL campaign where attendance to lecturers are being disrupted. In this way technology has ensured the academic programme continues and staff, students and state property are protected.

FIGURE 2.9: THE PROCESS OF LEARNING



Adapted from: Voss and Gruber (2006: 232)

Maroon circles represent attributes, blue circles represent consequences and brown circles represent values.

Students need to develop responsibility towards their studies in order to ensure that the learning process will be a smooth one. They need a positive attitude towards knowledge and understanding of the subject content. This requires a two-way communication from both lecturer and student, thereby fostering a congenial relationship. Lecturers should be able to communicate and apply their knowledge effectively both verbally and technologically.

Approachability of lecturers in terms of having a friendly attitude with a good sense of humour would ensure students have the confidence to approach the lecturer when faced with an academic difficulty. This is a very important aspect in terms of students not compounding a simple problem into a compound one. Most often a student's frustration could lead to a disinterest in the subject or programme and hence this could have a negative impact on the pass rate of the subject. Lecturers also need to show a certain degree of passion and enthusiasm about the subject they are teaching, more often breaking complex problems into simpler ones.

In order for effective learning to take place, the security and well-being of a student is of utmost importance in the learning process. Students learn best when their wellbeing is optimised and therefore learning can take place effectively and can interact on an academic and social level. The security and wellbeing of a student also impacts the performance of a student. Students experiencing personal problems can always approach the Student Counselling Centre for assistance, especially students who are not coping at first-year level. The learning environment also impacts the students' performance. An unfriendly and unsafe environment will affect the students in a negative manner. The lecturers must ensure that they are approachable and that they foster an environment that is friendly and that lectures have a little humour to their subject. A student's performance will be increased and students will be motivated if they have a professional learning environment, feel safe and secure on campus and have approachable lecturers. Students who develop holistically and have increased motivation during their studies will strive towards their professional qualification.

Enthusiasm contributes to an increased student motivation and for effective learning to take place students must set goals and strive to attain these goals. First-year students must be encouraged to actively engage with their lecturers so that learning can become a meaningful process. Lecturers must create a safe learning environment, have good interpersonal skills, have exciting teaching methods and the course material must be interesting and stimulating to maintain interest in a first-year subject. This will lead to a student being attentive in class and will result in an increase in the pass rate of the subject.

2.12 CONCLUSION

This literature review discussed the theories pertaining to teaching and learning as well as the different learning styles adopted by students. This chapter also presented the conceptual framework for the study and highlighted the importance of general education and the notion of student-centredness. The models highlighted the different types of learning styles adopted in a multi-cultural diverse group, whilst the taxonomy model classifies one's thinking order as a process of learning. The next chapter discusses the methodology employed during this study.

CHAPTER THREE: RESEARCH METHODOLOGY

"Knowledge which is organised and related is better learned and retained that knowledge which is specific and isolated" - Benjamin S Bloom.

3.1 INTRODUCTION

This chapter explains the data collection method used, research design, target population, data analysis, reliability and validity. This chapter also discusses the limitation and the delimitation of the study. Research methodology is a way to systematically solve the research problem and the steps that are generally adopted by a researcher in studying the research problem. Research helps to solve existing issues and it plays a crucial role in decision making. Researchers are better equipped to fully understand the problems or issues being investigated so that best decision will be made.

3.2 QUANTITATIVE RESEARCH

The quantitative research method seeks objectivity through testable hypothesis and carefully designed studies. According to Bonds-Raacke and Raacke (2012: 12), researchers gather data that can be reported in numbers and statistics. This type of methodology is used to find out whether there is a consensus on a particular subject and is an extremely efficient method for gathering data. Quantitative research uses structured questionnaires with mostly closed questions. The sample size is important as the larger size will produce more accurate findings on the topic under research. Quantitative methods pose both open-ended and close-ended questions.

In this study the quantitative approach was used to collect and analyse data from questionnaires where respondents were asked to answer questions based on the Likert Scale and open-ended questions. The type of questions were close-ended and used to measure the varying importance level of the respondents' feelings. In this study the quantitative approach is used by the

researcher so that that data can be quantified from the statistics generated from the questionnaire. The target population is the entire cohert of first-year students and is also the sample.

3.3 TARGET POPULATION

The target population can be described as the group of people that the researcher wants to draw a conclusion about once the research study is finished. Identifying the target population requires specifying the criteria that determine which individuals are included and which individuals are not included. In other words, what characteristics must an individual have to be included in the target population. Once the target population has been identified, then the researcher needs to select individuals from the target population to be part of the sample that participates in the research study (korbedpsych.com).

3.4 PROBABILITY SAMPLING

Probability sampling allows the researcher to generalise the findings of the sample to the target population. A sampling frame is crucial in probability sampling, because if the sampling frame is not drawn appropriately from the population of interest, random sampling from that frame cannot address the research problem. Generalisations can be made 'only' to the actual population defined by the sampling frame. Probability samples are the gold standard in sampling methodology and also for ensuring that the results of the study can be generalised to the target population. By probability sampling, we mean each individual in the population has an equal chance of being selected in the study (Archarya, Prakash, Saxena and Nigam 2013: 330). In this study all first-year students were included.

3.5 SAMPLE SIZE

According to Gravetter and Forzano (2012: 138-144), the large group of interest to a researcher is called the population and the small set of individuals who participate in the study is called the sample. The main function of the sample is to allow the researchers to conduct the study to individuals from the population so that the results of their study can be used to derive conclusions that will apply to the entire population. According to Leedy and Omrod (2013: 152),

the ideal sample should provide information not only about how things are on average, but also about how much variability exists in the phenomenon under investigation. The target population and sample size is the 126 first-year student cohort.

	First-year students	First-year lecturers
Target population	136	7
Pilot study	10	3
Sample	126	7
Responses	121	7

Ten first-year students and three first year lecturers who participated in the pilot study did not participate in the actual study. The three first-year lecturers who participated in the pilot study lectured first-year students previously.

3.6 DATA COLLECTION METHOD

The fundamental principles guiding data collection in quantitative research are that data are derived in a way that is independent of the expectations of the observer and that the data are true representations of a phenomenon. The student questionnaire was given to the lecturer for distribution during the lectures. The lecturer handed the questionnaire to the students, explained the key ethical issues and then collected the completed questionnaires which were submitted to the researcher. The researcher handed the lecturer questionnaire to each lecturer and informed them that the complete questionnaire would be collected after two weeks. The completed questionnaires were collected from each of the first-year lecturers.

3.7 DATA ANALYSIS

Once data are collected, these ‘‘raw data’’ need to be organised and interpreted. The interpretation of data in quantitative research requires the use of statistics. Statistics are a way of

organising and making sense of data obtained by measurement (Botti and Endacott 2008: 132). Statistical methods serve two principal purposes as stated by (Gravetter et al. 2012):

- Statistics help organise and summarise the data so that the researcher can see what happened in the study and communicate the results to others;
- Statistics help the researcher answer the general questions that initiated the research by determining exactly what conclusions are justified, based on the results.

The Statistical Package for the Social Science (SPSS) was used to analyse the data for this study. SPSS is one of the most popular statistical packages which can perform complex data instructions and provide analysis of such. Creswell (2009: 91) highlights the importance of good ethical issues when interpreting both qualitative and quantitative data:

- How will the study protect the anonymity of individuals, roles and incidents in the project?;
- Data, once analysed, need to be kept for a reasonable period of time and then should be discarded so that it does not get misappropriated by others;
- The question of who owns the data once it is collected and analysed; it is important to outline who has ownership of this at the onset;
- During the interpretation of data, researchers need to provide an accurate account of the information.

Chi-square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis. The chi-square test evaluates the relationship between two variables measured on nominal or ordinal scales, or the difference in proportions between separate groups of participants (Gravetter et al. 2012: 544). (Annexure A indicates a detailed analysis of the statistics for student responses while Annexure B indicates a detailed analysis of the statistics for lecturer responses).

3.8 PILOT TESTING

Piloting the questionnaire highlights problems such as inappropriate questions or ambiguity before starting the real survey. The effects of an alternative wording should be tested as well. Conducting a pilot study is one step toward determining the validity of the questionnaire and what is intends to measure.

The research questionnaires were administered to ten first-year students to ascertain how long it would take them to complete the questionnaire and to check if the questions and instructions were clear. The questionnaire was piloted by three first-year lecturers and ten first-year students. The respondents were briefed about the purpose and aim of the study and they were asked to indicate if there was any difficulty in understanding the questions or if any questions needed to be removed from the questionnaire. There were no changes to the questionnaires and the students and lecturers did not encounter any ambiguity in the questions or difficulty in understanding the questions. The sample used in the pilot study had the same characteristics of the actual study. The three-first year lecturers and ten first-year students did not participate in the actual study because they participated in the pilot study. They were only used in the pilot study. Pre-testing the questionnaires ensures that the design of the questionnaires works in practice and assists to identify and amend any problematic questions and refine the questionnaire.

3.9 RESEARCH INSTRUMENT

3.9.1 THE QUESTIONNAIRE

Questionnaires are one of the most widely used means of collecting data, although a lot of effort goes into a good questionnaire which aims to answer the research question and attract sufficient response rate (Rowley 2014: 308). In this study, the questionnaires contained questions which list possible answers and some questions would enable the use of the Likert scale.

The structure for the student questionnaire (Appendix 4) was divided into nine questions. The Likert scale type of questions ranging from strongly agree, agree, neutral, disagree and strongly disagree was used in questions two to eight.

Question one of the questionnaire comprised of the biographical information. Students were asked to indicate the following: gender, age, race (for statistical purposes), student history (such

Question two of the questionnaire comprised of questions regarding the student's career choice and how they learnt about the programme offering.

Question three of the questionnaire asked students to rate how interaction with peers, the physical environment, course content, technology and approachability of lecturers had an impact on their motivation.

Question four of the questionnaire asked students to rate how important attendance, completion of tasks, working with peers, use of the institution's libraries, social networking and sport was as being critical factors for passing their first year of study.

Question five of the questionnaire asked students how vital the institutions services such as student counselling, the SRC, Financial Aid, Library, Faculty Office and Cultural bodies was to them.

Question six questioned students on what factors they considered would improve their performance in the programme. These factors included increased interaction with lecturers, access to study material, increased practical exposure, improved assessment criteria and attendance.

Question seven questioned students on what skills are important to be successful in their studies. These skills included numeracy, literacy, problem-solving, information technology and communication skills.

Question eight asked students about the teaching and learning experience at the institution and the use of the facilities.

Question nine asked students to make suggestions to improve the teaching and learning experience of first-year students.

The structure of the lecturers' questionnaire (Appendix 5) comprised 9 questions.

Question one comprised of the biographical data.

Question two to five comprised of Likert scale type questions.

Question two required lecturers to identify critical factors that would assist students to pass their subject such as interaction with peers, use of the library and technology and an increase in interaction with lecturers.

Question three requested lecturers to rate factors such as consultation times, contact times, number of assessment and on-line access to student material as contributing factors that would increase a student's performance in their subject.

Question four needed the lecturers the importance of numerical, writing, technological, literacy and problem-solving skills.

Question five requested lecturers about their teaching and learning experience.

Question six to nine required lecturers about the resources, use of technology, diversity of students as well as suggestions to improve the teaching and learning experience.

3.9.1.1 ADVANTAGES OF THE QUESTIONNAIRE

According to Joshi and Chandel (2015: 34), the Likert Scale questions enable the strength of feeling or attitude towards a given statement. The questionnaire contained questions that list possible answers to the questions and some questions enabled the use of the Likert scale. Likert scales usually have five potential choices (strongly agree, agree, neutral, disagree, strongly disagree). Likert Scales do not expect a simple yes or no answer from the respondent, but rather allow for degrees of opinion, and even no opinion at all. Therefore, quantitative data is obtained, which means that the data can be analyzed with relative ease. Questionnaires were used as it was a more cost effective method and administration of the questionnaire was timely and not time-consuming. The questionnaire comprised of both closed and open-ended questions and provided for anonymity, thereby allowing the student to answer freely without being victimised. The response rate was quick and increased the likelihood that responses reflected genuine opinions. Large amounts of information can be collected from a group of people in a short period of time and carried out by the researcher with limited effect on its reliability and validity.

Rowley (2014: 310) further summarises the usefulness of questionnaires as:

- The research objectives focus on surveying a particular situation;
- Adequate information is already known about the topic under research, to formulate meaningful questions to include in the questionnaire;
- Respondents are willing to provide meaningful information about the topic;
- Questionnaires should not only suit the research and the researcher but also the respondents;
- Students consider their responses carefully without being pressurised;
- The questionnaires are all uniform in nature and standardised, and can address a large number of issues and questions of concern and receive a high response rate.

3.9.1.2 DISADVANTAGES OF THE QUESTIONNAIRE

Quite often questionnaires yield a low return rate and according to Leedy (2013: 191), even when people are willing participants, their responses will reflect their reading and writing skills and perhaps their misinterpretation of one or more questions. The researcher piloted the questionnaire before administering it to first-year students in the department.

3.10 RELIABILITY AND VALIDITY

Leedy and Ormrod (2010: 28-29) define reliability as the consistency with which a measuring instrument yields a certain result when the entity being measured hasn't change and validity is the extent to which the instrument measures what it is intended to measure. According to Roberts, Priest, and Traynor (2006: 41), reliability and validity are ways of demonstrating and communicating the rigour of research processes and the trustworthiness of research findings. If research is to be helpful, it should avoid misleading those who use it. He further states that trustworthiness depends on a number of research features: the initial research question, how data are collected including when and from whom, how they are analysed, and what conclusions are drawn. Both reliability and validity eliminate the possibility of errors in our measurements.

Roberts et al. (2006: 42) further state that internal consistency of items from the questionnaire can be measured using statistics such as Cronbach's alpha coefficient. External validity addresses the ability to apply with confidence the findings of the study to other people and situations according to (Black 1999) cited in Roberts et al. (2006: 42). The findings of this study will give an indication to the Department of CMQS what factors to consider to ensure that the pass rate increases at its first-year level. This will ensure the study's validity, that is, reporting the findings accurately and free of bias. We can measure something accurately only when we can also measure it consistently, according to Leedy et al. (2010: 56).

To test the validity of the questionnaires of the students and the lecturers, a pilot study was conducted. It is believed that using different types of procedures for collecting data and obtaining that information through different sources (students and lecturers) can augment the validity and reliability of the data and interpretation (Zohrabi 2013: 254). The pilot test revealed zero changes to the questionnaire and hence contributed to the validity of the questions posed.

3.11 ETHICS

Ethics in research has two dimensions: one is research ethics and defines the rules of how research should be conducted, especially when it involves animals or human beings, whereas researcher's ethics has to do with the researcher's own moral obligations, that is, to be honest and objective in presenting and interpreting his/her own research, to be fair to peer researchers, and honest to the society as a whole (Dahlquist 2006: 449).

Research ethics involves the relationship and interaction between research participants and the researcher. Ethical issues are vital and must be considered at each stop in the research process. According to Gravetter and Forzano (2009: 72-73), ethical principles dictate:

- What measurement techniques may be used for certain individuals and certain behaviours?
- How researchers select individuals to participate in studies?
- Which research strategies may be used with certain populations and behaviours?
- Which research designs may be used with certain populations?
- How data was analysed?
- How results were reported?

The wellbeing of the participants should always be a priority. According to Leedy and Omrod (2013: 104), within certain disciplines, especially the use of human beings in research, any physical or psychological distress is the focus of investigation. Leedy et al. (2013) further state that the researcher should also think about the potential benefits that participation in a study might offer. An informed consent letter was issued with every questionnaire so that students would be briefed about the confidentiality of the research. The letter of consent stated: what is expected of the research, the purpose of the research, participation was voluntary, confidentiality would be protected and the researcher's details for questions regarding the research. The researcher administered the questionnaire to all first year students with the first-year lecturer present. For the purpose of this study, all first-year students under study were effectively addressed regarding the privacy of the data collected and were briefed about the objectives of the study. Students were not subjected to any stress or encouraged to give answers and the researcher remained neutral while students completed their questionnaires. A lecturer from the department was present so that bias and coercion were eliminated. Students were advised that participation was voluntary.

In this study, participants' responses would pave the way for the Department for future enrolments by means of their input via the questionnaire and by answering open ended questions. The students' opinions and views were noted. The study entailed a category two level

of clearance and this was cleared for study purposes by the institution under study. Consent was given by both the department and institution under study.

Anonymity refers to concealing the identities of participants in all documents resulting from the research and confidentiality is concerned with who has the right of access to the data provided by the participants. Implied confidentiality involves instances where the researcher implies through either word or deed that the respondent's identity and responses are protected.

Confidentiality ensures that the information obtained from a research participant will be kept secret and private (Gravetter et al. 2012: 867). Confidentiality was explained to students and lecturers prior to the questionnaire being completed and a confidentiality letter and letter of consent was issued with the questionnaire. Lecturers and students were assured of anonymity and all information gathered would be kept in confidence for research purposes only for approximately five years as per the university's policy. A confidentiality letter was issued with the questionnaire to both the lecturers and students.

3.12 CONCLUSION

This chapter highlighted the manner in which the research was conducted taking into account the ethical implications as well. No students were harmed in any way either emotionally or psychologically. Prior to the completion of the questionnaires, lecturers were assured of the confidentiality of their responses. Acceptable ethical behaviour must be maintained at all stages of the research process safeguarding the interests of the participants of the study. This responsibility rests on the researcher who must abide by the ethics code of conduct.

CHAPTER FOUR: FINDINGS AND ANALYSIS

"Ability is what you are capable of doing. Motivation determines what you do. Attitude determines how well you do it." – Lou Holtz.

4.1 INTRODUCTION

The previous chapter outlined the methodology employed while this chapter discusses the findings from the questionnaires administered to students and lecturers. The data collected is intended to answer the research question, fulfill the research objective and make recommendations to the Department of CMQS. The chapter firstly discusses the demographical details of both the students and lecturers; secondly, factors affecting their career choice; the institutional support systems and finally factors affecting students' academic performance is presented.

4.2 RESPONSE RATE FROM QUESTIONNAIRES

A total of 121 of 126 students questionnaires were received, which resulted in a response rate of 96 %. Seven out of seven lecturer questionnaires were received with a response rate of 100%. The high response rate enhances the reliability of the research outputs. Response rate for lecturers was 100% as all seven lecturers submitted the questionnaires.

4.3 RELIABILITY AND INFERENTIAL STATISTICS

To measure reliability the researcher used the Cronbach's alpha. It is most commonly used when there are multiple Likert Scale questions in a survey questionnaire. The SPSS Statistical Package showed significant findings with regard to the consistency of the student and lecturer questionnaire. The one sample confidence intervals may also be used to determine whether two sample means are statistically significantly different. If the upper limit of the 95 % confidence interval of the lesser sample mean is below the lower limit of the 95 % confidence interval of the

higher sample mean, then the confidence intervals do not overlap and the mean difference is statistically significant (Choudary and Garg: 2013: 1). According to Tavakol and Dennick (2011: 53), alpha was developed to provide a measure of the internal consistency of a test or scale which is expressed as a number between 0 and 1. Improper use of alpha can lead to situations in which the results are not trustworthy. In this study, the students' questionnaires yielded an overall score of 0.856 which exceeds the recommended value of 0.70. This indicates a good degree of consistency scoring for this study (Appendix 2). The lecturers' questionnaires yielded an overall score of 0.945 which exceeds the recommended value of 0.70 (Appendix 3).

A cross-tabulation table provides the researcher with a wealth of information about the relationship between the variables. Cross-tabulation allows the researcher to compare the relationship between two variables and Appendix 4 shows that in terms of gender, 57 male students strongly agree while 21 male students agree that practical exposure for understanding subject material will improve their overall performance in the programme. The expected count was 57.7 and 20.2 respectively. Twenty-six female students strongly agree while 8 agree that practical exposure for understanding subject material will improve their overall performance in the programme. The expected count was 25.3 and 8.8 respectively. Three male students remained neutral and 1 male student strongly disagreed while 2 female students remained neutral and 0 females strongly disagreed that practical exposure will improve their performance. The expected count was 2.0 and 1.0 respectively. It must be noted, that there are more males that females registered for the programme. The result of the statistical test was significant and revealed that there is some relationship between the variables. Students (both male and female) felt that that practical exposure in their first-year of study will improve their understanding of the theoretical part of the course.

According to McHugh (2013: 143), the chi-square test of independence provide considerable information about how each of the groups performed in the study. This richness of detail allows the researcher to understand the results and thus to derive more detailed information about the study. The chi-square test in this study is used to evaluate the relationship between the lecturer and students with regard to course delivery. Answers in the student questionnaire for the

question: “approachability of lecturers” in a student’s first year of study (Annexure 4), revealed that the value (0.586) was greater than the level of significance of 0.05. This means that there was no significant relationship between the variables. The approachability of lecturers was not related to the motivational level of a first-year student.

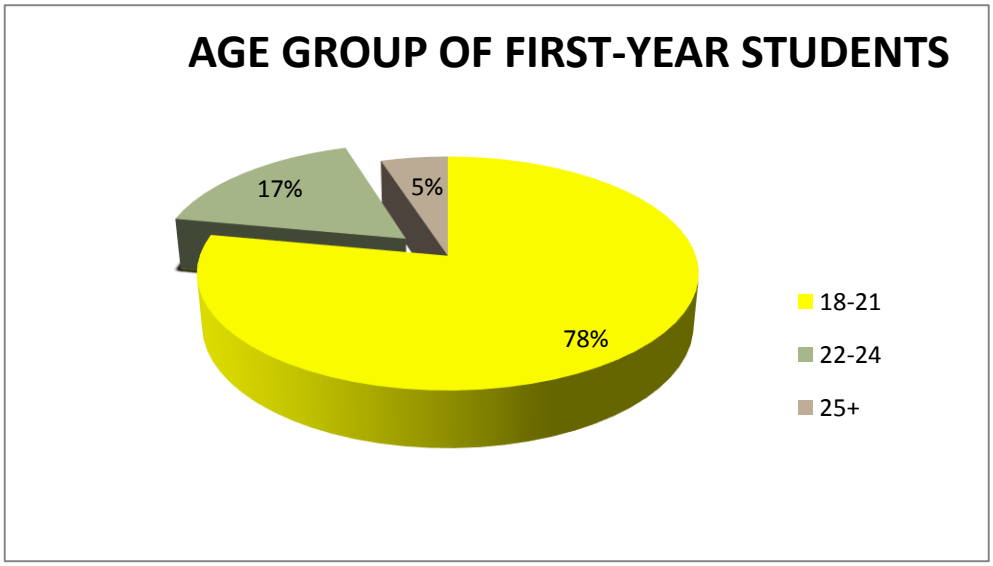
4.4 BIOGRAPHICAL DATA OF STUDENTS AND LECTURERS

The first section of the students’ and lecturers’ questionnaires comprised biographical data of the first-year students and the lecturers respectively.

4.4.1 BIOGRAPHICAL DATA OF STUDENTS

Figure 4.1: Age groups of students in the Department of CMQS.

The figure below highlights the age group of students.



The majority of the first-year students (78%) are between 18 and 21 years of age, 17% are between 22-24 years, and a further 5% are over the age of 25. The high percentage (78%) can be attributed to fact that these students have pursued their tertiary studies in the year immediately after matriculating. The remaining 22% of first-year students could have worked and then decided to obtain a formal qualification, therefore the delay in studying. The small

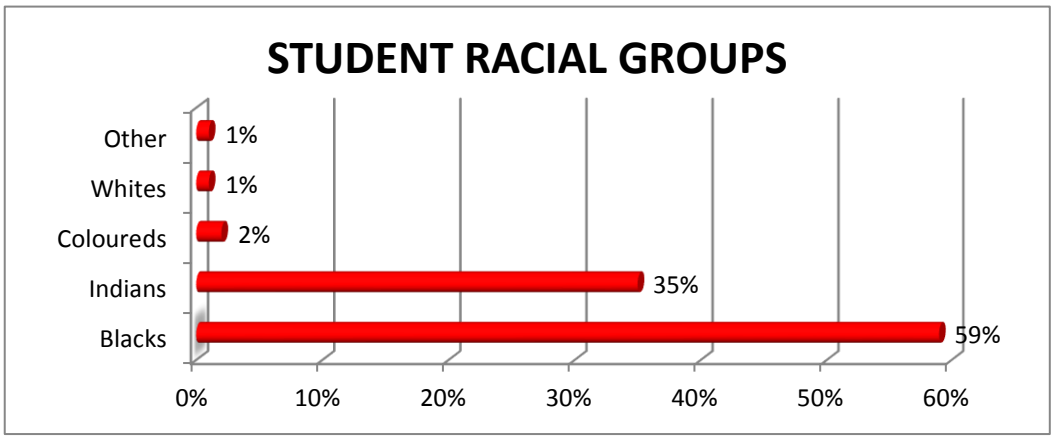
percentage of students could have been sponsored or financially able to pursue their tertiary studies.

A recent study conducted by Duangjan (2014: 83) regarding the factors affecting the learning responsibility of first-year students at Suratthani Rajabhat University, found that students older than 19 years had higher levels of responsibility than those of students' of 19 years or under. Older students have a higher level of responsibility because of their greater experience and their greater knowledge of how to interact with different people. According to Ballantyne (2012), mature students perceived themselves to be more purposeful and committed to being efficient in their studies and therefore did not want to be hindered by school-leavers' laxity and lack of commitment. They also felt the need to complete their studies in the minimum time. Therefore, it seems that the older first-year students should be more motivated that the younger first-year students. Contrary to this, Connor (2003: 896) believed mature students need more learning support than their younger counterparts as the school curriculum could have changed and they may need additional tuition.

4.4.1.2 RACE GROUPS OF FIRST-YEAR STUDENTS

Figure 4.2: Racial constitution of first-year students in the Department of CMQS.

The figure below graphically represents the racial composition of students.

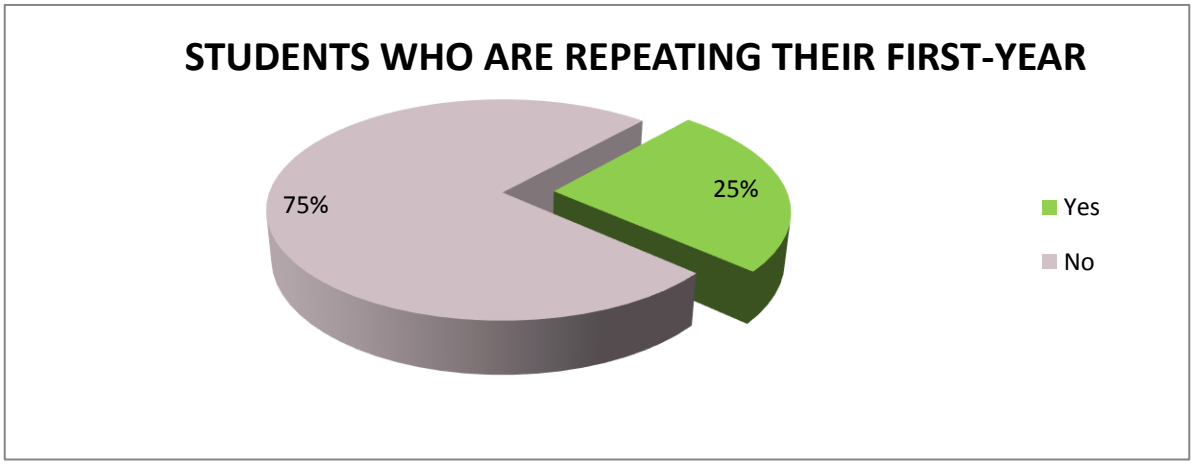


The majority of the student population (59%) for the programme are blacks, while 35% are indian, 3% are coloured, 2% are white and 1% classified themselves as other. This could be attributed to the location of DUT, being surrounded by large black townships and Indian communities. The removal of apartheid-era restrictions has led to a significant increase in overall enrolment by black students and a dramatic shift away from historically black universities to historically white universities (Mather 2007: 148). DUT is committed to the national higher education transformation goals and values of equity of access and the redress of past inequalities and the university strives for an efficient admissions system that is fair, simple, explicit and transparent, which is applied consistently across all faculties and campuses, and which has minimal barriers (www.dut.ac.za). Students who come from poor schools and previously disadvantaged backgrounds with limited resources and technology may be disadvantaged in their concept of understanding graphically demonstrated lectures. Interactive teaching may also pose a problem and therefore lecturers must take these social and economic factors into account when delivering their lectures. Bloom makes a significant statement (figure 2.10) and his model demonstrates to instructors the different ways of disseminating knowledge and adapting their lectures.

4.4.1.3 FIRST TIME AND REPEAT STUDENTS

Figure 4.3: Class constitution (first time and repeats) in the department of CMQS.

The figure below shows the split between first-year (first-time registered at the institution) and the repeat students.



Twenty-five percent were repeating first-year while the remaining 75% were new students to the programme. However, it must be noted that this high percentage of repeats impacts the throughput level of the department. Students who make a conscious decision to study a particular programme are more likely to demonstrate the commitment associated with their first-year of study. According to Connor (2003: 864), on or before students are accepted onto the programme, academics need to assess students before they are recruited into the programme to minimise students repeating the first-year of study.

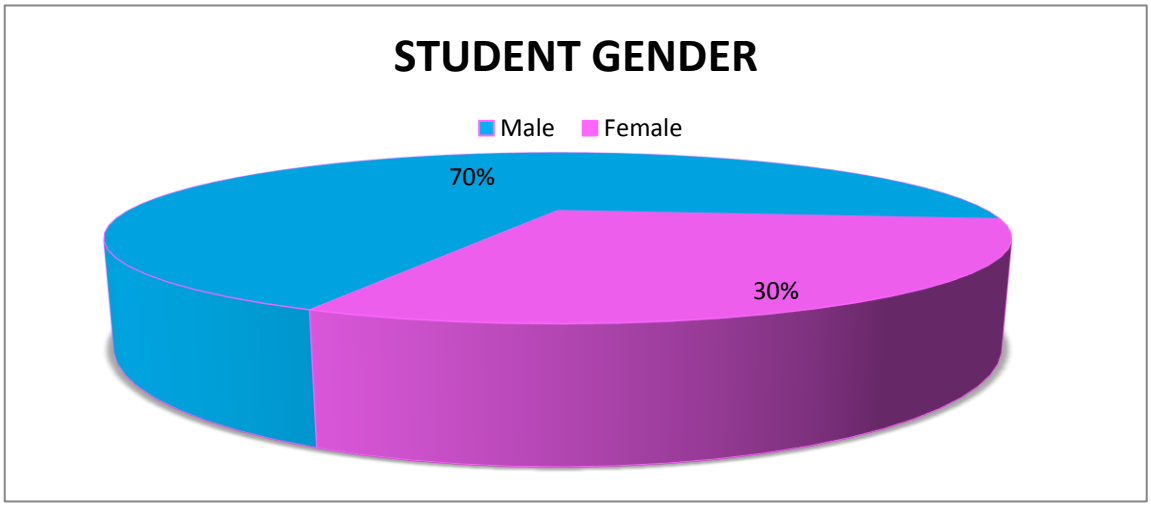
The high percentage of repeat students can be attributed to the fact that there could be a misconception of the programme as to its requirements and a lack of commitment of the students in pursuing an undergraduate qualification. Statistics obtained from the Department of CMQS indicate that black students generate the highest percentage of drop-out at first-year level. Affordability and their inability to cope with the academic programme seem to be the most common reason for their drop-out.

Students who come from disadvantaged backgrounds and attend schools that do not have proper funding and lack of text books are disadvantaged even when they come to tertiary institutions. Hence, the quality of education received in their secondary education is of a poorer quality as opposed to students who have had the opportunity of getting a proper education. This has an impact on the quality of students who are recruited at higher education institutions.

4.4.1.4 GENDER COMPOSITION OF FIRST-YEAR STUDENTS

Figure 4.4: Gender of first-year students in the department of CMQS.

The figure below gives a breakdown of the gender composition in the department.



Seventy percent of the student population for this programme were male students while the remaining 30% were females. The large proportion of males could be due to the construction industry currently being dominated by males and companies offering males rather than females bursaries.

Duangjan's (2014: 82) study relating to the factors affecting the learning responsibility of first-year students at Suratthani Rajabhat University, found female students to have higher levels of responsibility than males. It can be deduced that female students of different races had different senses of responsibilities, which is greater than their male counterparts. Abidemi and Ayobami (2015: 1) state that the construction industry is typically a male-dominated industry and presents a major challenge for equal opportunities for women. Gale (1994) cited in Abidemi et al. (2015: 5) suggests that careers about this industry must be transmitted to schools to increase the awareness of this career path for females. The Department of CMQS may see a steady growth of female enrolment in future due to demands by the Government for gender equality in previously male-dominated industries.

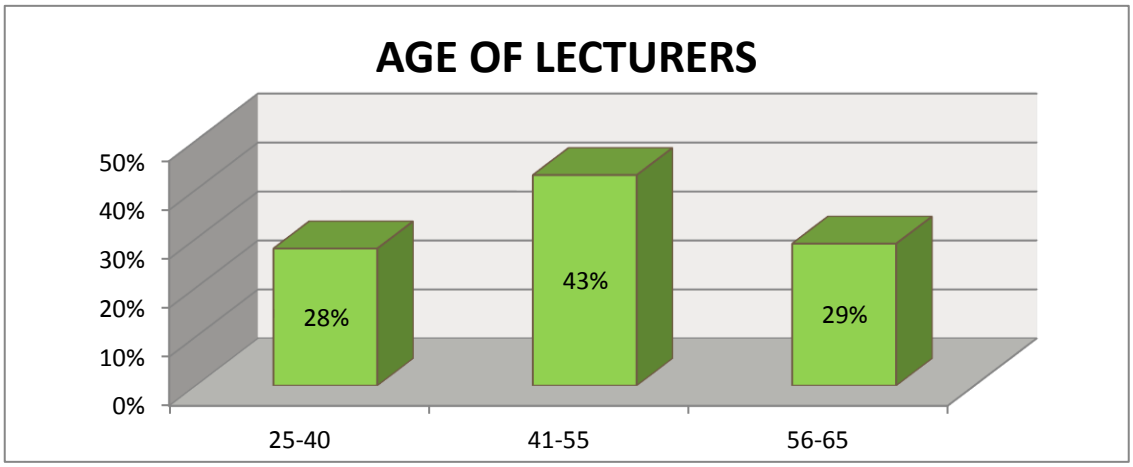
4.4.2 BIOGRAPHICAL DATA OF LECTURERS

The first section of the lecturers' questionnaire comprised biographical data.

4.4.2.1 Age of lecturers in the department of CMQS.

Figure 4.5: Age of lecturers teaching first-year students.

The figure below represents the age of lecturers at first-year level.

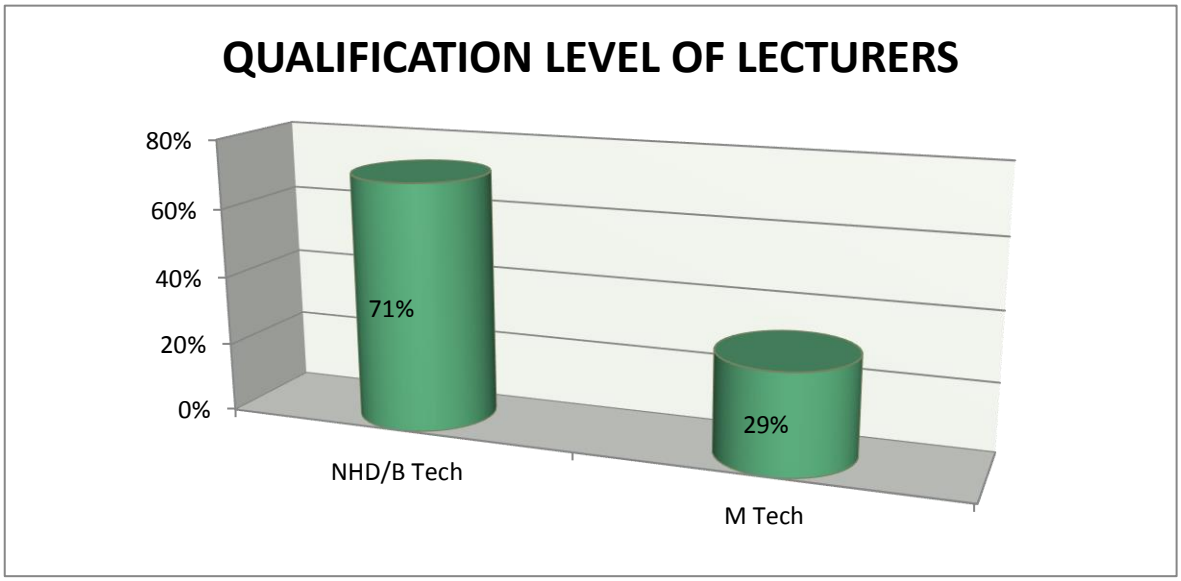


Twenty-eight percent of lecturers were between the ages of 25 – 40, 29% of lecturers are between the ages of 56 – 65. Forty-three percent of the respondents were aged between 41 – 55 years of age. Twenty-nine percent of lecturers could be retiring and there is no evidence of succession planning in the Department. This could lead to new academics being employed who may not have adequate experience in teaching first-year students.

4.4.2.2 QUALIFICATION OF FIRST-YEAR LECTURERS IN THE DEPARTMENT OF CMQS

Figure 4.6: Qualification level of lecturers.

The figure below highlights the qualification of lecturers.

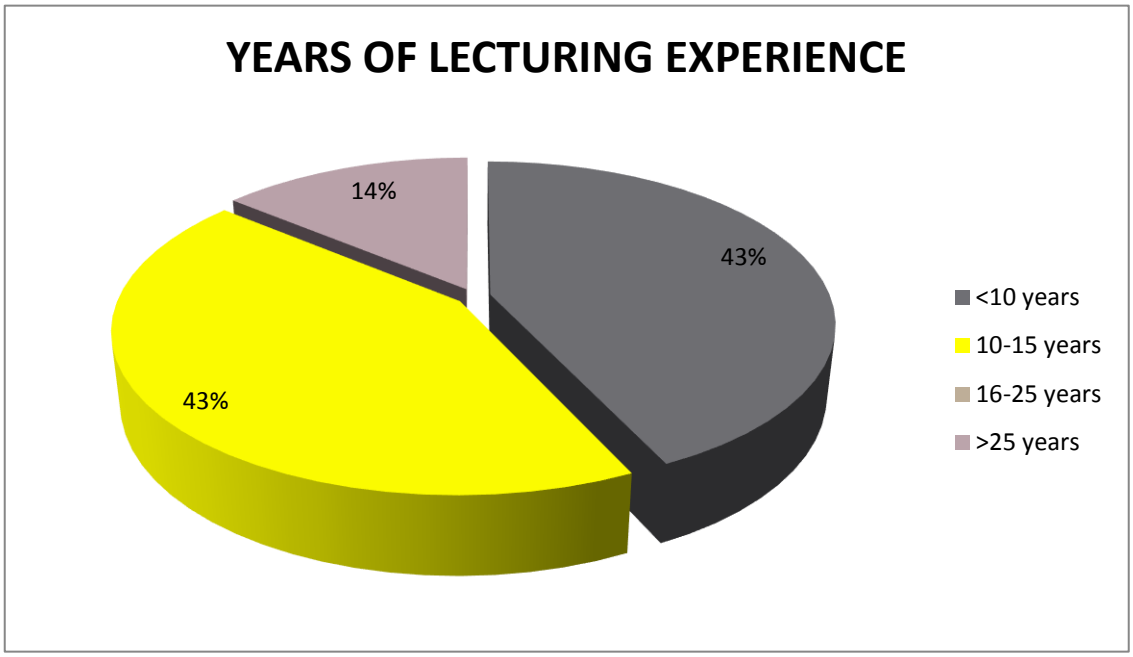


Seventy percent of lecturers have a National Higher Diploma/ Bachelor of Technology qualification, with only 29% having a Masters of Technology Degree and none having a Doctor of Technology or Doctor of Philosophy qualification. Connor (2003: 860), states that institutions need to ensure all lecturers acquire the necessary knowledge they need to act effectively in the lecturer-student relationship. According to Su and Wood (2012: 149), students felt that lecturers should be able to relate to real-life scenarios during lectures and be well-qualified with specialised knowledge in their subject areas. It is worth nothing that DUT provides a number of opportunities for staff to study towards a higher qualification. The lack of staff pursuing a doctoral qualification should be further investigated.

4.4.2.3 YEARS OF LECTURING EXPERIENCE OF FIRST-YEAR LECTURERS IN THE DEPARTMENT OF CMQS

Figure 4.7: Lecturers' years of experience.

The diagram below represents the number of years of experience a lecturer has at the institution:

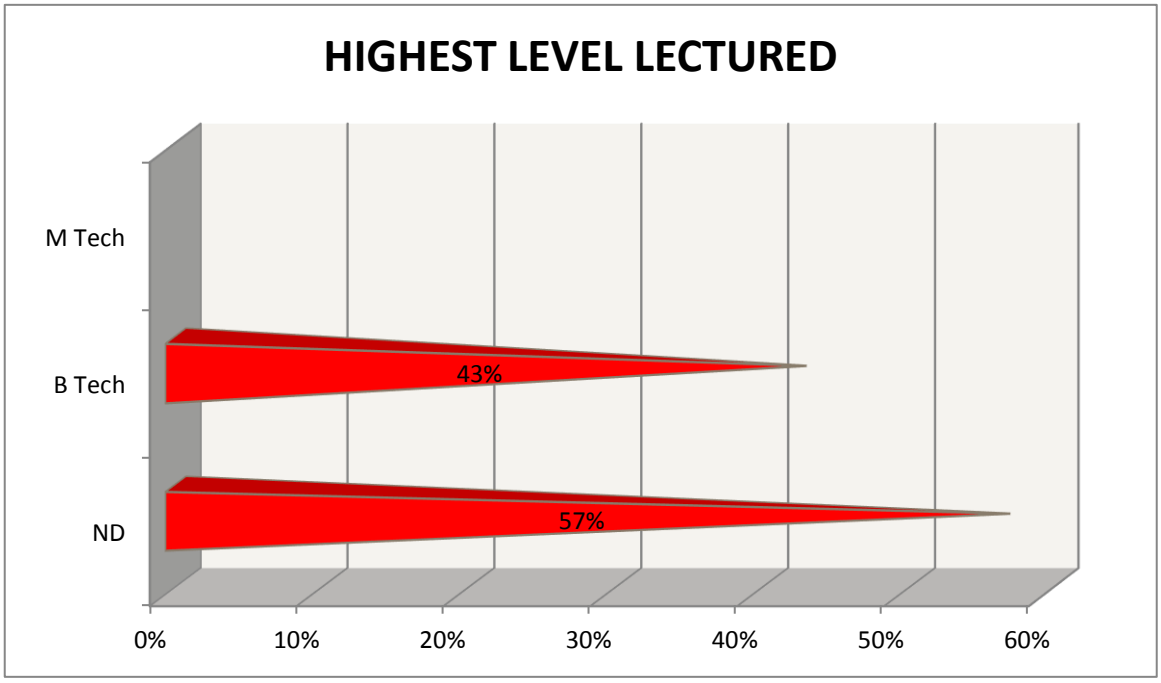


Forty -three percent of the lecturers have been lecturing for less than ten years and a further 43% are between 10 and 15 years. Fourteen percent have been lecturing for more than 25 years, while none of the lecturers have lectured between 16 – 25 years. The lengthy service and years of teaching experience may be advantageous for teaching first-year students. However, there is a large number of academic staff that would be retiring soon and there could be a knowledge deficit in the Department.

4.4.2.4 EXPERIENCE OF LECTURERS IN TERMS OF THE LEVEL TAUGHT IN THE DEPARTMENT OF CMQS

Figure 4.8: Highest level lectured

The diagram below represents a first-year lecturer's experience at other levels of study in the department.



Fifty-seven percent of the lecturers have exclusively lectured at the National Diploma level, while the remaining 43% have taught at the Bachelor of Technology level. None of the lecturers have lectured at the Masters level. There are two possible reasons for this – one being that none of the staff members have a Doctor of Technology or Doctor of Philosophy qualification, the other being that the Department does not offer a course work masters qualification.

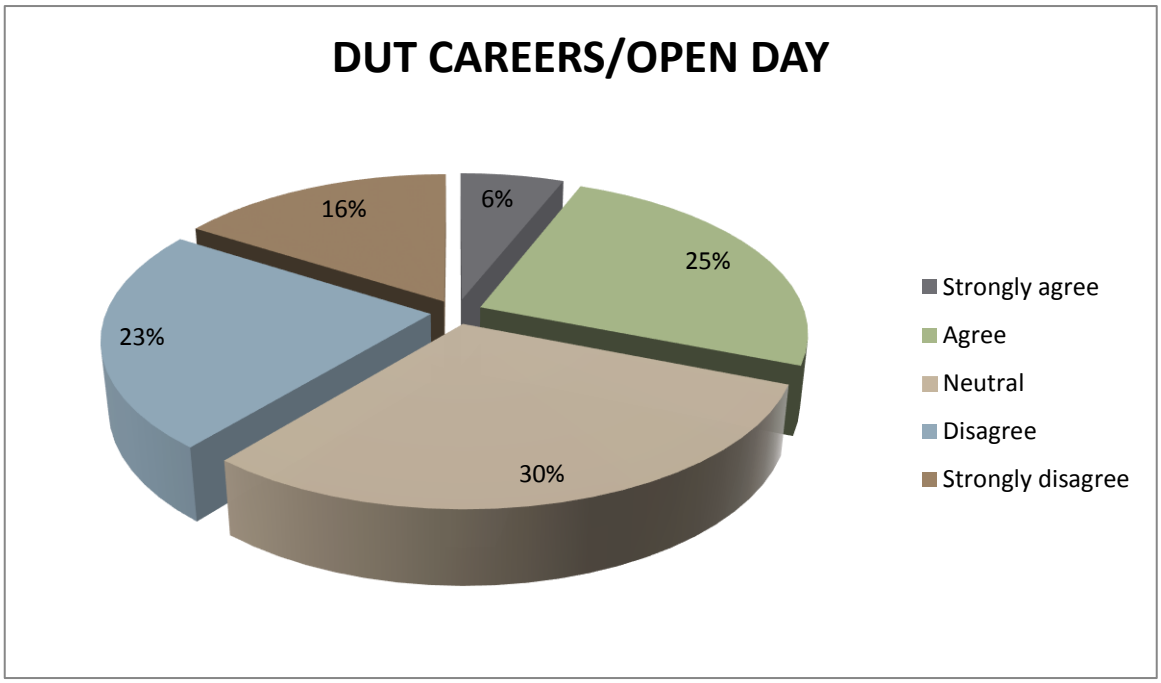
However, opportunities do exist for lecturers to supervise Masters' Degree level students in research.

4.5 OBJECTIVE 1: FACTORS AFFECTING FIRST-YEAR STUDENTS' CAREER CHOICE

4.5.1 DUT's career day

Figure 4.9: DUT's career day.

The figure below represents how first-year students were influenced by the institution's career day in choosing their course of study.



Thirty-one percent (25 + 6%) of the population received information about the programme at the university's career day while the remaining 69% (16+23+30%) received the information from other sources. Public perception of an institution and its reputation in industry as well as to other stakeholders is a decisive factor in determining whether an institution recruits quality students.

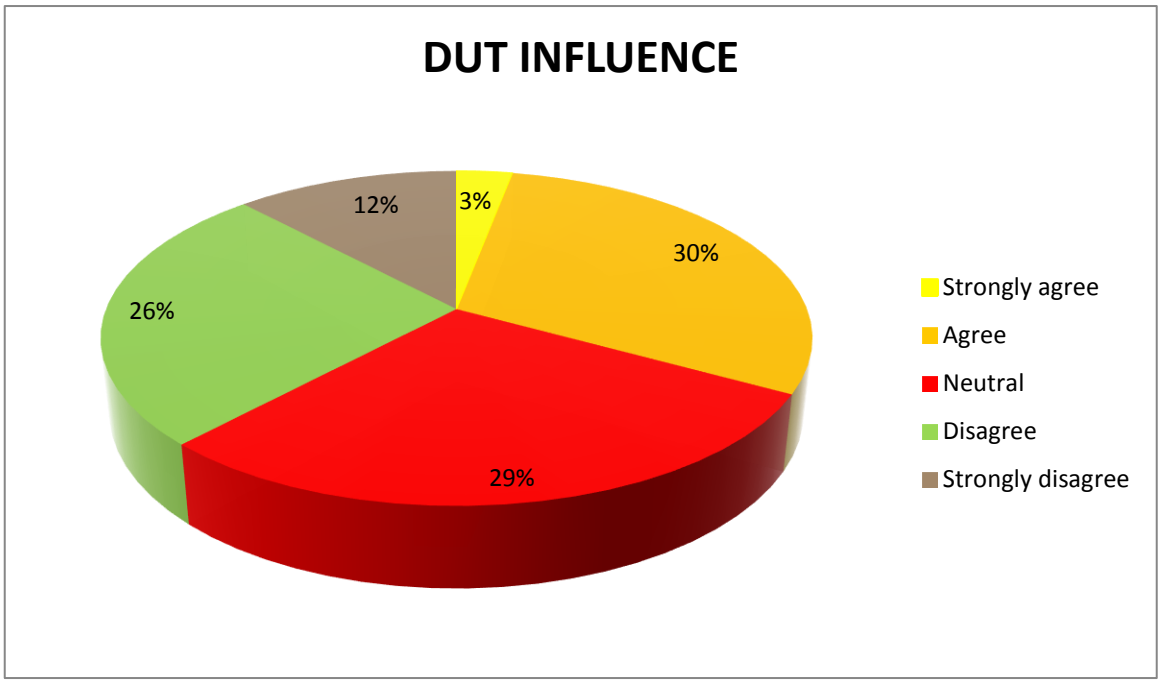
According to Palacio, Meneses and Perez (2002: 486), marketing and brand image of a university in maintaining its competitive edge with regard to other Higher Education Institution (HEIs) is extremely important. The image of the institution can have a positive impact on the

recruitment of potential students and retaining current students. This can also have an impact on funding.

4.5.2 INFLUENCE OF RECRUITMENT OFFICERS AT DUT

Figure 4.10: Influence of Recruitment Officers in choosing Construction Management and Quantity Surveying as a field of study.

The figure below graphically represents the institution recruitment officers and an impact on students' decisions to choose DUT as their choice of HEI.

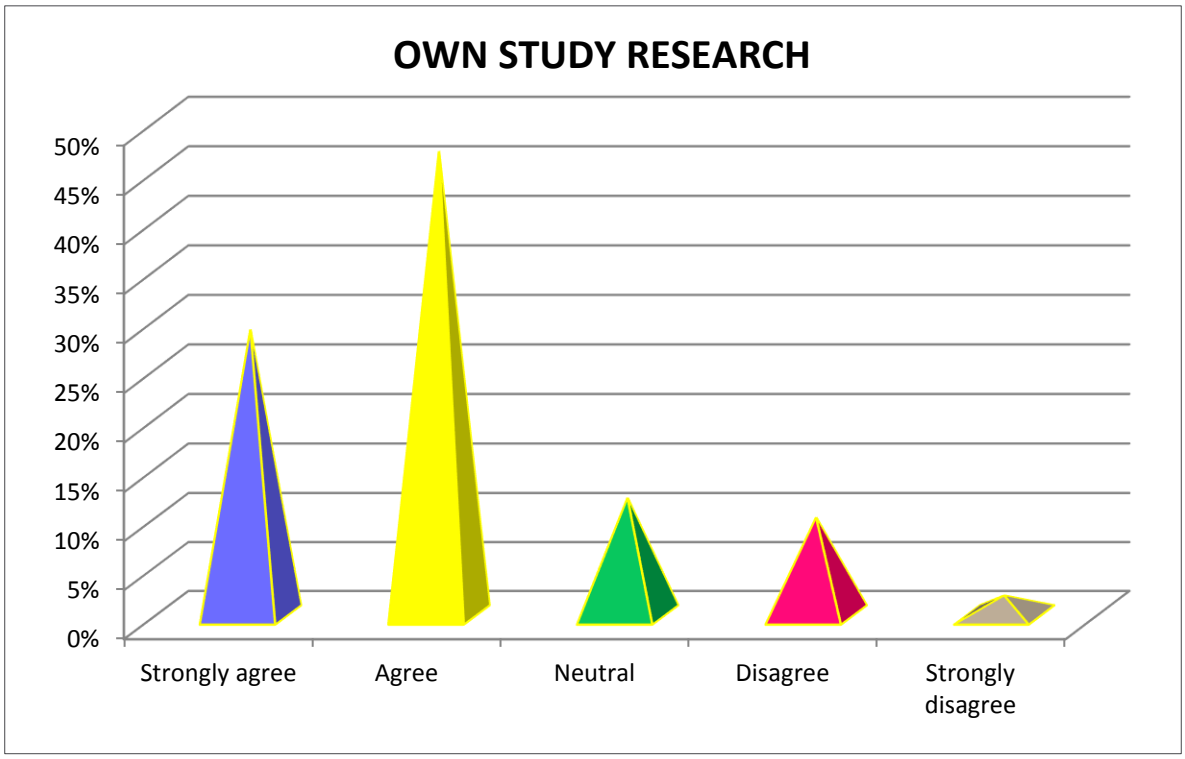


Thirty-eight percent of the respondents (those who agree and strongly agree) agreed that the DUT recruitment officers played a role in influencing their career choice. The remaining 62% had little or no interaction with the DUT recruitment officers. From a marketing perspective, the importance of brand image cannot be under-emphasised as this is a determining factor as to which institution is best suited to a student's need. Open days and campus visits are the most valuable sources of information for prospective students. Advertisements on television or in the printed media are not considered to be particularly valuable sources of information according to Bowden (2013: 450).

4.5.3 OWN STUDY RESEARCH CONDUCTED BY STUDENTS WITH REGARD TO CAREER CHOICE OF STUDENTS

Figure 4.11: Own study research conducted.

The figure below indicates the students who conducted their own research to apply for the programme.

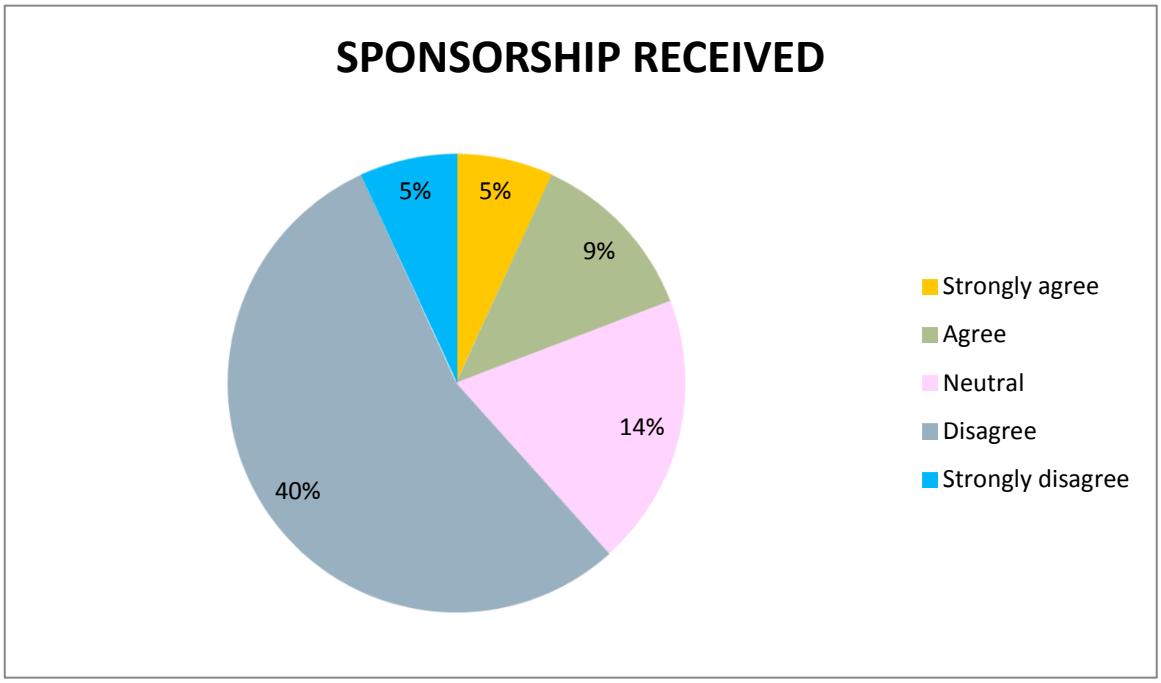


Seventy-six percent of students (agree and strongly agree) did their own research either by word of mouth, searching the internet or liaising with industry representatives before enrolling. The accuracy and adequacy of the information obtained could determine if the student registers. This finding supports the results of the previous sections where careers day and recruitment officers are not adequately utilised.

4.5.4 SPONSORED STUDENTS

Figure 4.12: Sponsorship of students in the Department of CMQS

The following graph shows the influence of sponsorship on a student's decision to register for the programme.

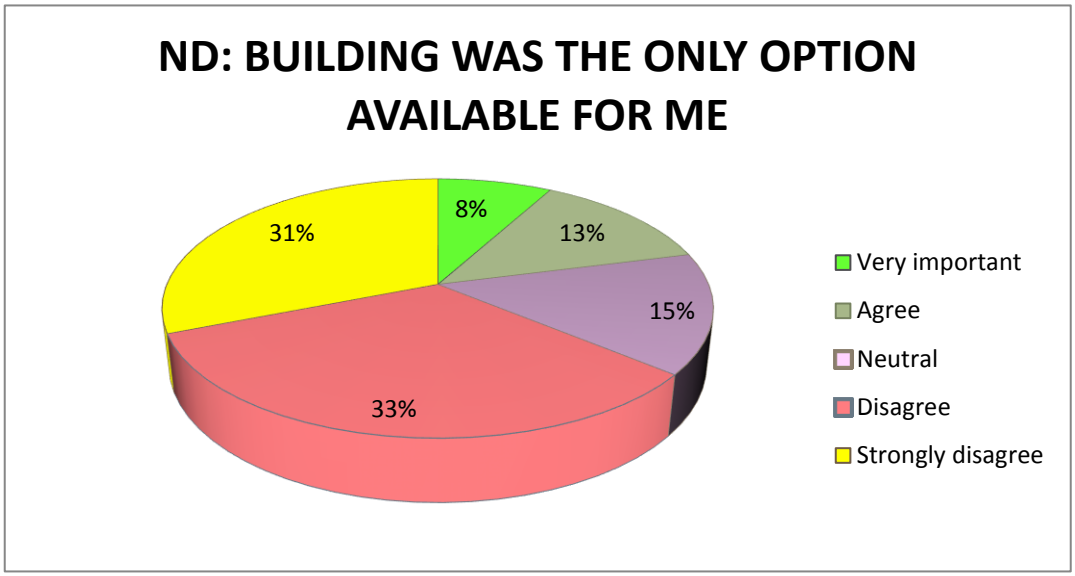


Fourteen percent (9%+5%) of the students chose this career path due to the sponsorship or bursary that they received, while the majority of students did not choose the course as a result of having received a sponsorship or bursary. The data shows that sponsorship was not a major factor in selecting the course. Other factors that could influence the students to register with the Department include employability, technical ability or this was the only programme that accepted the student (see section below). However, receiving sponsorships generally increases the motivation of the students, and his/her academic performance. Bursaries also have the potential to build strong motivational bonds between universities and their students, relieving financial anxiety, legitimising the learner and promoting retention of academic success (Harrison and Hatt 2012: 708). Students who are sponsored or have bursaries may be more motivated to complete their studies in the minimum time due to the prospect of gaining employment with the sponsor.

4.5.5 CAREER OPTIONS AVAILABLE TO STUDENTS

Figure 4.13: Career options available to students who registered in the Department of CMQS

The figure below represents why students chose this programme.



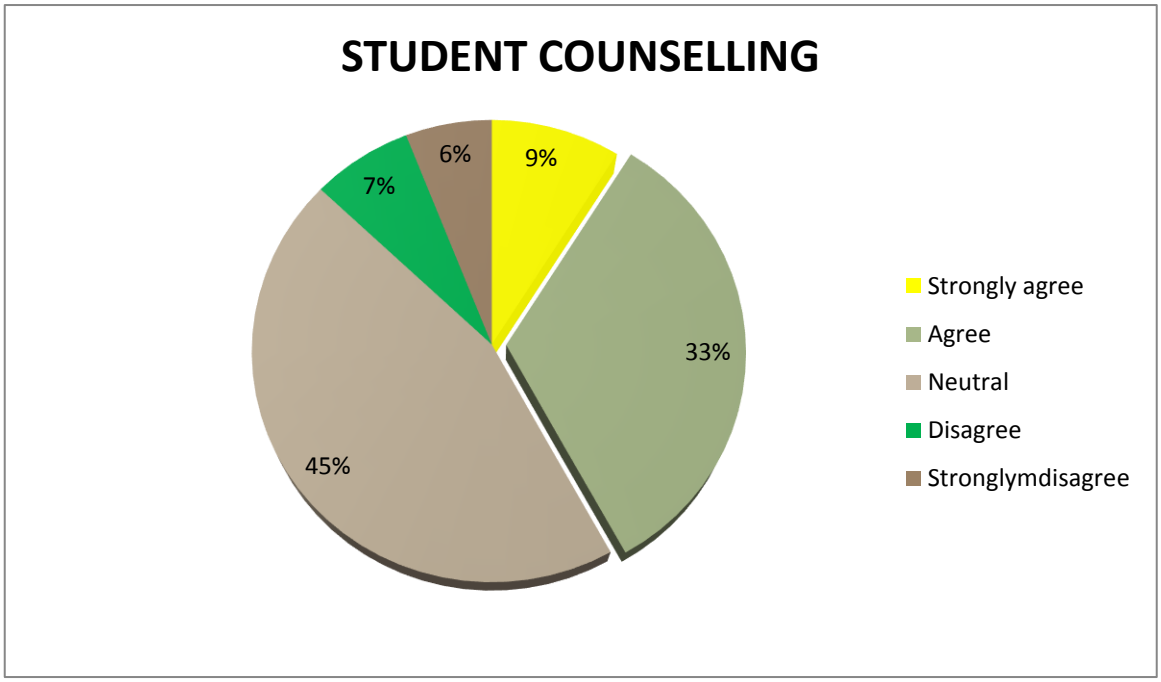
Twenty-one percent (13+8) of students agreed that this was the only option for them. Sixty-four percent (31+33) of the current first-year student population indicated this programme was not the only option available to them since, the students could have declined an offer by other departments and HEIs and considered this programme. Fifteen percent of the students remained neutral to this question. Student success could also be attributed to the student being passionate about the chosen field of study and the high rate (64%) indicates that students may have considered other career options and chose Construction Management in order to secure a place at a tertiary institution. This choice could affect the student's level of motivation and academic performance.

4.6 OBJECTIVE 2: INSTITUTIONAL SUPPORT SYSTEMS FOR FIRST-YEAR STUDENTS

4.6.1 THE USE OF STUDENT COUNSELLING SERVICES BY FIRST-YEAR STUDENTS

Figure 4.14: Student Counselling

The diagram below analyses the importance of student counselling in his/her university life:



Nine percent of students strongly agreed for the need for student counselling during their studies, while 33% agreed that this is an important support centre for students. Forty-five percent remained neutral and seemed unaffected by the student counselling services rendered to first-year students.

Mental health issues, particularly regarding stress and depression were felt to be extremely important with regard to the support system. Stress is brought about due to various factors, namely, by the transition from home to university life, living away from home and the combined academic pressures at university (Dunne and Somerset 2004: 360). Health education regarding proper diet, the different medical conditions and access to the student health and counselling

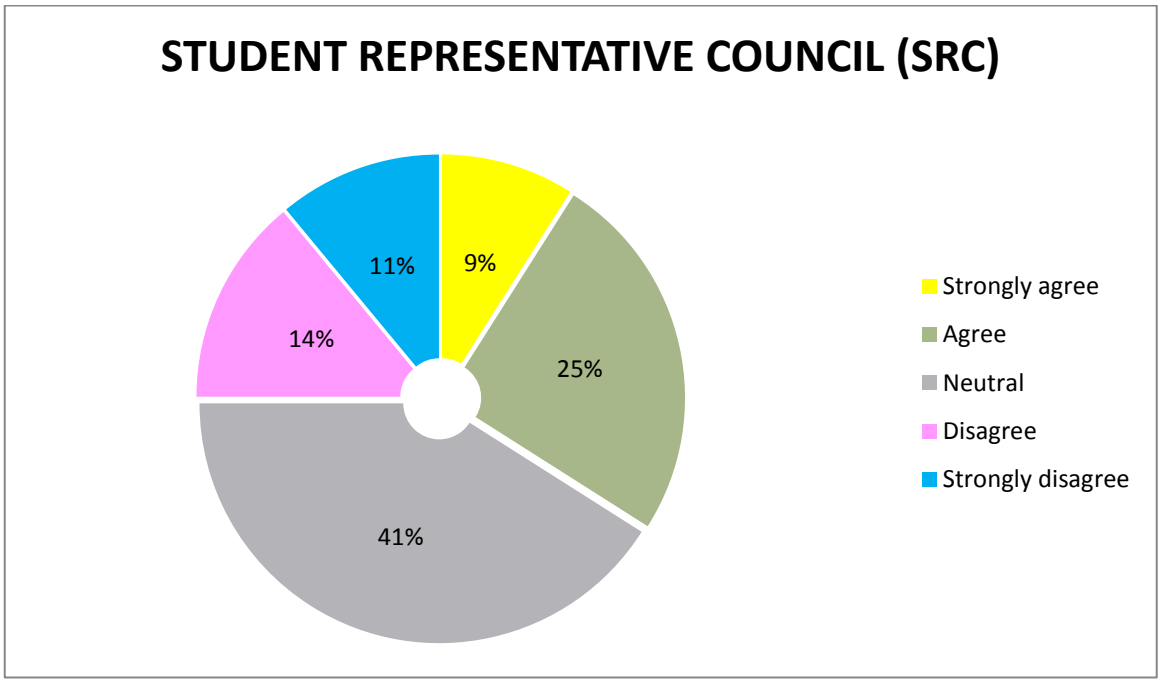
department services need to be addressed at first-year level, especially for students who reside on campus.

It is widely acknowledged that social conditions are directly associated with health and well-being and transition to university can have a significant effect on a student's health. Students are pressured into making decisions out of school for the very first time as young adults, which could be a traumatic experience.

4.6.2 ENGAGEMENT WITH THE STUDENT REPRESENTATIVE COUNCIL (SRC)

Figure 4.15: Student representative council (SRC) engagement with students from the Department of CMQS

The figure below indicates the level of importance students have towards the role the SRC has within the institution.



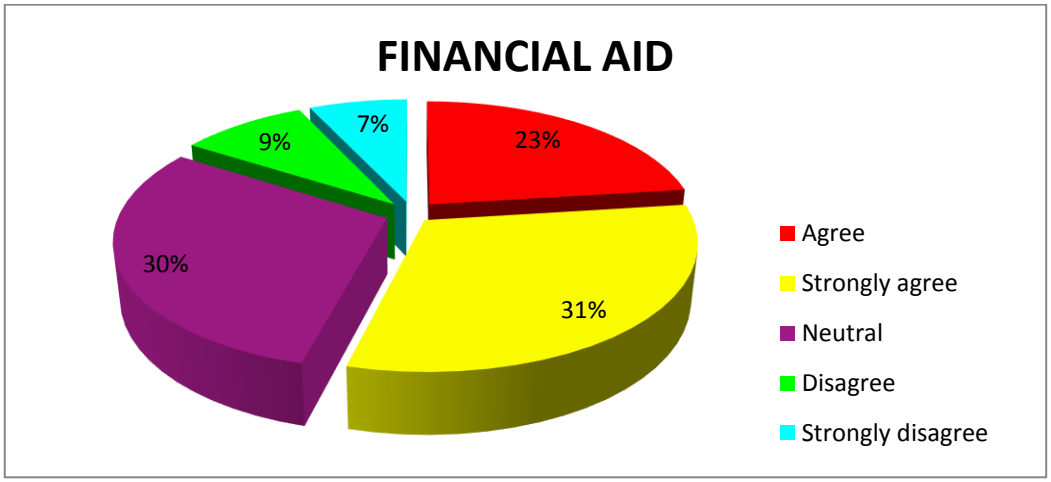
Nine percent of the students strongly agreed that the services of the SRC were required in the first-year of study, 25% acknowledged that they knew what the role of the SRC, was while 41% were neutral to the role of the SRC. This could be attributed to the fact that students do not clearly understand the role and function of this committee, except when there are student protests on campus. The objectives of the SRC at DUT is to represent students of the university in matters that may affect them, provide leadership to the student body, serve the interests of students without partiality, bias, prejudice, discrimination or preference.

Student representatives from first-year together with student representatives from other levels of the programme can have joint meetings with academic staff to discuss students concerns. These joint discussions can contribute immensely to the quality of the programme as well as the motivation of students because students begin to feel a sense of security that their concerns will be addressed. Student-staff meetings can be seen as a platform where each party can view their concerns and derive solutions, creating a better learning and teaching environment. Zuo and Ratsoy (1999) cited in Lizzio and Wilson (2009: 71), reiterates this importance by stating that student representation on departmental committees has been identified as the most strategic and potentially useful mechanism, because it aids problem-solving at a local level, on issues that have an immediate impact on students, while offering the greatest potential for building a sense of community between staff and students.

4.6.3 FINANCIAL AID SERVICES AT DUT

Figure 4.16 Use of the financial aid services at DUT

The figure below represents the students' interest in the financial aid services offered at the institution.



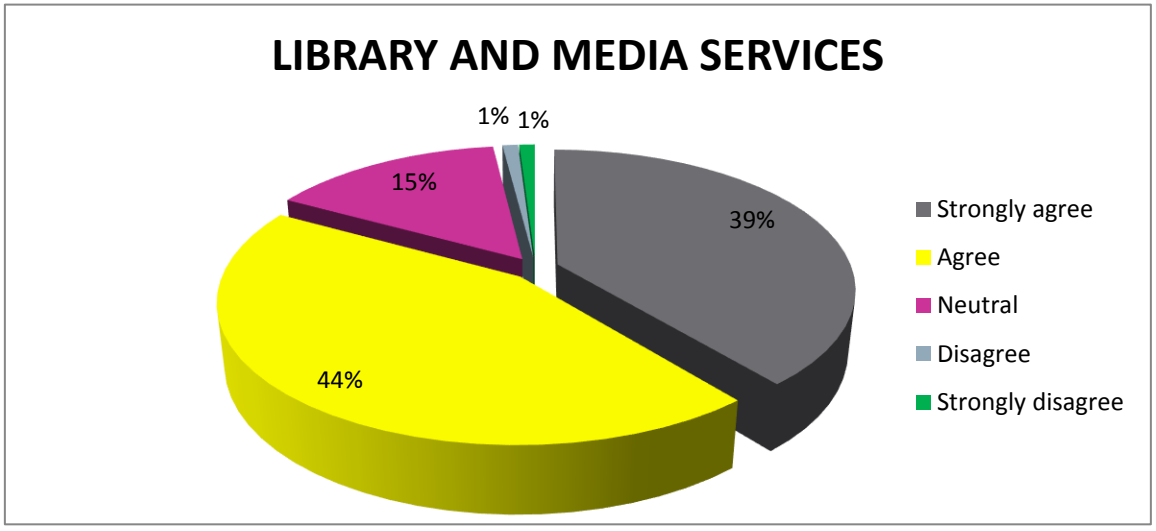
Twenty-three percent of respondents strongly agreed that this service is important, 31% agreed that financial aid is required at first-year level, 30% was unsure about the importance of this service, while seven percent of the students strongly disagreed that the services provided by the financial aid facility was important. Nine percent disagreed that it was an important service provided by the institution.

The high percentage of students unsure about the financial aid services could be attributed to the fact that most students are privately funded by parents or bursars. Being a first-year student, they could be unaware of the facilities or services being offered by the institution which could be attributed to the high level of student protests at HEI's. Business Report (Sunday Tribune, 2015: 1), reported that after a week of the recent student protests, the Finance Minister painted a bleak picture of state finances and the economy, both nationally and internationally. Universities need to make strategic decisions for student funding and their loan schemes in order for institutions to be globally competitive. However, HEIs need to plan and execute their student finances appropriately and effectively by having ongoing student discussions to avert finance-related student protests. Student protests relating to financial aid have adverse implications on student assessments as these have to be rescheduled, lecturers are rushed to complete the syllabus and

this also has implications on the reputation of the institution. For a student, the feeling of not having the burden of finances could ensure that he/she is less stressed and therefore able to concentrate more on their studies.

4.6.4 THE USE OF LIBRARY AND MEDIA SERVICES

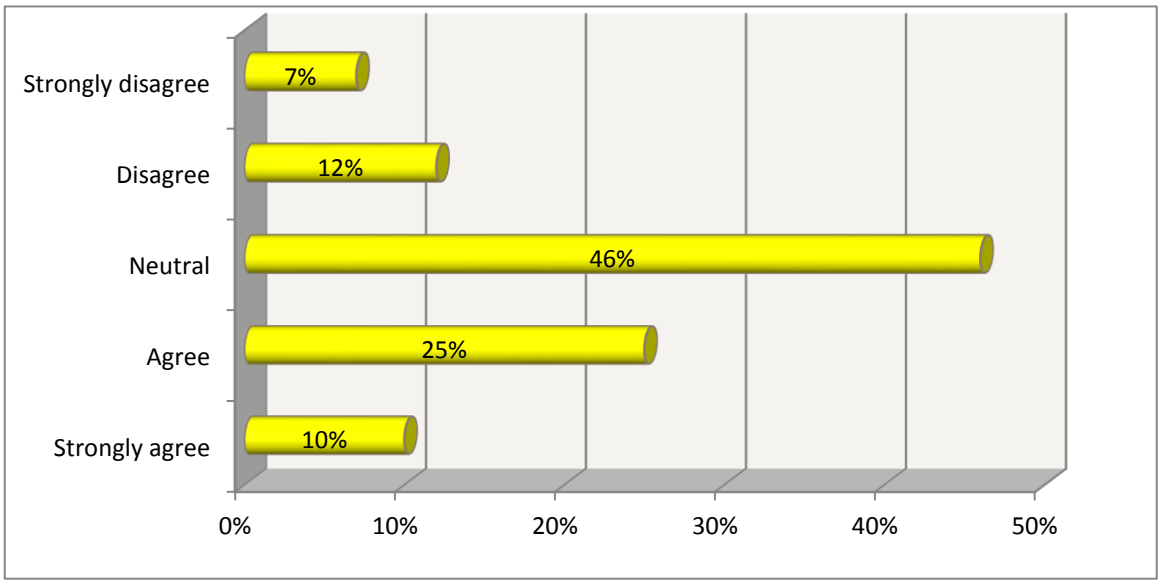
Figure 4.17: The importance of the library and media services at DUT.



The library facility is used by 83% of the first-year student population. Only 2% of the students felt they had no need to use the library. Like most other courses, information and academic literacy courses need to be student-centred and although departments and library staff may be the designers and facilitators, it is the students who decide how to make use of available resources to solve their problems (Chen and Lin 2011: 410).

4.6.5 THE IMPORTANCE OF CULTURAL AND RELIGIOUS AFFILIATIONS FOR STUDENTS

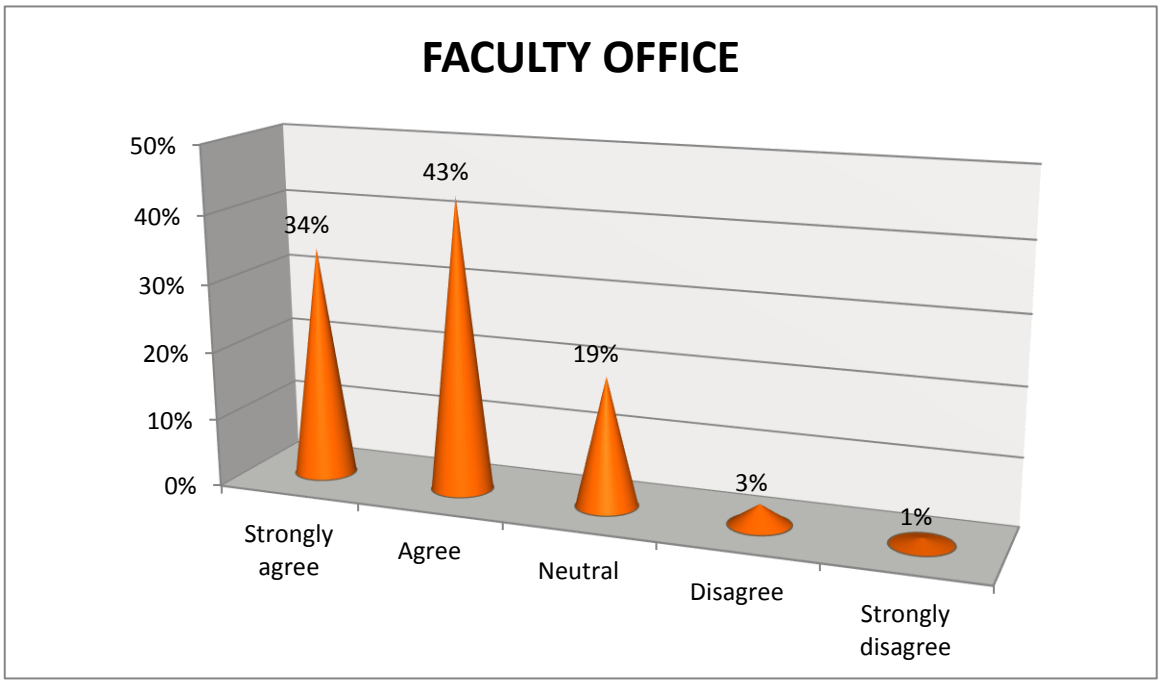
Figure 4.18 highlights the importance of cultural and religious affiliations.



Forty-six percent of students were neutral to cultural and religious body affiliations at DUT. Either they are unaware of these facilities on campus or do not have any interest in such affiliations. Nineteen percent (12% + 7%) disagree to the use of such services, implying that these affiliations may not be critical for their success on campus. Thirty-five percent agree to such affiliations and recognise these services as being important. According to Bowman and Smedley (2013: 756), non-religiously affiliated students are an important group that merit attention, as non-affiliated students fare more poorly than students from any other religious group in terms of several forms of university satisfaction. Belonging to a cultural or religious affiliation may assist first-year students' transition to university life and could assist in motivating them to becoming more responsible towards their studies.

4.6.6 FACULTY OFFICE SERVICES AT DUT

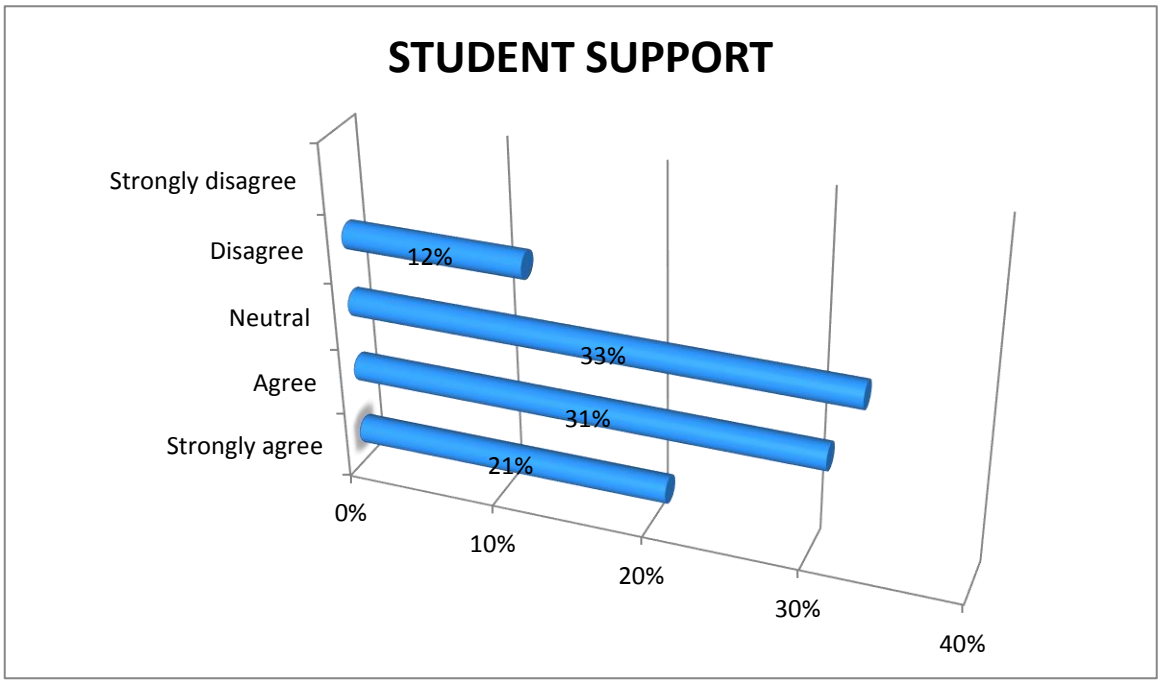
Figure 4.19: shows the significance of student support from the Faculty Office within the Faculty of Engineering and the Built Environment.



The faculty office provides the departments and students with information regarding a variety of student issues and students' registration. Seventy-seven percent of the respondents agreed that the services of the faculty office are important. Four percent of the students felt that the Faculty Office was not important while 19% were neutral. The Faculty Office is the contact point for all undergraduate and postgraduate students in the Faculty of Engineering and Built Environment. Students who have issues with their registration and subject enrolments should seek assistance as the Faculty Office would be able to provide accurate and timely information.

4.6.7 STUDENT SERVICES SUPPORT AWARENESS

Figure 4.20 represents knowledge of the various support systems.



It was found that 52% of students are aware of the services being offered by the university in terms of supporting students. Fifteen percent of the students may be unaware of services offered by the university. Bowden's (2013: 434) study conducted on first-year students revealed that first-year transition to higher education involves a significant amount of cognitive adaptation for the student which can lead to a range of psychological barriers within the new environment as well as disruption to academic learning process.

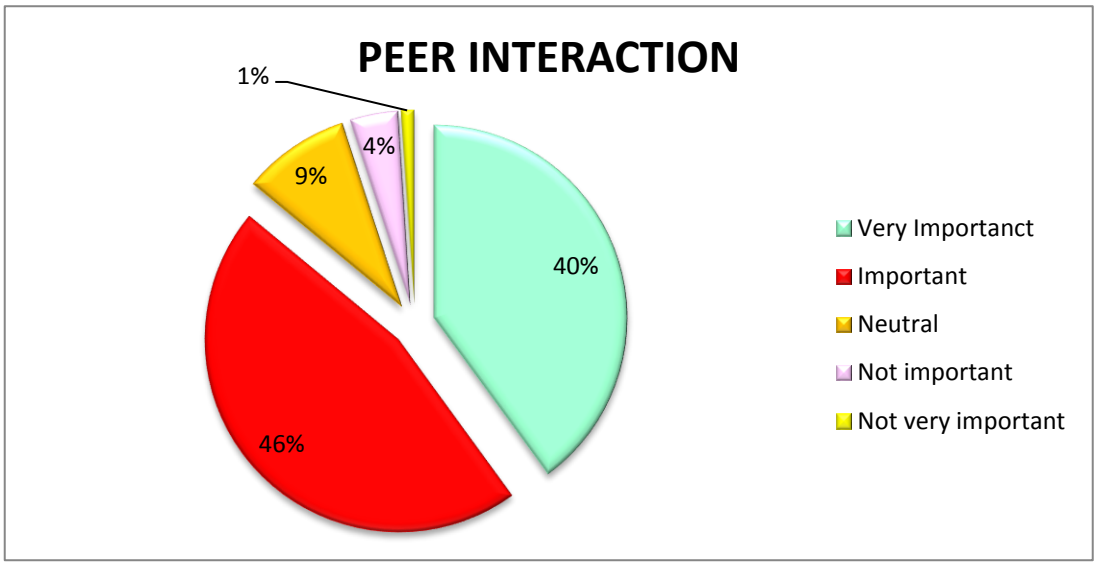
4.7 OBJECTIVE THREE: FACTORS AFFECTING STUDENTS' ACADEMIC PERFORMANCE

4.7.1 STUDENTS' PERCEPTIONS OF FACTORS CRITICAL FOR SUCCESS

4.7.1.1 PEER INTERACTION WITHIN THE DEPARTMENT OF CMQS

Figure 4.21: Peer interaction of students within the Department of CMQS.

The following figure graphically represents whether interaction with fellow students assisted their motivation at first-year level.



Eighty-six percent (40% + 46%) of the students agreed that constant interaction with their peers motivated them to succeed. Nine percent of the students remained neutral and unaffected by this question while only 5% felt assistance from their peers had no effect on their motivational levels.

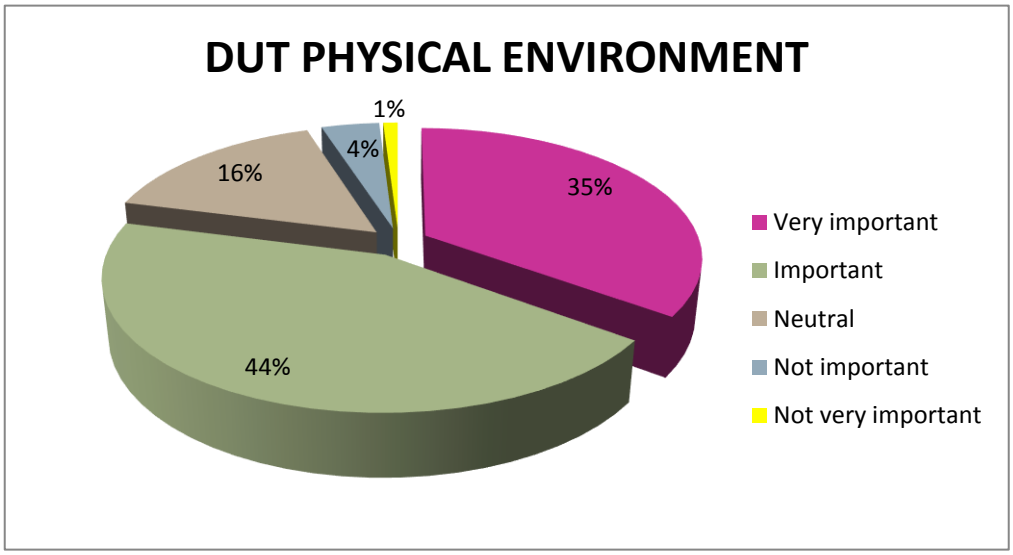
In response to questions posed to first-year students at an Australian University about experiences that had impacted students in a positive way, participants commented that meeting friends, social activities as well as receiving good marks and feeling good about doing well were important factors (Wrench, Garrett and King 2013: 730-746) were important factors. The reliance on each other clearly shows that interaction amongst the group keeps these students positively motivated in class and social interaction impacts their learning positively. This also

contributes positively to the process of transition from high school to university and reduces the pressures of adjustment in the new environment. A study conducted by Moore, Westwater-Wood and Kerry (2016: 128) states that the introduction of a peer coaching model and associated assessment was successful in driving deeper learning of content material and enhancing the socialisation of students into their learning environment.

4.7.1.2 PHYSICAL ENVIRONMENT AT DUT

Figure 4.22: The physical environment

The figure below highlights the importance of the physical environment at DUT.



Seventy-nine percent of the students (35% + 44%) felt the physical environment of DUT was important to their studies while 5% felt that the physical environment did not help them to achieve better. The remaining 16% felt that the DUT physical environment had little to no impact on their studies and remained neutral. Connor (2012: 855) states that the learning environment is relevant to student motivation and if the university's visual appearance or the quantity/quality of student facilities are poor, the learner motivation is likely to diminish.

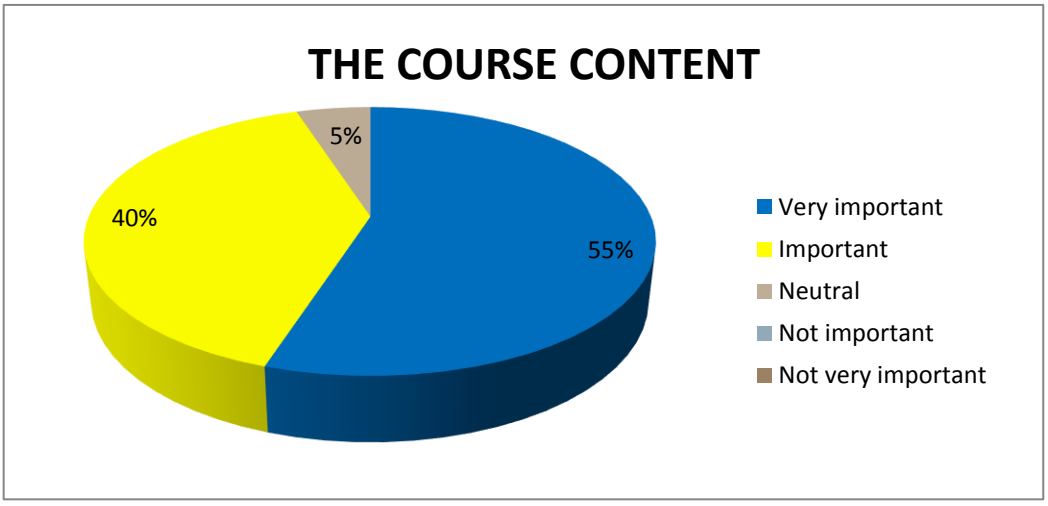
Institutions that satisfy the needs and expectations of their students with respect to the physical environment should contribute positively to the motivation of these students. Studies by (Bluyssen et al. (2011), Felsten (2000), Huang et al. (2004), Roelofsen (2002) cited in

Muhammad, Sapri, Sipan (2014: 1160) have shown that the physical environment influences users and it can therefore be deduced that the learning environment is capable of influencing the students' behaviour, comfort, health and productivity. The physical environment of an institution plays an important role in the general well-being of a student in terms of their sense of pride and being part of such an institution. Herzberg identified hygiene factors such as the physical environment which could positively or negatively affect a student's ability to adapt to tertiary life (see figure 2.6).

4.7.1.3 COURSE CONTENT

Figure 4.23: Course content

The figure below graphically shows the importance of the course content for first-year students.

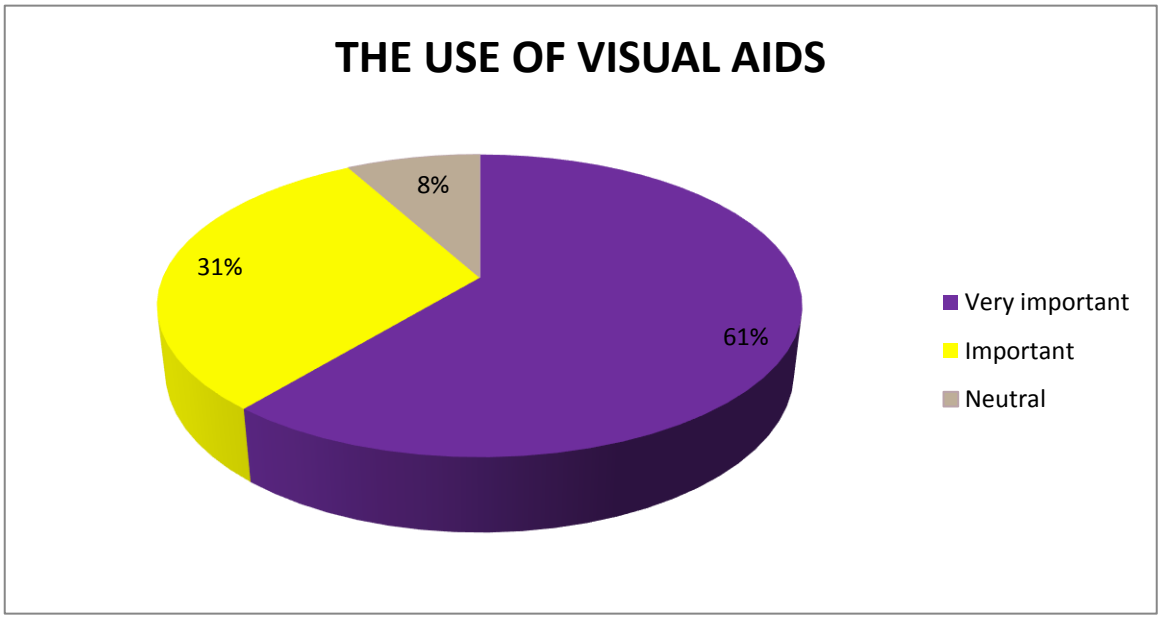


Ninety-five percent (40% + 55%) of the student population agreed that subject content was crucial for passing first-year. The remaining 5% felt that the course content made no difference to their motivational level. Students are only truly motivated by enabling them to reach for and satisfy the factors that Herzberg identified as real motivators, such as achievement, advancement and development, which represent a far deeper level of meaning and fulfilment. McClelland's theory of needs comments on students' achievement needs and goals which may be related to the relevance of the course content to the student.

4.7.1.4 USE OF TECHNOLOGY FOR LECTURING PURPOSES

Figure 4.24: Visual aids as a teaching tool for teaching

The figure below highlights the importance and use of visual aids or technology for teaching first-year students.



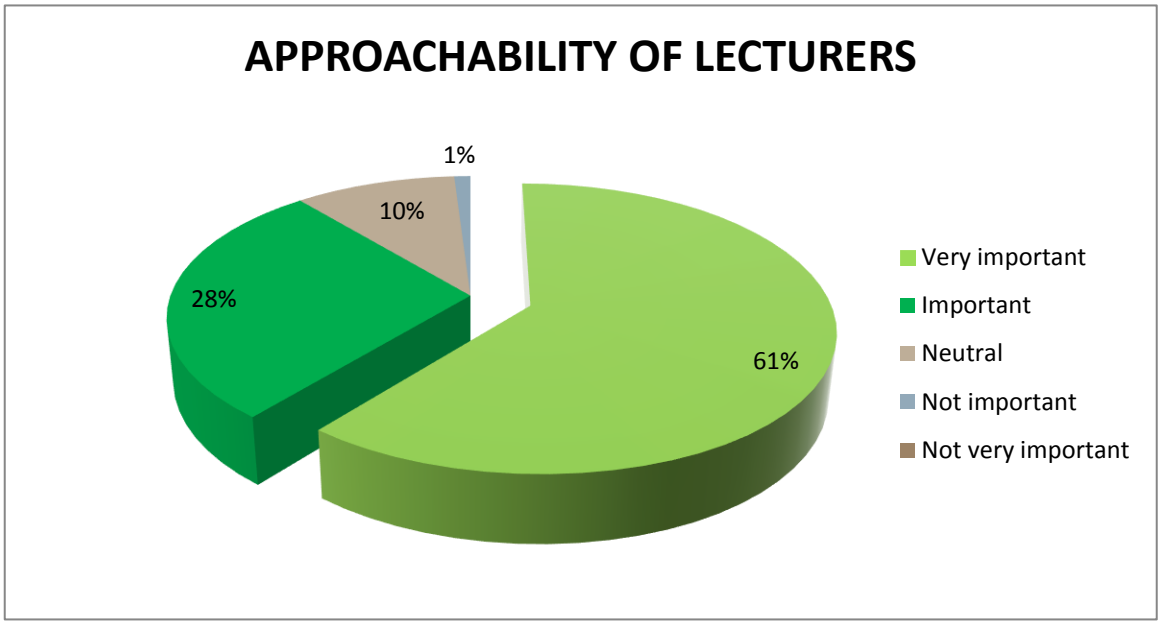
Ninety-two percent (61% + 31%) of the students felt that the use of visual aids was extremely important for their studies, in order to understand the course content. The remaining 8% of students was indifferent to the use of visual aids in the lecture room and this indicates that they could adapt to their studies without visual aids. Many first-year students do not understand the concepts associated with construction or quantity surveying and should be visually exposed. Visual and technological aids, such as e-learning, OHPs and video clips, help in bringing industry to the classroom and enhances teaching and learning.

The study by Ghazivakili et al. (2014: 8) reveals that learning styles, critical thinking and academic performance have a significant relationship to each other and recommends lecturers to use different methods which are consistent with the learning style of students. Students' difficulty in adapting to university, with culturally and socially different backgrounds, may result in students adapting to visual aids to understand critical concepts.

4.7.1.5 APPROACHABILITY OF LECTURERS IN THE DEPARTMENT OF CMQS

Figure 4.25: Approachability of lecturers

The figure below indicates the importance of lecturers' approachability.



Eighty-nine percent (61 + 28%)) of the students indicated that it was important for lecturers to be approachable. Eleven percent (10% + 1%) of the students did not feel the lecturers needed to be approachable. Students should be able to approach their lecturers when faced with challenges and constructive engagement with the lecturer could enhance the quality of campus life and learning experiences.

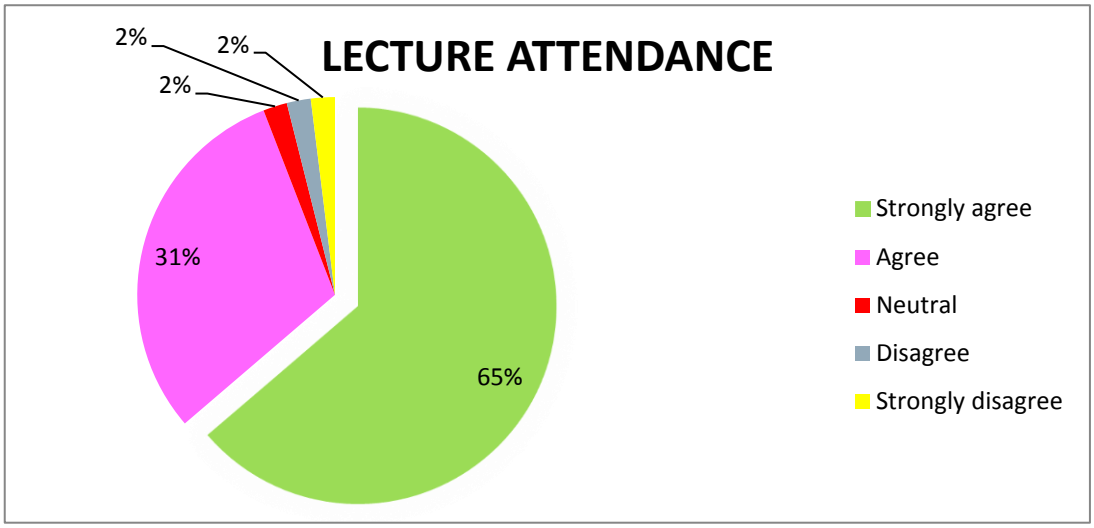
Penszine and Pulas (2000) cited in Hagenauer and Volet (2014: 375) argued that lecturer approachability is an important quality that must be guaranteed in order to facilitate positive lecturer interactions. This assists students in having a feeling of connectedness and assists students in feeling a sense of belonging in the institution, as it is at the first-year level that the majority of students drop out of university. First-year students experience anxiety and this is coupled with the stress of adapting and 'fitting in' may pose a difficult experience for some first-year students. Lecturing styles and especially approachability of lecturers can play a defining role in whether a student can approach lecturers without fear when faced with a problem which could result in students performing better in class assessments.

Lecturer approachability promotes personalised learning where students, when faced with difficult sections of their work, can approach their lecturer with ease. This promotes student centredness (see figure 2.7). Students begin to feel competent in their tasks and studies.

4.7.1.6 STUDENT ATTENDANCE AT LECTURES

Figure 4.26: Attendance of students to lectures

The figure below indicates the students' views on attendance at lectures.

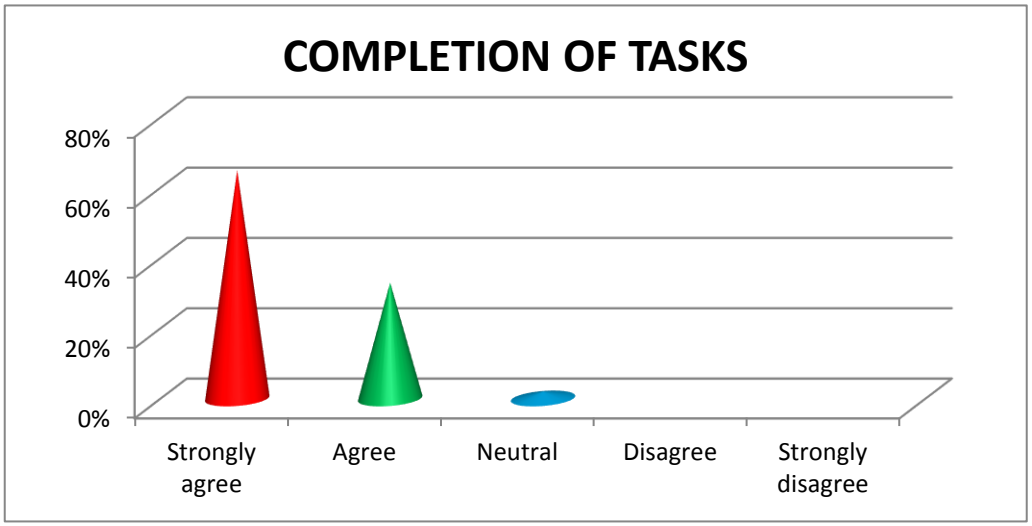


Ninety-six percent (65 + 31) of the students felt that attendance of lectures was a fundamental part of passing their first-year courses. Two percent of the students were neutral and the other 2% disagreed that regular attendance at class was crucial. Attendance is critical as the majority of students originate from previously disadvantaged communities, where high school education does not adequately prepare students for university. However, the socio-economic status of students, namely, affordability to attend university on a daily basis, adversely affects attendance. The recent spate of strikes also affected students' attendance at lectures.

4.7.1.7 COMPLETION OF TASKS

Figure 4.27: Completion of tasks

The figure below explains graphically the importance of task completion.

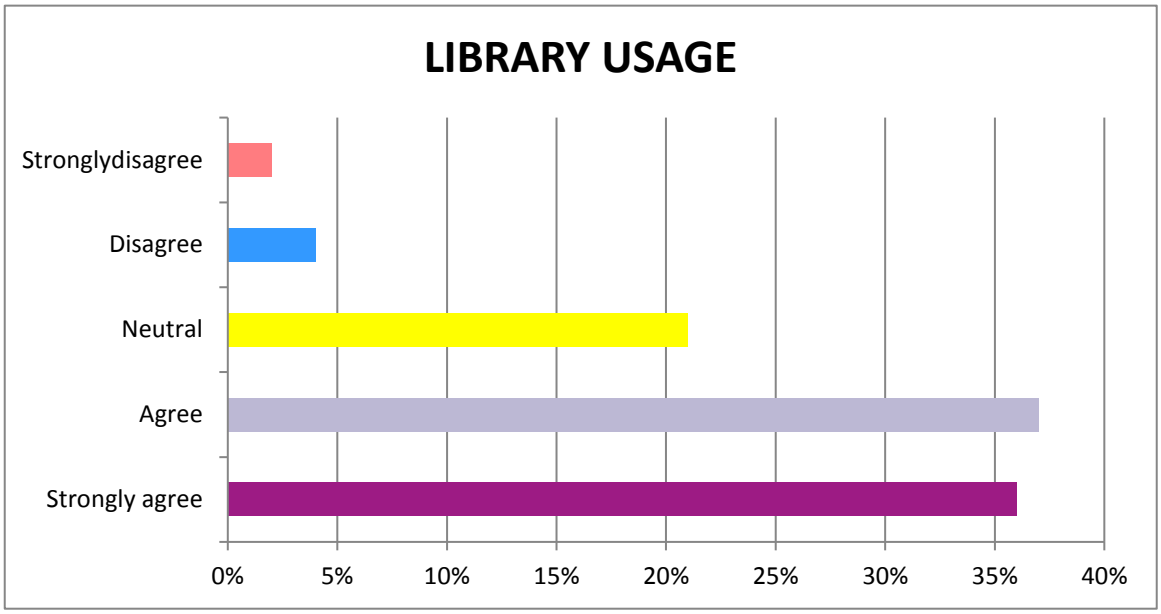


Ninety-six percent (65% + 31%) of the students felt it is important to complete their assessments while two percent of the students remained neutral to this question. Incomplete or non-submission of both formative and summative assessments does not provide an opportunity to gauge the level of understanding of the course material by the student. Hence, the lecturer is not in a position to undertake remedial action, thus making the teaching and learning process inadequate.

4.7.1.8 USE OF DUT LIBRARY FACILITIES BY CMQS FIRST-YEAR STUDENTS

Figure 4. 28: Use of the library facilities

The figure below explains the use of the library facilities and its impact on a student's motivation.

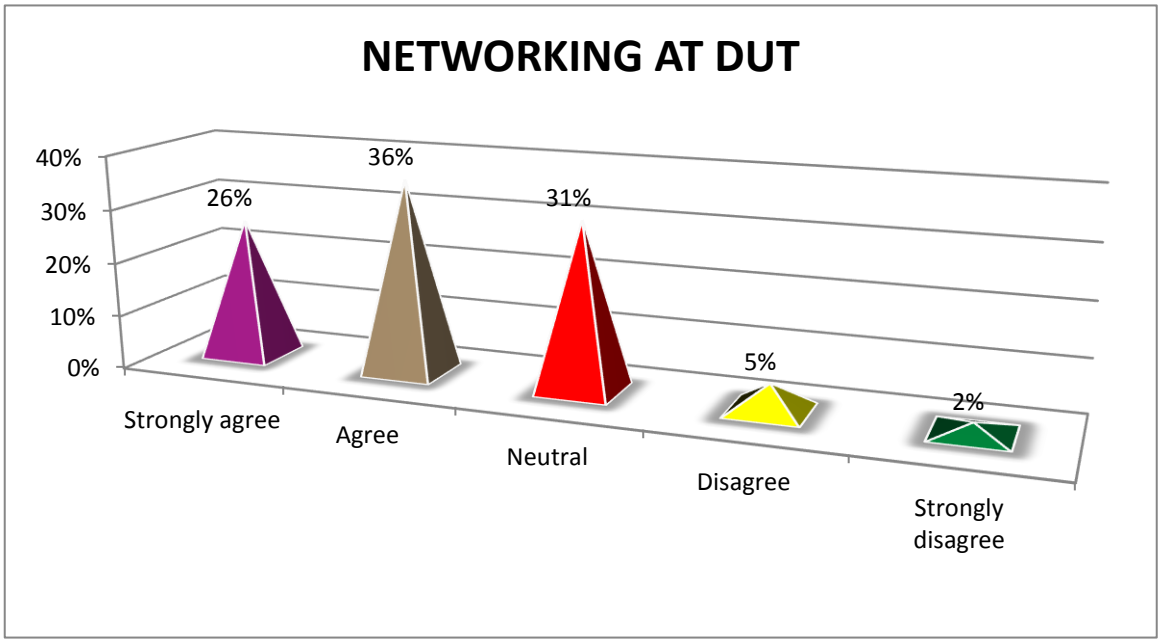


Seventy-three percent (36% + 37%) of the students use libraries and recognise the use of the library is important to pass their courses in first-year. Twenty-one percent of the students remained neutral while 7% (4% + 2%) disagreed. Where the use of the library was limited, this could be attributed to the learning outcomes, nature of the formative assessments and students not requiring additional information to the lecture notes.

4.7.1.9 SOCIAL NETWORKING OF CMQS STUDENTS AT DUT

Figure 4.29: Networking at DUT

The figure below analyses the importance of social networking towards students' success.

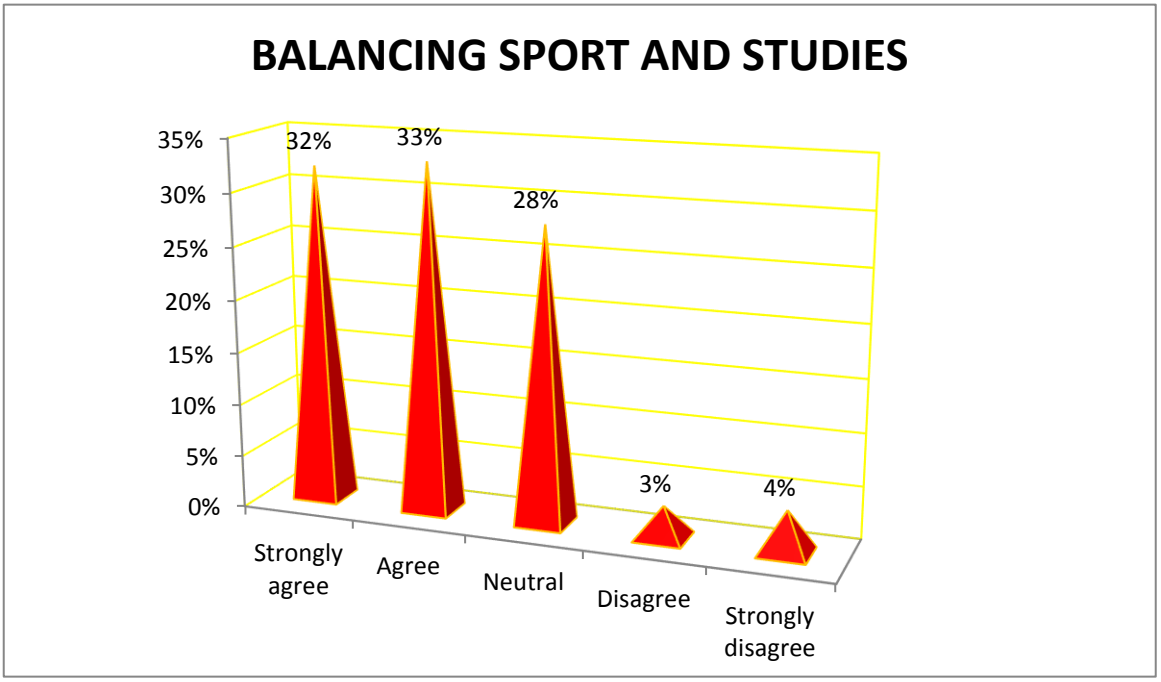


Sixty-two percent (26% + 36%) of students felt that socialising with other students within the campus would benefit them to succeed. Thirty-one percent answered that they were neutral to socialising. According to Bowden (2013: 447), a number of operational strategies could be employed by institutions to foster and accelerate the establishment of effective bonds amongst students. This result supports the students views of the importance of peer interactions at the university (see section 4.7.1.1).

4.7.1.10 STUDENT LIFE AT DUT

Figure 4.30: Student life within the department of CMQS

The diagram below analyses the non-academic aspects of a student's life, such as recreational and sporting activities.



Sporting and academia are two activities that complement each other. Thirty-two percent of the students in the survey strongly agreed that sports and academics can be balanced and a further 33% agreed that it was a possibility. Twenty-eight percent of the students were indifferent towards sports and academics being complementary activities. Seven percent (3% + 4%) disagreed that sporting activities enhance their academic life.

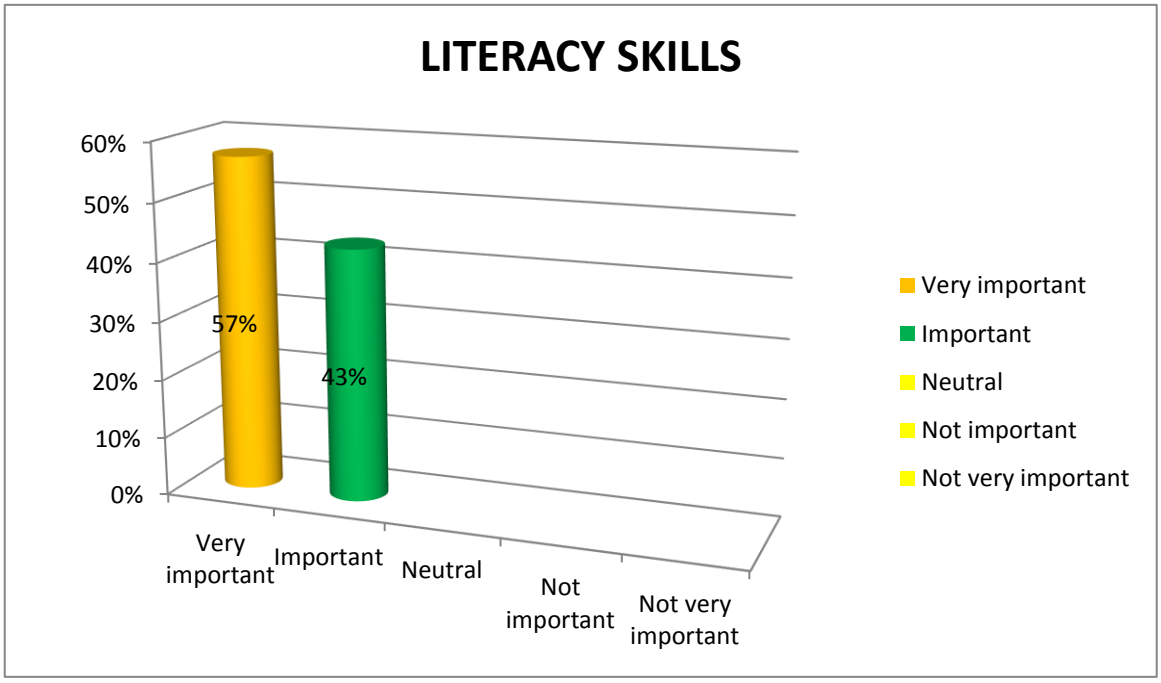
The fact that students from disadvantaged backgrounds (and schools) have not been given opportunities to create a balance between school, work and sport, may not understand the benefit of activities offered by the institution in terms of balancing their academic life.

4.7.2 LECTURERS' PERCEPTIONS OF FACTORS CRITICAL FOR SUCCESS

4.7.2.1 LECTURER PERSPECTIVE: LITERACY SKILLS REQUIRED FOR FIRST-YEAR STUDENTS

Figure 4.31: Literacy skills required for first-year students

The figure below represents literacy skills required to assist a student succeed at first-year level.



One-hundred percent (57% + 43%) of the lecturers felt literacy skills are an important factor which will contribute to a student's success at first-year level. The advancement of technology and the need for a student to think critically to solve society's complex problems, necessitates that a student has good literacy skills so that a student can process information and apply that knowledge during his student and working life.

Based on the findings of a gap analysis study by Griesel and Parker (2009: 11), in conjunction with SAQA and HESA regarding South African graduate attributes, the study showed significant gaps in terms of communicative and ICT skills. It seems that in terms of what employers regard as the most important components of basic skills and understanding attributes, higher education institutions are not aligned with these expectations. The role of writing in building critical

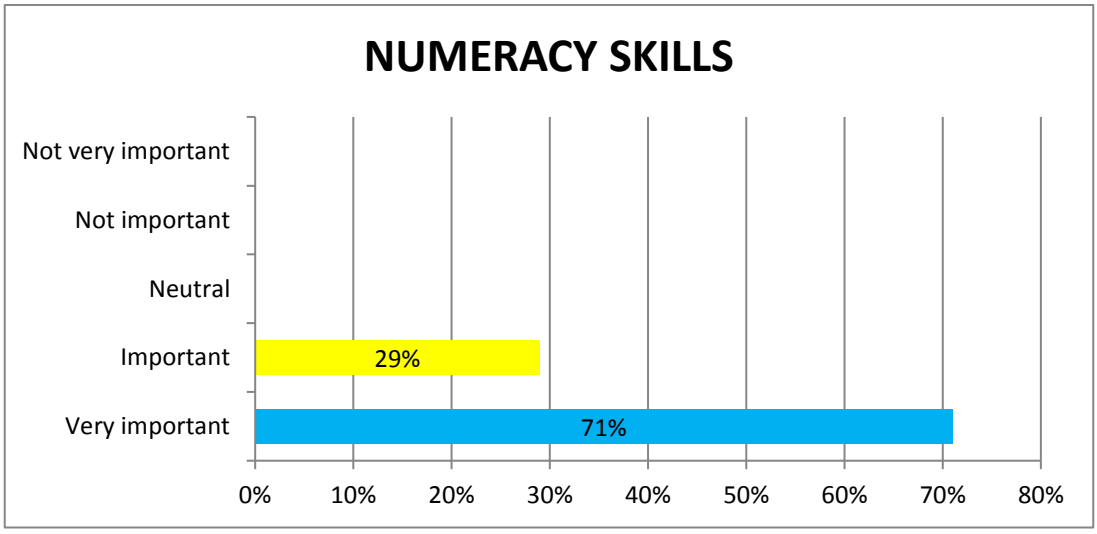
appraisal skills is of particular importance, especially for university students who are expected to represent their knowledge in writing by making critical connections within subject areas, and generalising ideas to other contexts (Baily, Zanchetta, Celasco Pon and Hassan 2015: 524). It should be noted that thus far for the majority of the students (black), English is their second language, which presents difficulties for students.

However, at DUT's Writing Centre students can expect tutors to guide, advise and support them with the aim of developing their writing skills and confidence, especially at first-year level. This is an important support centre for first-year students who are finding difficulties with the changes and demands that are expected of first-year students.

4.7.2.2 LECTURERS' PERSPECTIVE: NUMERICAL SKILLS REQUIRED FOR FIRST-YEAR STUDENTS

Figure 4.32: Numerical skills required for first-year students

The figure below represents numerical skills as a critical skill required to assist a student succeed at first-year level.



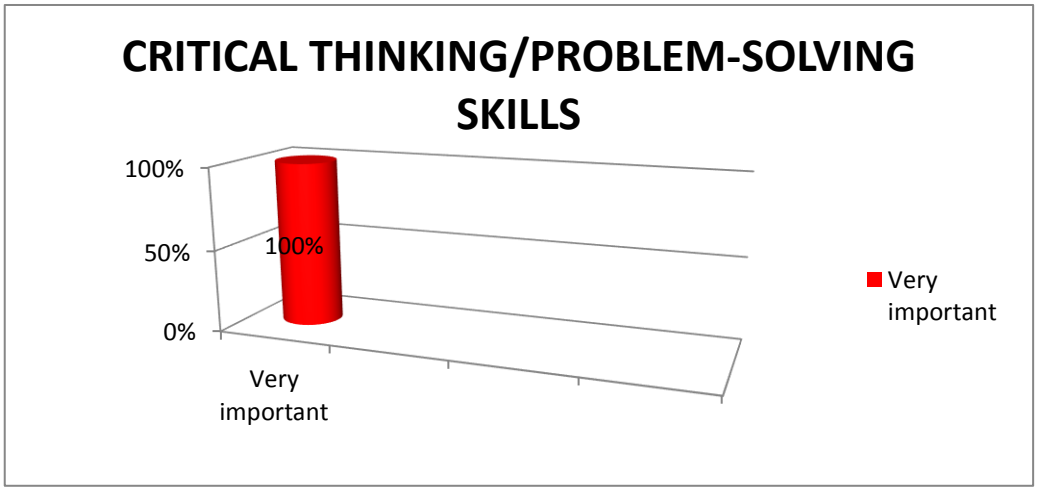
All of the respondents (100%) felt numerical skills are very important in first-year, and are invaluable to the student. To practise as a professional in the construction industry it is important that students have good numerical skills. Bender (2012) cited in Ozsoy, Kuruyer and Cakiroglu

(2015: 129) states that problem-solving requires reading, reading comprehension and the use of mathematical knowledge, as well as the use of mathematical operation and students who experienced difficulties reading a problem were unable to provide correct answers. In addition, correct vocalisation of the problem may not be enough for finding the correct solution to a problem, because the mathematical language involved in the problem must also be understood (Ozsoy et al. 2015: 129). Good numeracy skills are therefore also extremely important to understand real work problems. According to Mji and Mwambakana (2008: 20), experts illustrate that South Africa finds itself in a negative cycle with few students passing matric mathematics well and barely making the minimum requirements for entrance to university. This somehow affects the students' performance as they are anxious about attempting subjects which incorporate mathematics.

4.7.2.3 LECTURERS' PERSPECTIVE: CRITICAL THINKING/PROBLEM-SOLVING SKILLS FOR FIRST-YEAR STUDENTS

Figure 4.33: Critical thinking/problem-solving skills

The figure below represents critical thinking/problem-solving skills at first-year level.



One-hundred percent of the lecturers felt that critical-thinking skills and problem-solving skills are critical and a requirement to be a student in this programme. According to Hammer and Green (2011: 303), lecturers are faced continuously with increasing pressure to produce graduates who can think critically. While there is a general acceptance of the importance of this

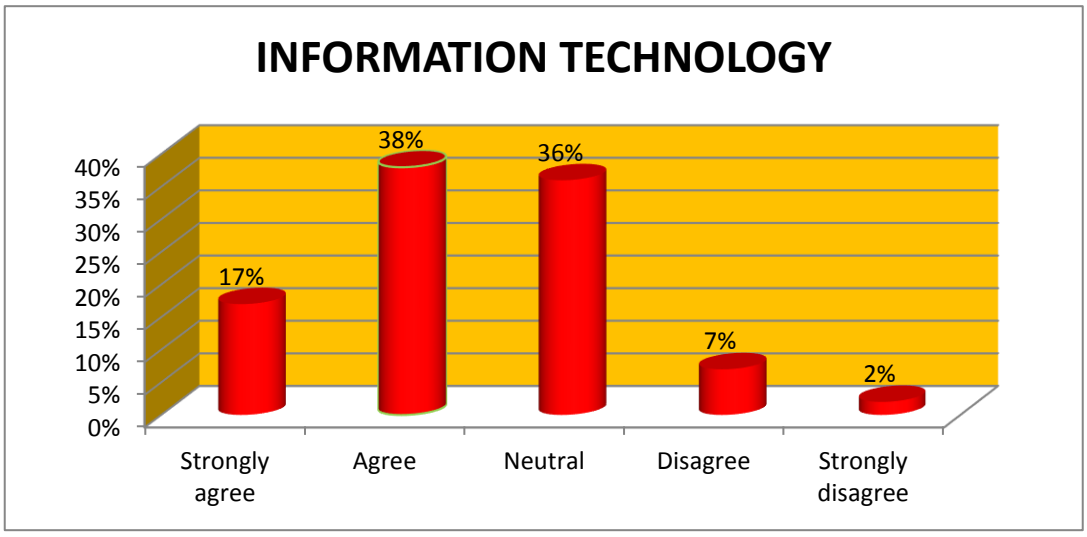
attribute, the development of critical thinking in curricula presents challenges because many academics and students remain unclear about what critical thinking means for their particular discipline.

Ghazivakili, Nia, Panahi, Karimi, Gholsorkhi and Ahmadi (2014: 1) state that the current world needs people with a lot of capabilities such as understanding and using different ways of thinking, research, problem-solving, critical thinking and creativity and therefore critical thinking is one of the aspects of thinking that has been accepted as a way to overcome the difficulties and to facilitate the access to information in life. It is important that students have the ability to think analytically, which includes evaluating, synthesising, and applying knowledge without supervision, according to Bloom's Taxomony (Bloom et al. 1956: 1). The first-year level of study is critical and this level builds the foundations for subsequent years of study. Therefore, problem-solving skills are very important in the development of the students.

Critical thinking and problem-solving skills will equip graduates with the necessary life and social skills required in the real world (see setion 2.6).

4.7.2.4 INFORMATION TECHNOLOGY

Figure 4.34: Use of information technology by first-year students



Seventeen percent of lecturers felt that the use of information technology was crucial to assist students in their tasks. A further 38% acknowledged that it was critical to have knowledge and

understanding of technology while 36% remained neutral. Nine percent disagreed that the use of technology would assist them to pass first-year.

Molopyane and Fourie (2015: 567), stressed the importance of training in the workplace and the importance of academic literacy amongst staff and students. According to Eryilmaz (2015: 252), students in an online classroom environment listen to the lesson and when they return home, they complete tasks and conduct studies related to the lesson. In contrast, blended learning students have already received the information concerning the lesson before they attend lectures. The advantage of this is that students are able to access resources regarding the lesson in advance before coming to lectures, enabling the lecturer to use class time for discussions. The internet is a source of information for lecturers for preparation purposes. Erilmaz (2015) further states that studies indicate that in educational practices designed with B-learning, students benefit enormously with regard to content of the course, learning, attentiveness and motivation.

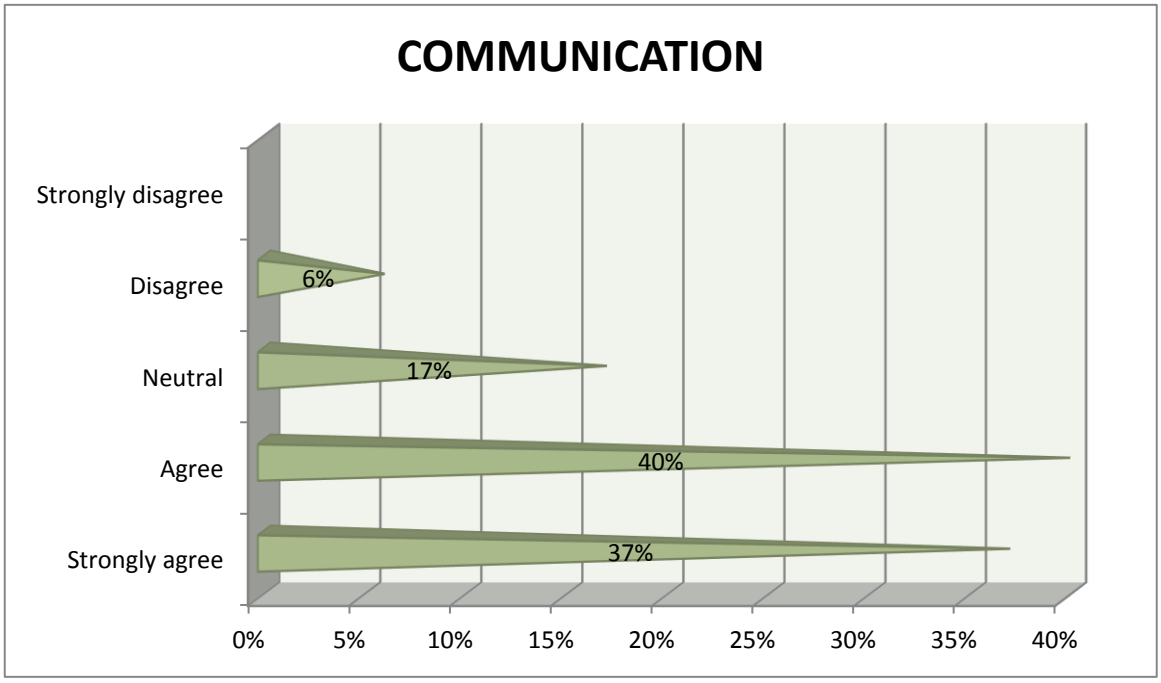
According to Apperson, Laws and Seepansky (2006: 123-124), students enrolled in PowerPoint classes indicated that the Professor demonstrated the significance of the subject matter more, more clearly stated the objectives of the course more clearly, offered more opportunities to apply learned skills through exercises and projects, gave more projects that required problem-solving and critical, original or creative thinking, gave more helpful feedback on tests and assignments and demonstrated how technology can be used to search for and present information or solve problems, to a greater extent than students enrolled in classes not using PowerPoint.

Some subjects required technology more than the next; therefore the different views of the use of technology. The current day students are technologically advanced and may feel bored by a lecturer from the older generation teaching by the traditional chalk and talk methods of lecturing. E-learning is significant in that it improves flexibility in education delivery and enhances focus on student centredness (Mbengo 2014: 16). This can also contribute to the increase in attention level of students. Students are in acceptance of the use of technology and online tools, thereby instilling enthusiasm in the learning process (see section 4.7.1.4 and 4.7.2.4). A positive attitude

from both lecturer and student will ensure a success at online tools and the use of technology where class attendance is a challenge (see section 4.7.1.6).

4.7.2.5 COMMUNICATION WITH LECTURERS DURING CLASS

Figure 4.35: Shows lecturer-student communication at first-year level.



Communication on all levels, in any profession is critical for achieving set goals. However, 37% strongly agreed to this, with a further 40% agreeing to its criticality. Seventeen percent responded that it was neither critical nor necessary to communicate with lecturers. Six percent of the students felt that communication with lecturers was unnecessary to complete your first-year on campus.

Morreale, Osborn and Pearson (2000: 1) further emphasise the importance of oral communication in speaking and listening as being a prerequisite to a student's academic, personal and professional success in life. Students with ineffective listening skills fail to absorb much of the material that they are exposed to. Morreale et al. (2000), state that communication education develops the whole person, improves the work of education, advances the interests in

society, bridges, and advances careers. Su's (2012: 150) findings reflect that being approachable is highly regarded as an important factor for a good lecturer and lecturers are willing to find the time to support their students.

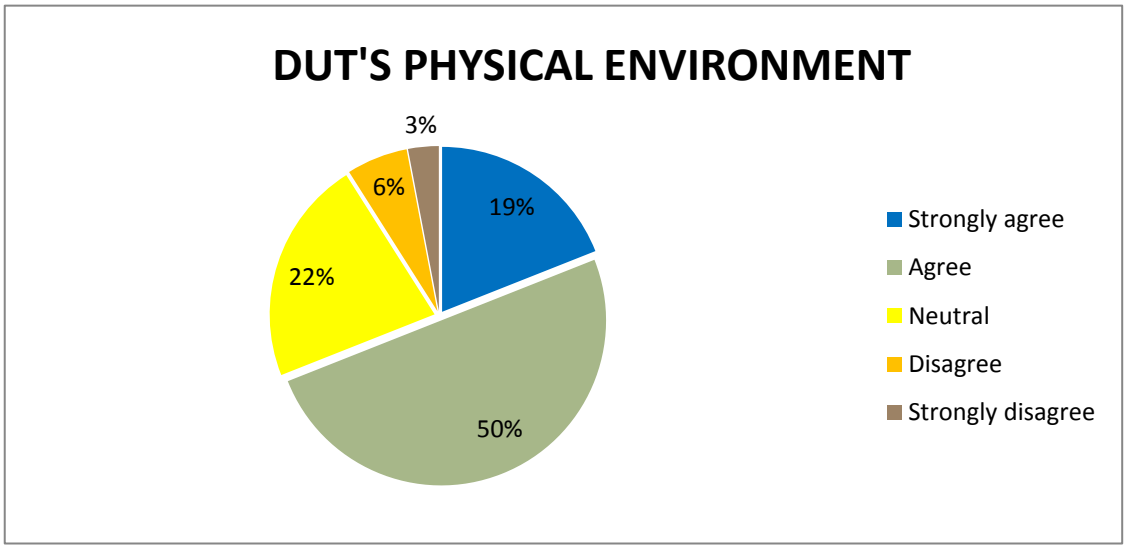
Braxton, Milem and Sullivan's (2000) study cited in Hagenauer and Volet (2014: 381), shows that positive relationships can be fostered not only through informal (out-of-class) interactions, but also in the more formal classroom setting through the use of active learning methods that support interactions in the classroom (e.g. discussions, group work). By means of active learning, the social integration of teachers and students is promoted in the classroom. Therefore, approachability in the lecture room is very important to enable the student-lecturer relationship and to motivate students who are underperforming in certain subjects.

Chepchieng, Mbugua and Kariuki (2006: 80) state that in a university environment, there is a great diversity in terms of socio-cultural, political, religious and racial backgrounds among students and lecturers and with an appropriate lecturer-student relationship it makes possible the generation, advancement and dissemination of knowledge. Lecturers' contact with students in and out of the classroom is very important with regard to student motivation, as this relationship can influence the students' integration into their first-year of study. Lecturers' willingness to provide student consultation can assist students to be more positive regarding the difficulties experienced at first-year level. This finding is in line with the findings of section 4.7.1.5, which deals with the approachability of the lecturers.

4.7.2.6 PHYSICAL ENVIRONMENT

Figure 4.36: DUT's physical environment with regard to learning.

The diagram below shows the impact of a positive environment has with regard for the learning process amongst students at DUT:



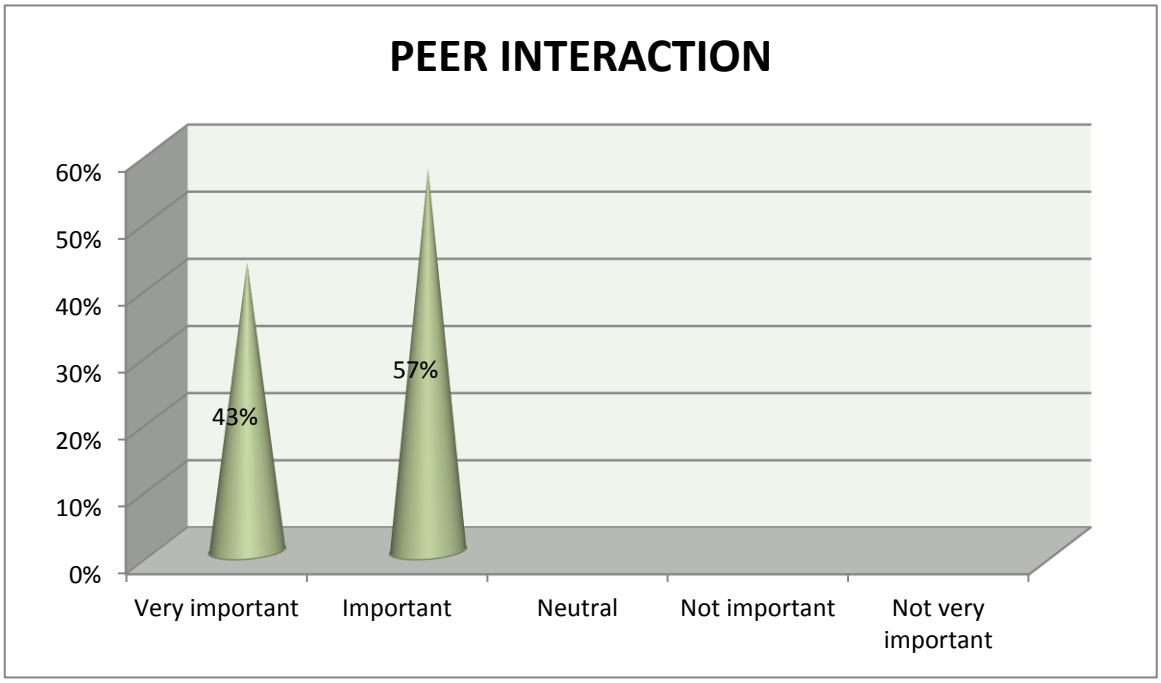
Fifty percent of the respondents agreed that DUT facilities provide a positive learning environment for them and 19% strongly agreed with this statement. Twenty-two percent remained neutral while 9% were dissatisfied with the facilities at DUT and disagreed that it created a positive environment for studying.

The expectations of first-year students include not only academic expectations but generally an overall university experience. Bowden (2013: 433) reiterates the importance of how students view the university experience and perceive themselves in the institution. Students usually have a very high expectation when it comes to change from secondary to tertiary studies, their perceived loss of identity with their new environment and adjustment to their new lifestyle. Petruzzellis et al. (2010: 152), expresses the importance of the marketing activities that an institution needs to undertake in order to be considered as the number one institution of choice in the region. Figure 4.22 graphically shows that students view the physical environment and appearance at DUT as an important contributing factor for student success.

4.7.2.7 Peer interaction

Figure 4.37: Peer interaction with other first-year students in the same programme.

The figure below indicates the impact of peer interaction amongst first-year students.

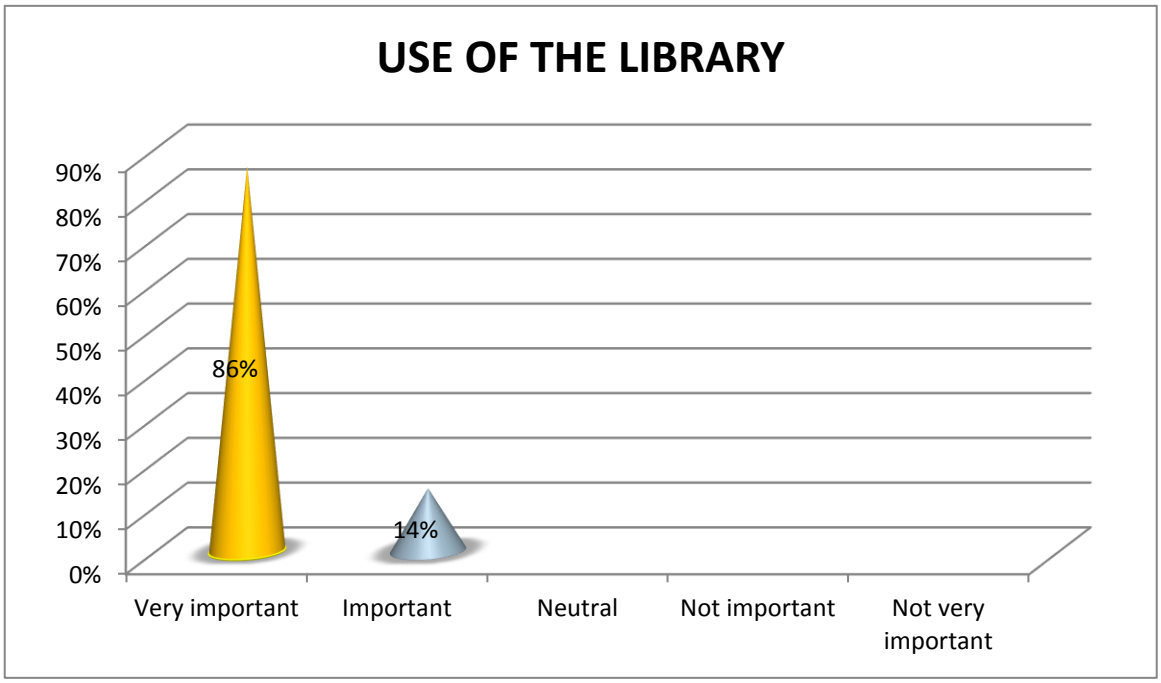


One hundred percent (43 + 57) of the lecturers felt it was important for students to interact with peers. Overall it can be assumed that all respondents felt interaction between students was necessary for a first-year student's development in each subject. Peer interaction, especially in group work, may prove invaluable as students generally shy away when lecturers pose questions. Lizzio et al. (2009: 81), highlights the importance of department relationships with student representatives in that representatives have been nominated to represent the class and are likely to facilitate early interventions and perhaps prevention of issues related to the learning and teaching experiences. These class representatives could function as the students' "early warning" or "ear to the ground" system. Students agree that constant interaction amongst peers is an important aspect for them to succeed in their studies (see 4.7.1.1). Maslow identified the need for social belonging and peer interaction. Students need to feel that they belong as a group and to have a pleasant academic year which could impact the student positively and increase student motivation (see figure 2.4).

4.7.2.8 LECTURERS' PERSPECTIVE: THE USE OF THE LIBRARY BY FIRST-YEAR STUDENTS IN THE DEPARTMENT OF CMQS

Figure 4.38: Use of the library for supplementary information

The figure below represents the use of the institutional library to supplement students' knowledge.



This question looked at how important the use of the library was to first-year students. All respondents felt it was important for first-years to consult the library for supplementary information that was not received in class. Eighty-six percent of the lecturers felt that it was very important while the remaining 14% felt it was important.

Bruce (1994) cited in Chen and Lin (2011: 399), states that information literacy programmes will be more successful if all educators and information providers work together and take shared responsibility as information literacy programmes rely upon "co-operation between information specialists and discipline experts to achieve curriculum innovations which foster literacy". Supplementary knowledge is vital for student motivation and success. The importance of the use of the library can be seen in figure 4.17 and 4.28 as an important institutional support system for a student.

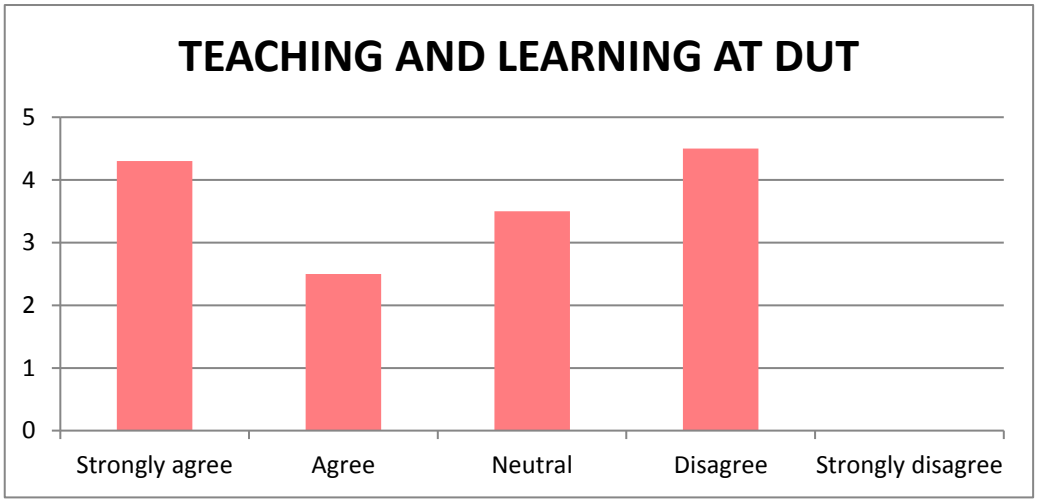
4.8 TEACHING AND LEARNING IN THE DEPARTMENT OF CMQS AT DUT

The Department of CMQS employs qualified staff with academic and industrial expertise. The department offers sought-after programmes and is competitive in its offerings with the neighbouring institutions. Its offerings are in sync with desires and requirements of industry with regard to the graduates that the department produces. This final section looked at how students responded to the level and approach of teaching at the institution.

4.8.1 STUDENTS' PERCEPTION OF TEACHING AND LEARNING ENVIRONMENT

Figure 4.39: Teaching and learning environment at DUT.

The diagram below graphically represents the students' satisfaction with teaching and learning environment at the university:



Seventeen percent of the respondents strongly agreed with the teaching and learning environment at DUT. Fifty-seven percent of the respondents agreed that they were satisfied with the teaching levels at DUT. Six percent disagreed with the levels and approach of teaching at the institution. Su (2012: 149) states that a good lecturer appreciates the difficulties students may face in learning and offers as much support as possible to create a safe place where students make mistakes and develop. Ayes (2001), cited in Su and Wood (2012: 142), emphasised that teaching must be built on vision and commitment and learning on imagination, risk-taking, intention and invention. Without these, 'teaching is mechanical and sterile'. Lecturers need to

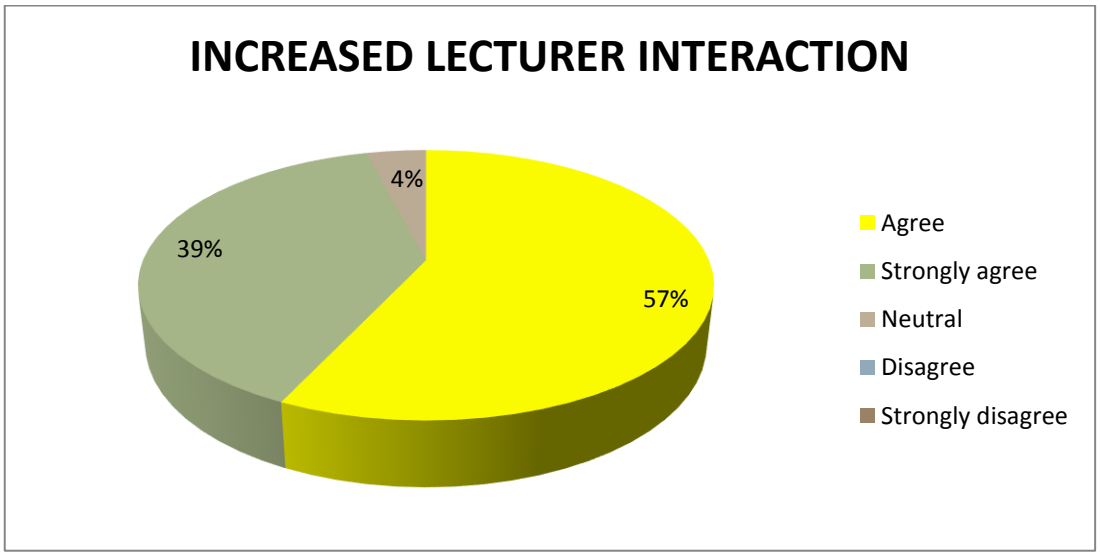
release excitement as well as effort and enthusiasm during their lectures. Despite the satisfaction of the teaching and learning environment, the Department of CMQS experiences a high first-year absenteeism rate and some low subject pass rates which was evident from attendance registers and test results from lecturers. This could be attributed to the fact that students have low motivation levels and do not engage seriously with their academic work at first-year level.

As the first-year level of a student is a very important grounding year, the manner in which a student is lectured to can have an impact on the student. Students may develop a positive or negative attitude towards his studies which could affect the student's motivation. A student's study skills, life skills, vocational time and academic literacy programmes offered by the institution can positively impact a student's ability to learn and develop interest in their studies. Teaching assistants and tutors play an important role and also contribute to the quality of learning taking place.

4.8.1.2 LECTURER INTERACTION

Figure 4.40: Lecturer interaction

The figure below shows the students' views on lecturer interaction.



Ninety-six percent (57% + 39%) of the students would prefer to have more interaction with the lecturers. The remaining 4% are neutral to this idea. Su (2012: 148) reiterates students' expectations of a good lecturer, namely, he or she should be approachable, must have good communication skills with a knowledge of educational technology, enhancing lectures by video clips, diagrams and images to make the subject more understanding and being reflective in one's subject, using his own experience to draw on ideas.

Learning is often a struggle and a challenge to the first-year student at DUT. To overcome this challenge, students need to be able to engage in the learning process (Connor 2003: 854). Connor (2003) reiterates the importance of the lecturer's role in the process of the student's learning, as students are also dependent on advice, the lecturer's expertise and training. Confidence and the ability of students develop through more frequent interactions with lecturers as students feel that they can approach lecturers with ease when they encounter difficulty in understanding a. Feeling good about one's learning experiences assists students' motivation.

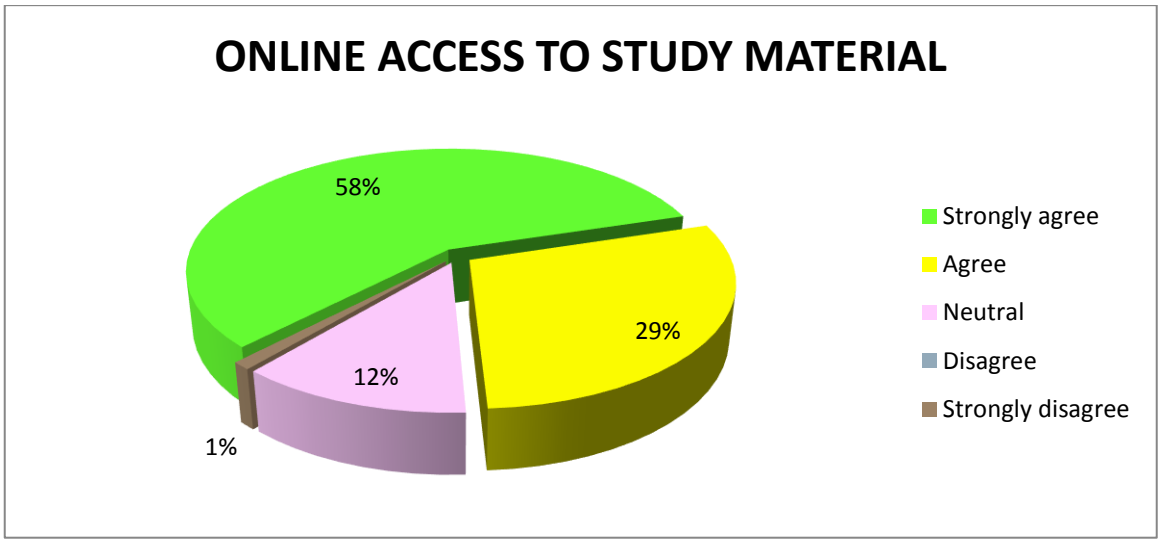
Domizio (2008: 284) reports from surveys done, that a good lecturer should have knowledge of their subject, together with passion, enthusiasm and good communication skills. Lecturers should impart their knowledge in a manner that captures the student's attention and be easy to understand in order to keep students motivated to interact with him/her. An increase in contact time between lecturer and student develops co-operation (see 2.14.1) and enhances the performance of the student. A constructivist lecturer encourages students to engage in lecturer-student and student-student discussions. This type of interaction is beneficial in a multi-cultural student population because students can share their views and experiences on a topic being discussed.

4.8.1.3 ONLINE ACCESS TO STUDY MATERIAL BY STUDENTS

Students are expected to engage in a technological environment that would prepare them for the world of work.

Figure 4.41: Online access to study material by students

The figure below highlights the importance of access to online study material.

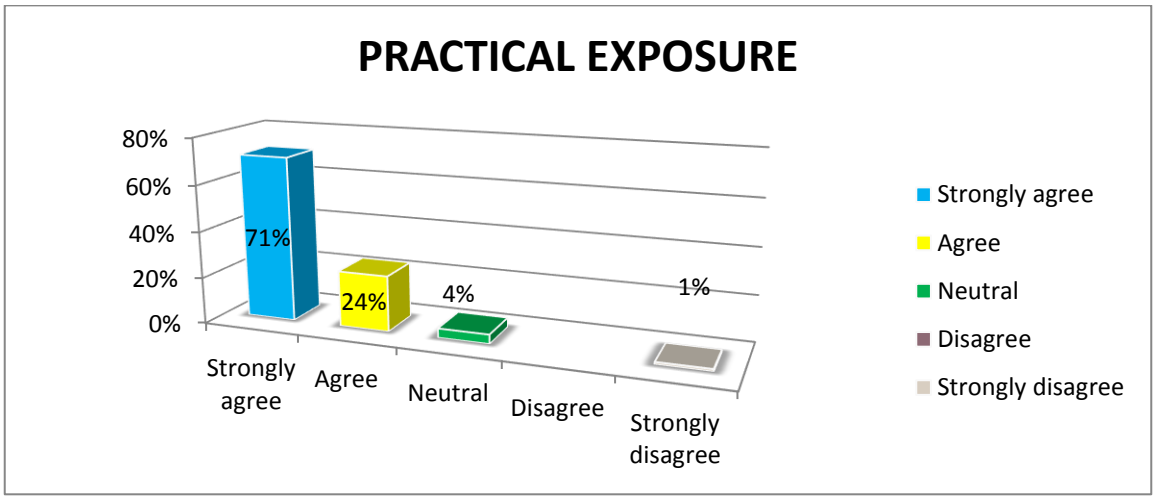


Eighty-seven (58% + 29%) percent of students agree to the use of an online system and to access study material to help in their course work. Twelve percent remained neutral and 1% strongly disagreed. Sullivan (2004), cited in Chen et al. (2011: 412), observed that as first-year students grew up with the graphical user interface, mouse and local area networks, later they embraced home on-line information services, chat rooms, cell phones and school computer laboratories. Today they also benefit from wireless devices and laptops. This makes them more at home with digital information and technology to access online study material from their location and courses can be developed in such a manner that students feel excited about what they are learning. Interactive online information can be available to students while they learn or undertake a project. Research done by McNeill, Diao and Gosper (2011: 5) suggests that students find themselves highly technologically advanced and their learning could be advantageous using digital technologies such as faster and easier transfer, sharing and publishing of information and data, especially online programmes such as Blackboard at DUT. The importance of visual aids (see figure 4.24) shows that students felt that it was important to

understand concepts taught and reinforced by the use of visual aids such as graphically represented explanations of the content material.

4.8.1.4 INCREASE IN PRACTICAL EXPOSURE AT FIRST-YEAR LEVEL

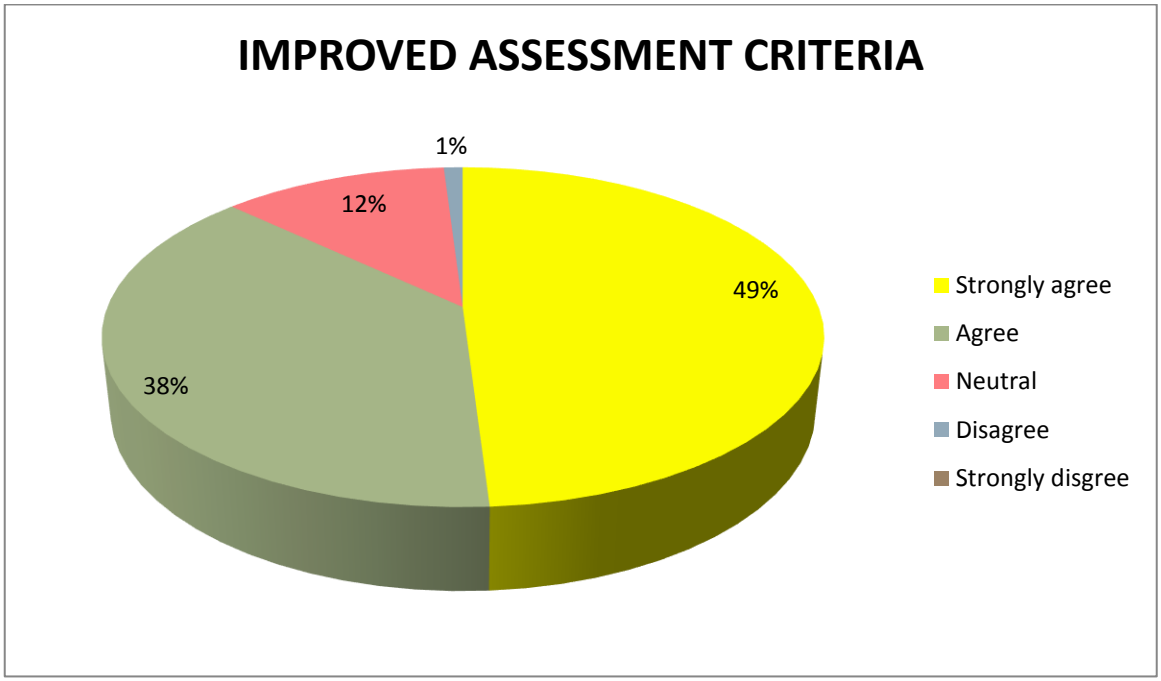
Figure 4.42 represents students' views on the importance of practical exposure in subjects to improve understanding.



Ninety-five percent (24% + 71%) of the students agreed to more practical exposure in this programme. Practical exposure allows students to visualise what happens in the real world. According to Duangjan (2014: 83), students from the science and technology department perform better than students from other departments due to high levels of theoretical and practical study. Students have a better understanding if they are given practical exposure in the form of projects, site visits and case studies. Students believe that understanding the course content of the subjects is crucial for them to pass (see 4.7.1.3) and as such, practical exposure can enhance the student's understanding of the content being taught.

4.8.1.5 IMPROVED ASSESSMENT CRITERIA FOR PRACTICAL AND THEORETICAL SUBJECTS

Figure 4.43 graphically represents the students' views about improved assessment criteria.



Forty-nine percent of the students strongly agree for improvements to be made in the assessments, while a further 38% also agree that better assessments procedures would be beneficial. Twelve percent of the students are indifferent to the assessments.

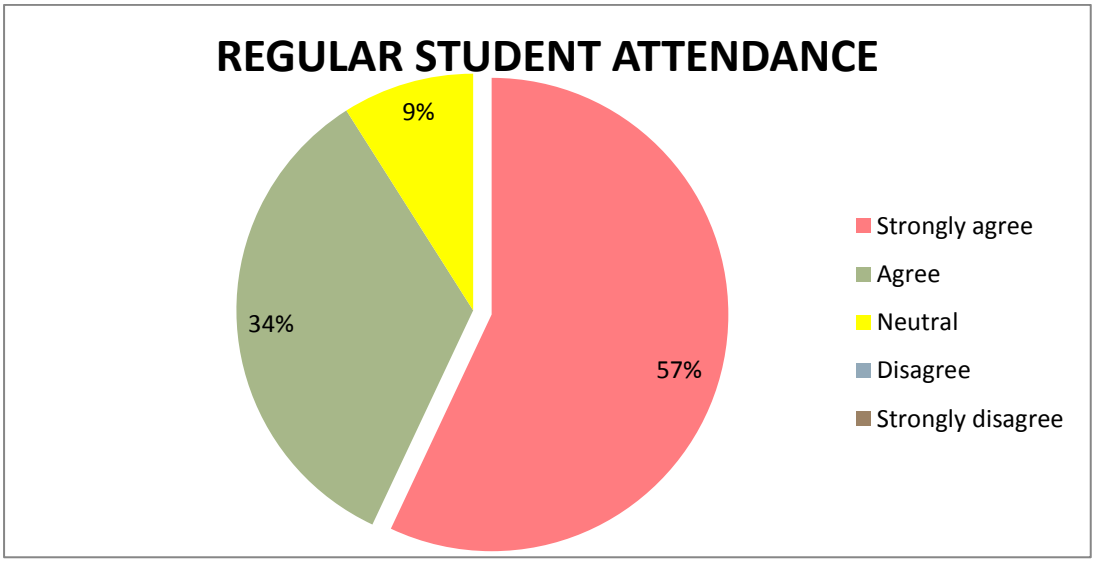
Timely detailed feedback on assessments is also appreciated by students as this could be a determining factor for a student's success in their university study (Su 2012: 150). Feedback will give a student constructive criticism or ways of improvement. Therefore, timely feedback can be considered as a vital tool for passing. Students could work on their shortcomings and put in the additional work wherever necessary. When students do not receive timely feedback regarding tests and assignments, they have limited understanding of what is expected, and hence, would have difficulty understanding the next sections being lectured on. Students have no directive and this could impact their understanding of the next section being taught.

In studies conducted by Ballantyne (2012: 47), students expressed that they need to converse with the university and lecturers regarding areas where they need to improve as well as what was expected out of the assessment. While these are typical complaints by students, the lack of timely response from assignments and tests could compound a problem that a student is experiencing, resulting in the student performing poorly at subsequent assessments. Untimely assessment feedback could lead to the detriment of both the student and department. Ongoing assessments and involvement of students' makes it easier for a student to understand what is being taught and reflect on their weak areas (see figure 2.3).

4.8.1.6 IMPORTANCE OF REGULAR ATTENDANCE FOR FIRST-YEAR STUDENTS

Figure 4.44: Student attendance

The figure below highlights the students' views on attendance.



Fifty-seven percent of the respondents strongly agreed that attendance of lectures is an important factor for them to pass first-year. Thirty-four percent agreed that class attendance is important to improve their performance as a first-year student at the institution. Attendance of lectures supplements course material and enhances critical thinking. It also gives students opportunities to ask questions. Through their participation in General Education during the course of their studies at DUT, it is expected that students will develop and gain capacity in knowledge, skills

and attitudes, such as intellectual and practical skills, including written and oral communicative competence in English, mathematical and/or quantitative reasoning, analytical and critical inquiry and technology applications

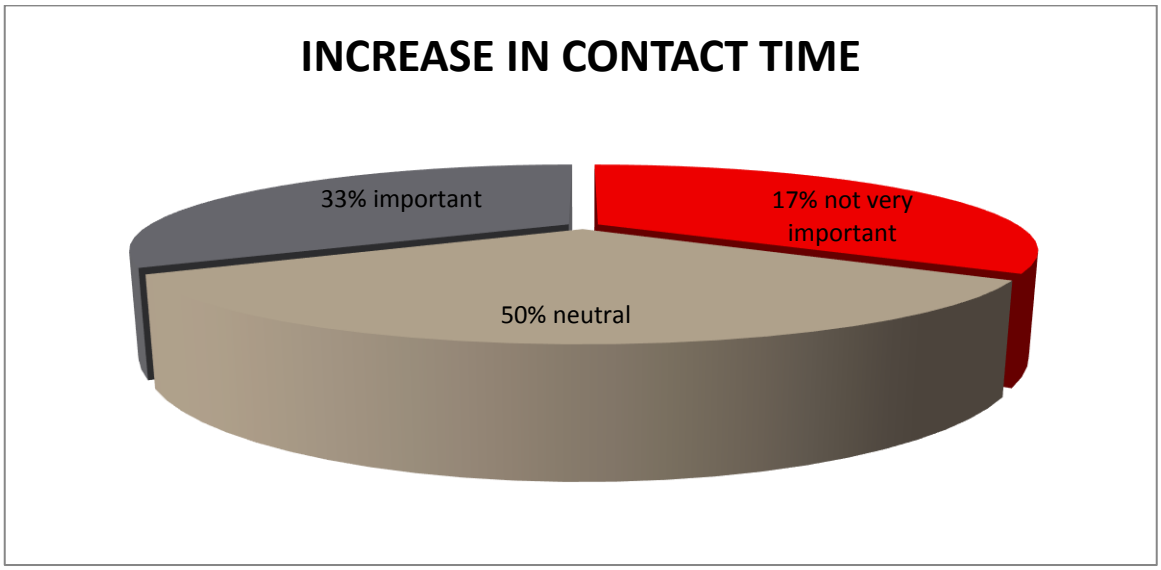
4.8.2 LECTURERS' PERSPECTIVE ON TEACHING AND LEARNING

4.8.2.1 CONSULTATION TIME WITH STUDENTS

Figure 4.45: Increase in consultation times with students

Students who are finding the course challenging may need extra time out of the lecture room to consult on a one-to-one basis with their lecturer. Sometimes students feel intimidated by their peers and do not have the courage to tell their lecturers that they do not understand what is being lectured.

The figure below represents the lecturers' views on the remedies available to increase the academic performance of first-year students.



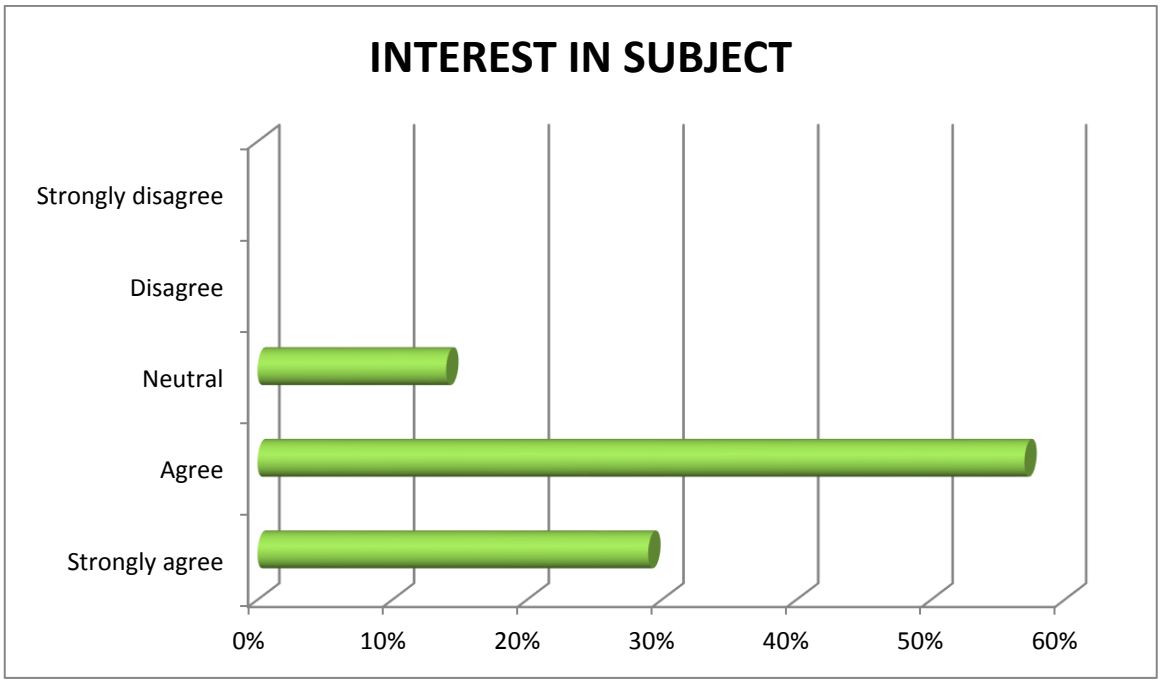
Thirty three percent of the lecturers felt that it was important that an increase in contact time would benefit the student, while 50% remained neutral and 17% felt that it was not very important for a student to have an increase in contact time for a student to be successful. The high percentage of lecturers not supporting increased interaction with students could be

attributed to the large class sizes that impact on the lecturer's workload. Lecture-student communication is paramount for student success and lecturer-student interaction (see section 4.7.2.5 and 4.8.1.2).

4.8.2.2 STUDENT INTEREST IN THE CURRICULUM

Figure 4.46: Student interest in the curriculum at first-year level

The figure below reflects the students' interest in the coursework and curriculum.



Eighty-six percent (29% + 57%) agreed that students showed an interest in their subject while the remaining 14% of the lecturers were indifferent to the students' interest in the subject.

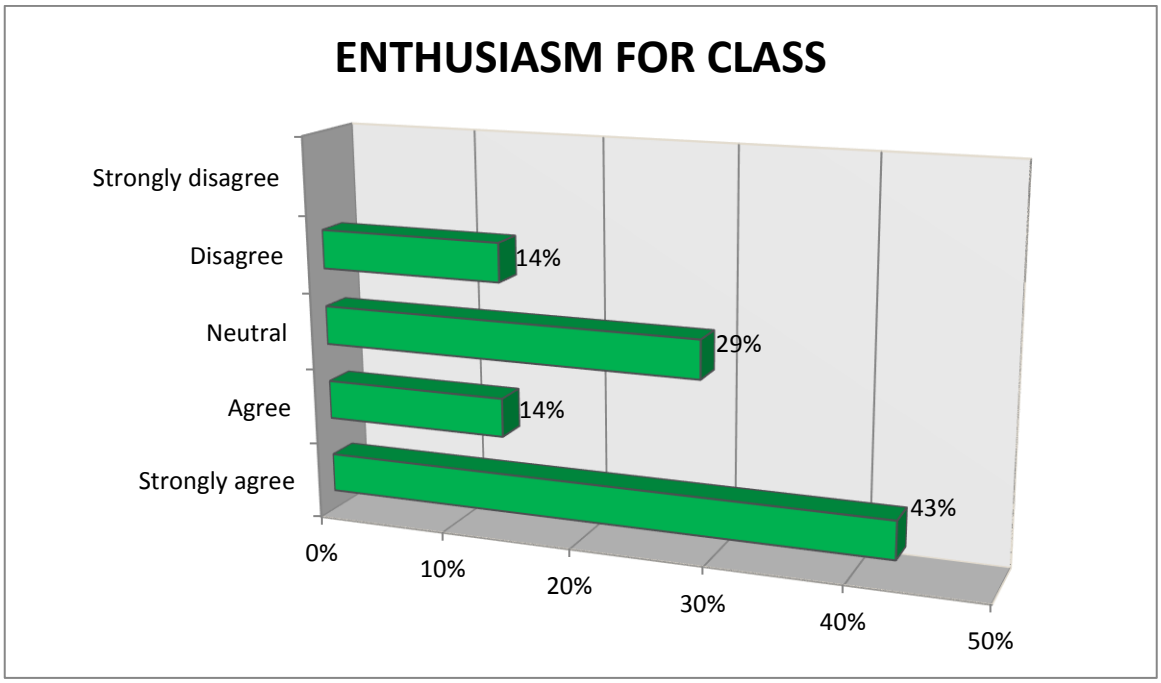
According to Van Klaveren (2010: 729), lecturers in Netherlands tend to spend less time in front of the class and instead adopt a more personal approach and adjust their lecturing methods to suit the needs of students with the aim of improving the performance of students. However, a possible downside of this is the time constraints and could be less effective in certain situations

where the lecturer has to spend time explaining a mathematical problem and where class numbers are large.

4.8.2.3 STUDENT ENTHUSIASM AT FIRST-YEAR LEVEL

Figure 4.47: Student enthusiasm at first-year level

The figure represents how students react about the new and interesting concepts being taught in class.



Fifty-seven percent (43% + 14%) agreed that their students were enthusiastic in class while 29% remained neutral. Fourteen percent of the lecturers disagreed that their students showed any enthusiasm about what is being taught in class.

Fitzpatrick, Cronin and Byrne (2011: 301) state that while the traditional style of lecturing is typically verbally orientated, this is a mismatch with the learning styles of many students who may be active, visual or global learners who consequently become bored, inattentive and discouraged. This leads to students who realise that they are not receiving much from lectures

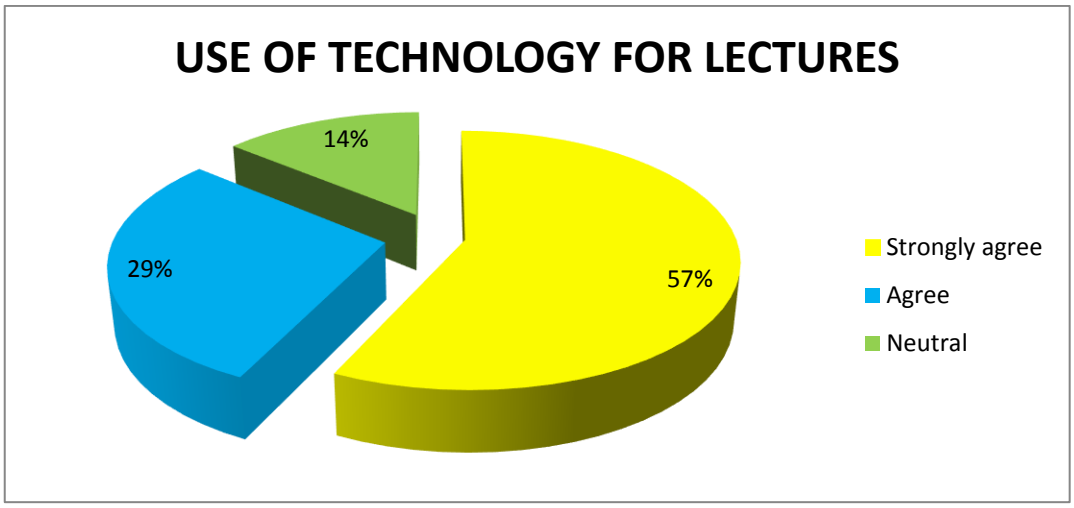
and who lose interest in attending lectures or consciously decide not to attend. Fitzpatrick et al. (2011) further states that some students also felt that attendance makes them understand course material when and they do not attend lectures, they miss out on handouts. Students also felt that PowerPoint presentations complement the lecture experience and aid in discussions. This enables students to actively engage in the lectures as well.

For a student to feel enthusiastic about the content being taught, the subject content must be current and must be taught in a manner that promotes understanding amongst students. Therefore, the lecturing skills are particularly important as well as the approachability of the lectures. Students must be able to converse with their lecturer and therefore lecture-student relationships are very important for the motivational level of a student. This type of enthusiasm would motivate the student, intrinsically contributing to a fulfilled student life. When students are enthusiastic they want to come to class and complete tasks assigned to them (see 4.7.1.6 and 4.7.1.7).

4.8.2.4 THE USE OF TECHNOLOGY IN CLASS BY FIRST-YEAR LECTURERS

Figure 4.48: The use of technology in class at first-year level

The figure below represents the importance of using technology in class to ensure a better understanding of the course material.



Fifty-seven percent of the lecturers strongly agree to the use technologically advanced tools for the delivery of their classes. Twenty-nine percent of the lecturers use some technology but not all the time. The remaining 14% were neither for nor against the use of technology in class and out of class. Large student enrolments encourage the use of alternative methods of teaching to the 'chalk and talk' teaching method. Although it is possible for students to be mentally active while listening to lectures, the chances of students being more engaged with interactive and exciting tools are greater.

A large-scale survey conducted by Van Dijk, Van Den Berg and Van Keulen (1999: 260-272) on the instruction used by lecturers can be attributed to their beliefs about teaching. Lecturers do not want to change their traditional methods of teaching and hence do not keep up with the technological advancements in their field. They believe that their responsibility in class is to transit information in whichever way is best suited to them, while encouraging little or no interaction from their students. Van Dijk et al. (1999), explain that the reason why current lecturing practices stay teacher-centred and focused on the transmission of information, might relate to the teaching skills of lecturers, because lecturers teach in the manner in which they have been taught.

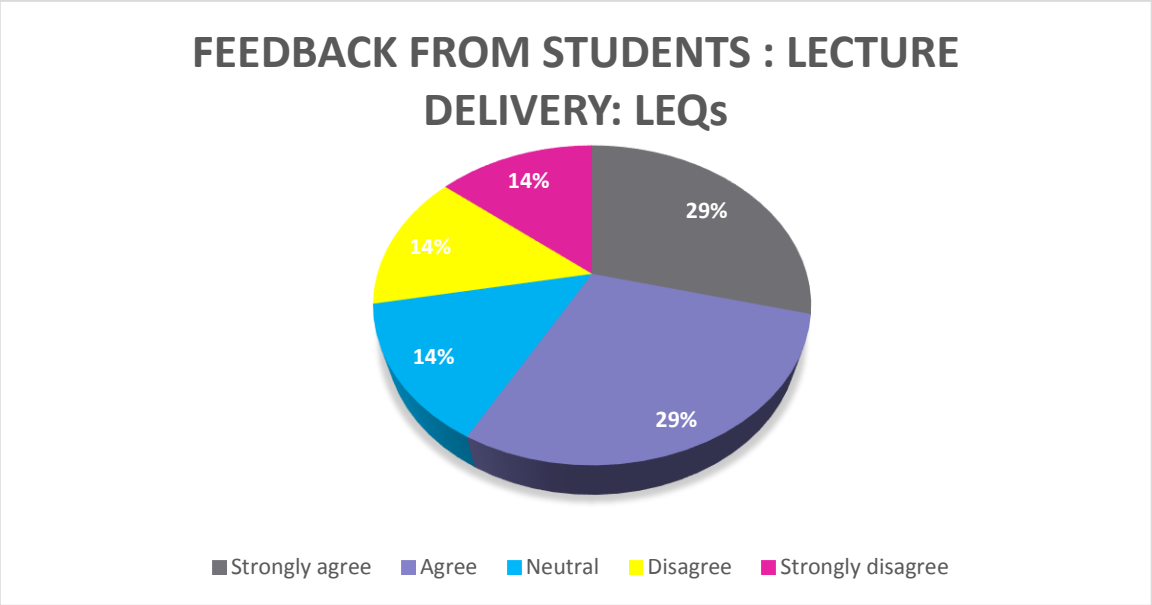
The type of technologies being referred to here are those tools used to better explain concepts within a subject. In the educational sphere, most teaching staff agree that ICT, if properly utilised, fosters and enhances teaching and learning according to Nwezeh (2009: 688). The use of internet- based assessment criteria, as well as online tools, allows students to access course information remotely, thereby saving students a considerable amount of time. Odesanya and Ajirelze (2000), cited in Nwezeh (2009), highlights the problems experienced at a University of Nigeria with regard to large classes that posed a problem to lecturer effectiveness. Information technology effectively improved the productivity and creativity in lecturing. While lecturers felt that the use of technology was important, students also felt that it was critical for lecturers to use technology for their success (see sections 4.7.2.4 and 4.8.1.3).

Bloom's Taxonomy provides a structure that allows lecturers to lecture to students with different abilities and need and more especially, students in a multi-cultural environment. Students who come from disadvantaged backgrounds have not been exposed to state of the art technology. Bloom's Taxonomy provides a structure which allows lecturers to lecture to a multi-cultural class with different needs and abilities.

4.8.2.5 STUDENT FEEDBACK RESULTS FROM LECTURER EVALUATION QUESTIONNAIRES (LEQ).

Figure 4.49: Students' evaluations: LEQ

The figure below illustrates the student feedback from lecturer evaluations.



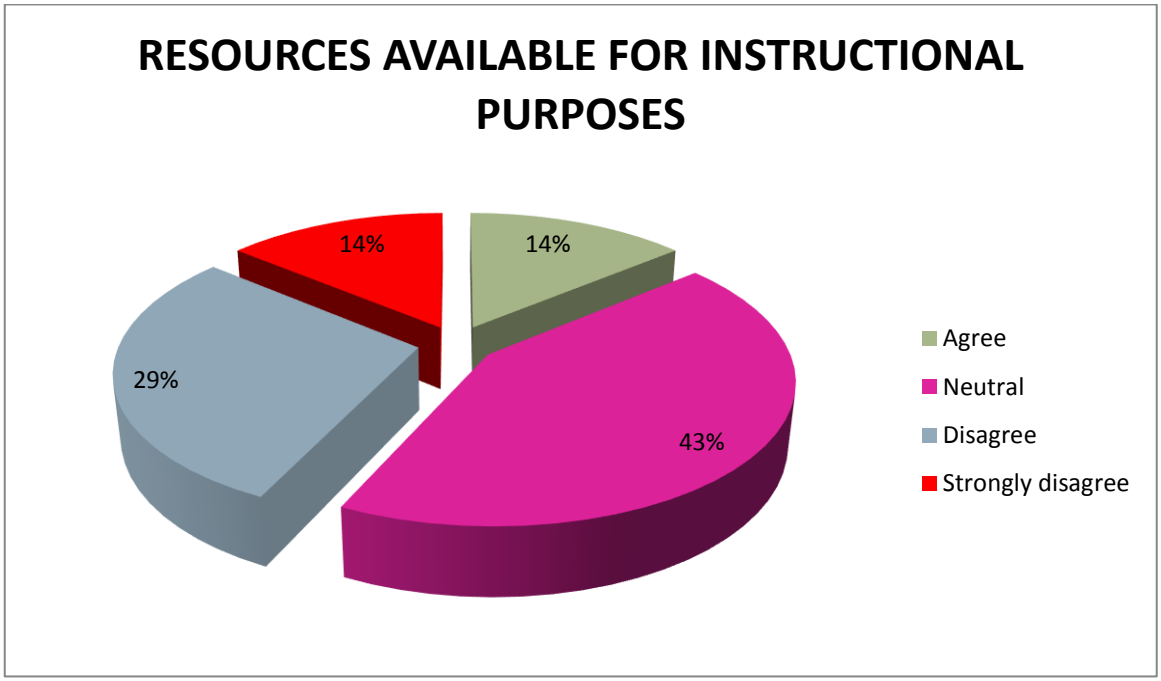
Fifty-eight percent of the lecturers strongly agree that their LEQs match the level of effort that they put into the subject and their teaching methods was of a sufficient level; 14% were neutral as to whether or not course quality was what was expected from the students, and finally 14% disagreed, and the remaining 14% strongly disagreed that the course delivery meets the expectations of students. The low percentages indicate that lecturers may not consider the LEQs as a fair platform for a lecturer to be evaluated as students may not take this tool seriously.

Timely feedback is imperative for a student's improvement and gives students the opportunity to concentrate on their weaker areas (see section 4.8.1.5).

4.8.2.6 LECTURERS' PERSPECTIVE: DUT FACILITIES FOR LECTURING PURPOSES

Figure 4.50 Academic facilities for lecturing purposes at first-year level.

The figure below indicates whether the facilities in the department are adequate for lecturers to execute their tasks such as teaching.



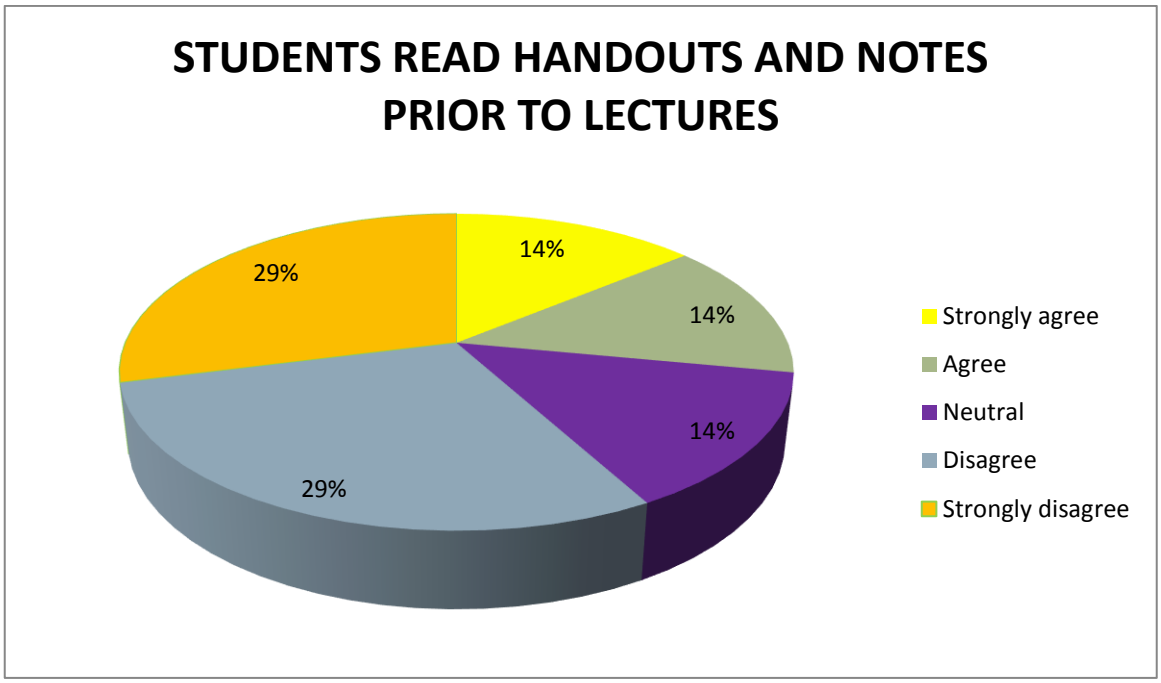
Only 14% of the lecturers agreed that the resources were adequate for instructional purposes. Forty-three percent of the lecturers remained neutral when questioned as to whether the institution's facilities were sufficient for the efficient delivery of their lectures. Forty-three percent disagreed that the resources were sufficient for lecture purposes. To facilitate learning and motivation, resource allocation at university needs to be efficient and just, and even imaginative and ambitious (Connor: 2003: 855). For the lecturers to excel at their tasks, they need up-to date and the latest resources for course delivery. Visual aids for instructional

purposes and the use of technology makes for a student's easier understanding of complex areas being taught which could impact the pass rate of the subject (see sections 4.7.1.4 and 4.7.2.4).

4.8.2.7 STUDENTS' FAMILIARISATION WITH COURSE MATERIAL

Figure 4.51: Students' familiarisation with course material.

The figure below graphically represents views of the lecturers with regard to students' familiarity of concepts before a lesson.



Fifty-eight percent of the lecturers strongly feel that students do not read notes or course material before their lecture. Twenty-eight percent of lecturers felt that students do read before a given lecture. The remaining 14% was unsure and remained neutral.

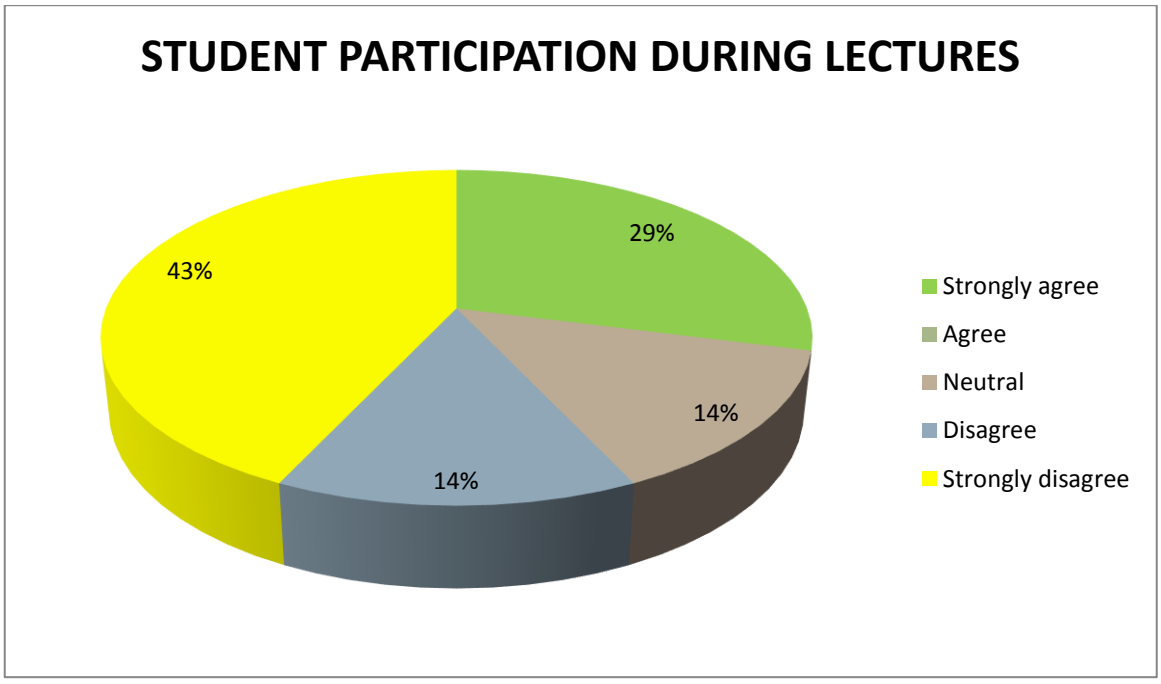
The amount of reading and assessment work required in a subject will provide the student the opportunity to develop higher-order critical skills. Hammer et al. (2011: 311) highlight the importance of assessment design where subject descriptors state the specific outcomes, highlighting the skills required. The importance of relevance of Bloom's Revised Taxonomy

addresses the knowledge area to be explored and what students need to learn in order for them to make the knowledge meaningful to themselves, as seen in section 2.23. Students need to know the importance and significance of reading prescribed works, so that they can be motivated when the lecture is based on the reading material. The importance of students completing tasks allocated to them is very important as it gives them the opportunity to revise and prepare for the next lecture (see section 4.7.1.7).

4.8.2.8 LECTURERS' PERSPECTIVES: STUDENTS' PARTICIPATION IN CLASS

Figure 4.52: Student participation during lectures

The figure graphically represents if students come prepared to class in order to be actively involved and participate in a lecture.



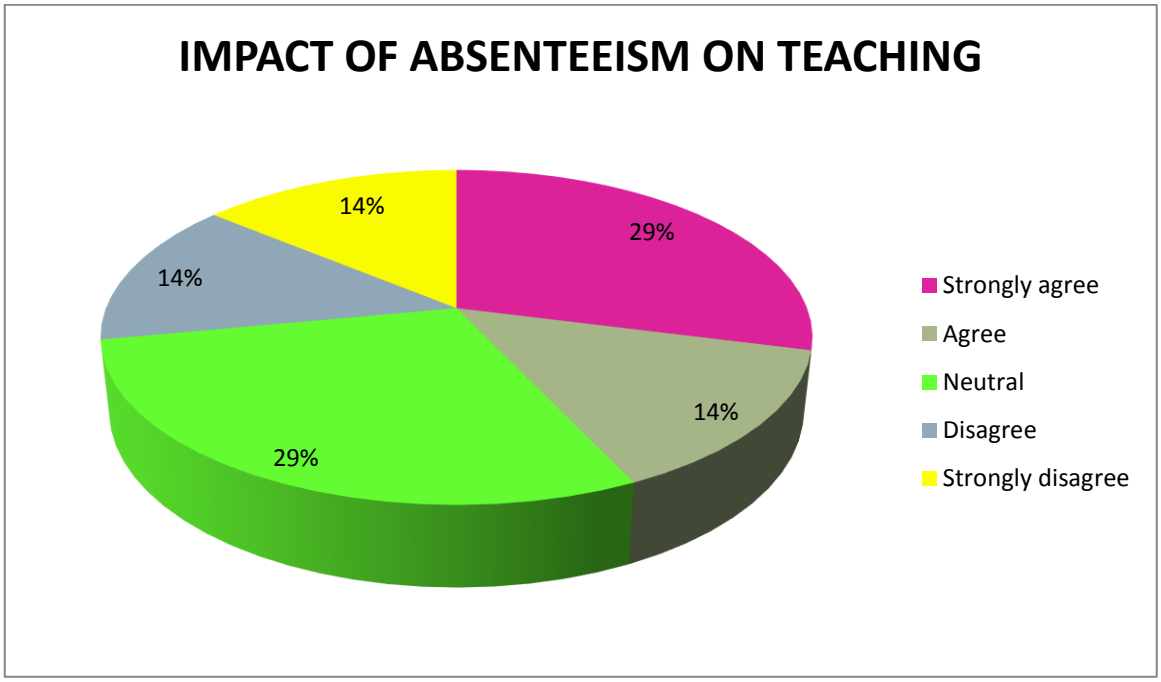
Fifty-seven percent of the lecturers (43% strongly disagree and 14% disagree) felt that students come unprepared for lectures, while 29% agree that to some extent students do come prepared. Certain first-year subjects require students to come prepared to class so that they are familiar with the subject content, which makes the lecture more interesting and understandable. Scaffolding technique allow students to progressively understand concepts and bridge the gap

between what is being taught by the lecturer and the students' understanding. The lectures refer to literature on the sections being covered in class and hence, if a student does extra reading before attending lectures, this could lead to the student become more independent in the learning process, which in turn could increase a student's motivation and interest. The idea of transformation of shared knowledge into its individual form is important for becoming a life-long learner. In particular, understanding scaffolding as a tool to provide students with cultural tools, is important, the appropriation of which enables them to become independent learners according to Verenikina (2008: 174). WIL of Good Practice Guide emphasises the need to develop students and foster student learning that is more situated, participative and "real world" orientated (see section 2.4.3).

4.8.2.9 IMPACT OF ABSENTEEISM OF A FIRST-YEAR STUDENT IN THE DEPARTMENT OF CMQS

Figure 4.53: The impact of absenteeism on teaching.

The figure below represents the effect of student absenteeism on a lecture.



Forty-three percent of the respondents agreed that non-attendance of students hampers the way and how they teach. Twenty-nine percent of lecturers are indifferent as to how many students attend lectures or not or whether students absenteeism has an impact on their lecture while the remaining 28% (14% disagree and 14% strongly disagree) disagree that the lack of student attendance has any effect on the way the lecture is conducted.

A study by Fitzpatrick et al. (2011), regarding student absenteeism suggests that the standard of lecturing and the ability to disseminate knowledge and the dislike of the course material decreases their concentration and makes students stay away from class. Moore, Armstrong and Pearson (2008: 17) argue that in our changing educational world, lectures play an integral part in the academic experience for students and that attending them gives rise, at the very least, in some contributory way, to academic development and the facilitation of academic attainment. Student attendance may be particularly important for those students who are finding it difficult to adapt to university life.

The findings of Moore, Armstrong, Pearson (2008: 20) indicate that students do not articulate a sense of obligation to attend lectures despite messages on the importance of attending lectures, and this could be attributed to the fact that motivation levels of these students are low. This could further indicate that lectures are not perceived to be useful, which inevitably has an impact on a student's performance. Moore et al. (2008), further caution that lecture attendance provides a strong platform to ensure and enhance academic performance. Once a student "gets lost" in the progress of study, their sense of competence disappears, and more often than not they lose interest in completing their studies.

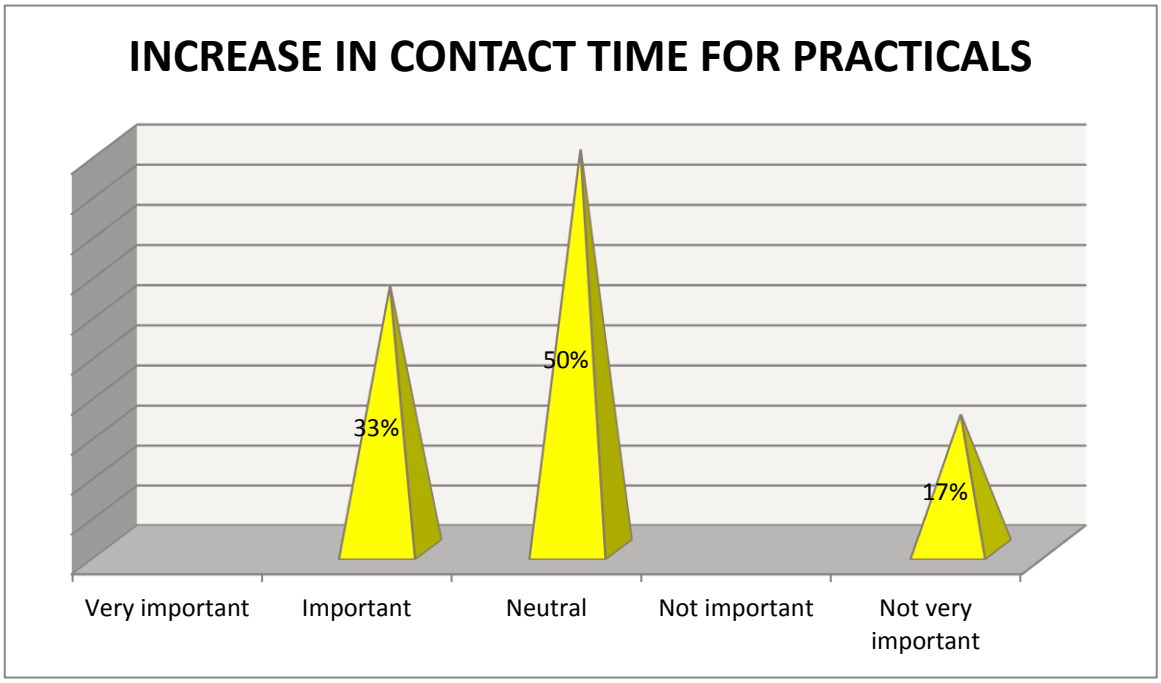
Lectures provide the background to a subject and help students to understand areas and tasks that they need to focus on most in order to navigate their learning experiences more successful, according to Moore et al. (2008: 17). Students who attend lectures regularly are more likely to perform better and engage with fellow students regarding the section of the syllabus being discussed.

The Alija (2013: 181) study suggests that apart from personal commitments from everyday life and part-time employment, students also have other reasons for their absence from lectures such as classroom conditions, classroom management, professional skills and methods of teaching. Some students face financial challenges and this could impact the attendance negatively. Students may not grasp concepts taught and this could affect the motivational level of the student. (see section 4.7.1.6).

4.8.2.10 LECTURERS' PERSPECTIVE: THE NEED FOR AN INCREASE IN TIME FOR PRACTICALS

Figure 4.54: Increase contact time for practicals

The figure below represents the views of lecturers as to whether an increase in consultation time for the practical sessions could motivate the students to perform better.



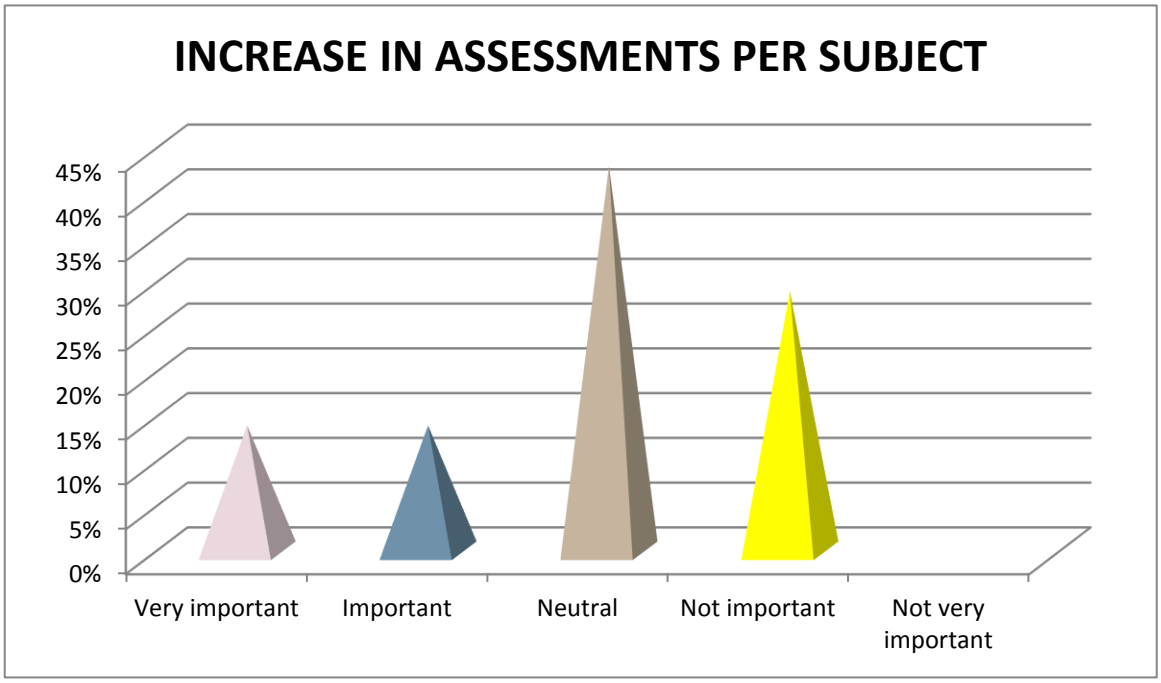
Thirty-three percent of lecturers felt that an increase in practicals would be advantageous for the understanding of the course material. Fifty percent of the lecturers remained neutral while 17% felt it was not very important. This could be due to the fact that these lecturers to do not have a practical component incorporated into their subject. Ninety-five percent of the students indicated

from their responses that it is imperative for them to be more exposed to the practical component of the course in order for them to understand the theoretical aspect and construction methods.

4.8.2.11 AN INCREASE IN THE NUMBER OF ASSESSMENTS AT FIRST-YEAR LEVEL IN THE DEPARTMENT OF CMQS.

Figure 4.55: Number of assessments per subject.

The diagram below represents whether an increase in the number of assessments for a subject may contribute in the success of a student.



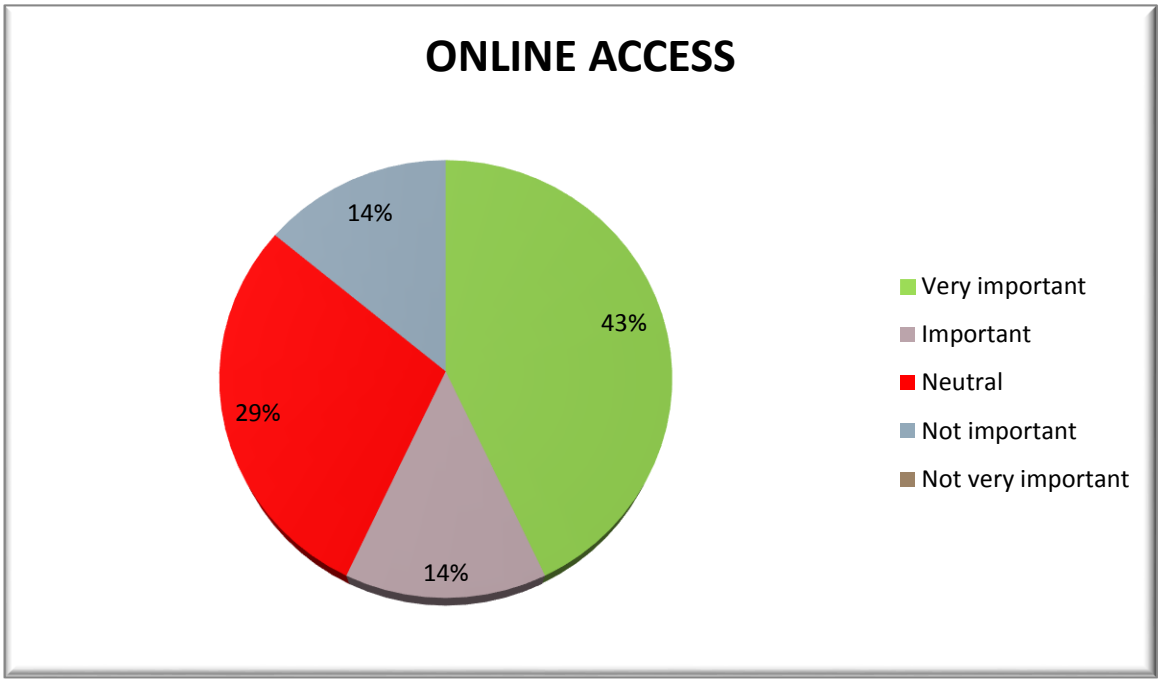
Twenty-eight percent of the lecturers felt that increasing the number of assessments at first-year level may contribute to a student's success in their subject. However, 29% of the respondents felt it was not important to increase the number of assessments. Forty-three percent of the lecturers were indifferent and neutral towards the number of assessments required to be done by first-year students. Lecturers may feel that the assessments covered may be adequate by the understanding of their subjects and do not require an increase in the number of assessments. However, as seen in section 4.8.1.5 regarding improved assessment criteria, 49% of the students strongly felt that there should be an improvement in the assessment criteria and 38% of the

students felt that better assessment procedures would benefit them by improving their performance at first-year level subjects.

4.8.2.12 LECTURERS' PERSPECTIVE ON ONLINE ACCESS TO STUDENT MATERIAL FOR FIRST-YEAR STUDENTS IN THE DEPARTMENT OF CMQS

Figure 4.56: Importance of online access to student material.

The figure below represents the lecturers' views on the use of online material to facilitate lectures.



Forty-three percent of the lecturers felt that it was very important for students to have access to online study material, while 14% said it was important and another 14% felt it was not important. Twenty-nine percent remained neutral and were not sure of the impact of online student material pertaining to their subjects. This could be attributed to the fact that lecturers do not use the online facilities at DUT. Figure 4.41 shows that 87% of students would benefit from the use of online facilities such as Moodle and Black Board to improve their performance at first-year level. The student responses indicate that the use of online facilities would benefit the students tremendously and thereby increase their motivation to succeed at first-year level. Su

and Wood (2012: 148) reiterate the importance of educational technology during lectures. Students' assessment marks can be viewed on the student portal and students can devise ways and methods to improve. This will work only if students are given their assessment marks timeously. The lecturers' constructive criticism and detailed feedback will suggest ways to improve.

4.9 CONCLUSION

The student numbers fairly represent the demographics of the area within which DUT operates and females are well represented. In terms of lecturers, the number of imminent retirements is of concern in the absence of succession plans. The marketing of the programme and the teaching and learning environment pose many challenges to transform the first-year students' campus lives and academic experiences. The analysis highlights the need for many changes to be implemented such as the need for more online tools, more consultations with the lecturer and importantly, the need for more visual tools to assist the student understand subject material. However, the shortcomings are highlighted as well and recommendations are made to the department in the next chapter.

CHAPTER FIVE: RECOMMENDATIONS AND CONCLUSION

"Education is not the learning of facts, but the training of the mind to think". – Albert Einstein.

5.1 INTRODUCTION

This chapter concludes the study by revisiting the main objectives and aim of the study. The chapter also makes recommendations to improve the motivational level of first-year students in order to reduce the drop-out rate at first-year level and increase the throughput rate of the Department. The aim of the study was to determine the factors that affected the motivational level of first-year students in the Department of CMQS. The purpose of the study was to determine key factors which had an impact on a student's first year experience at a tertiary institution. The objectives of the study were to:

- ► Determine the factors that motivate students to choose CMQS as their career.
- ► Identify factors that affect students' motivation in academic performance.
- ► Identify factors that could improve students' performance in the Department of CMQS.

The key findings and conclusions are discussed under each objective.

5.2 Objective 1: Factors that motivate students to choose Construction Management and Quantity Surveying as their career.

5.2.1 Career Choice

Majority of the student received information from other sources and clearly did not use the services of the university such as the career guidance days or directly liaising with the institution. The correct career choice can help a student set goals and find ways to achieve their goals. It also motivates the student to work harder to accomplish personal goals and embark on a

fulfilling career. Students are motivated and feel a sense of belonging if it the programme they registered for is their "first choice" of study. A higher percentage of students indicated that the programme was not what they wanted to initially study. Misconception of the name of the programme and confusing the programme with other programmes offered within the faculty can also be of major concern. Too often students do not engage in discussions with the institution about the programme offerings and possible career choices and end up choosing the incorrect programme.

Registering for the incorrect course can result in a student's morale being low which leads to a student with a low motivational level. This can also have financial implications placing students under stress and concern. This can contribute to a student dropping out of the programme.

5.2.2 Marketing

A high percentage of the students were not influenced by the university's career day and this clearly necessitates for a more rigorous marketing strategy. Marketing of an institution and a programme plays a very important role in securing students and setting themselves as the "sought after" institution and sets apart from its neighbouring institution. Intelligent thought-provoking marketing tools are therefore necessary for the institution. Teaming with industry is a very effective way of promoting the programme as well as the institution. Industry is always on the look-out for the 'best students'. This is also a way to give industry what they require – industry helps in the marketing process and assists with sponsorships, the institution provides the education and industry recruits the student. Industry liaison is therefore very important. DUT must be the first-choice for recruitments of its graduates. Marketing helps students make informed decisions about their choice of career, assists with retention and inadvertently reduces the drop-out rate.

5.3 Objective 2: Identify factors that motivate a students academic performance.

5.3.1 Use of information technology

A high percentage of students felt that the use of technology would enhance their learning in a positive manner. The use of visual aids would assist students understand concepts easily. At first-year level, terminology and concepts are being introduced and by allowing students to visualise these construction concepts would assist the student tremendously.

5.3.2 Lecturers' and students' use of online facilities

The use technologically advanced tools for the delivery of their classes is beneficial to both student and lecturer. Students strongly felt that online facilities for learning and revising of lecture material would benefit them and contribute to their success at first-year level. The interactive use of online facilities such as moodle and blackboard is perceived as important tools for the first-year student.

5.3.3 Student attendance and preparedness for lectures

Lecturers felt that students come unprepared for lectures and agreed that non-attendance of lectures by students hampers the manner in which they teach. Attendance is a critical component for a first-year student as they can engage with their peers and lecturers for a better understanding of the course content.

5.3.4 Practical exposure of subject material for easier understanding of theoretical component of the course

Student felt that practical exposure would benefit them to understand the concepts being taught at first year. Practical exposure includes site visits to construction sites as well as the use of interactive tools in the classroom. Visualisation can also stimulate interest in the subject. Practical exposure can also assist students gain valuable skills and assists them to become successful in their career.

5.3.5 Critical skills

Although students felt that literacy, numerical and problem-solving skills were important, all the first-year lecturers agreed to this. However, all first-year lecturers felt numeracy was the most important skill for a student to have. The programme requires a good understanding of mathematical concepts for students to succeed. The National Diploma: Building graduates become Quantity Surveyors and Construction Manager and these career suits people who are well-organised and have an aptitude for mathematics.

5.4 Objective 3: Identify factors that could improve students' academic performance in the Department of CMQS.

5.4.1 Retention of students

Students felt that constant interaction with their peers would motivate them to succeed at first-year level. Students often identify with their peers when faced with challenges rather than approaching academic or administration staff. Students believed that the physical environment and facilities of DUT was an important aspect that contributed to the quality of their student life since they spend a vast amount of time on campus.

5.4.2 At-risk students

Identifying students who are at risk of failing at first-year level by the department could improve the academic performance of a student. Although students felt that attendance of lectures was an important factor for success at first-year, lecturers strongly agreed that attending class was crucial for a student to pass at first-year level. Attendance of lectures can contribute to an increase in interest which can impact positively on the attitude of students. Student-lecturer interactions were viewed as very important factors by students and they believed that these interactions would contribute to their success at first-year. This is also a way of lecturers to enter into discussions with students to enable them to identify students who are finding difficulty in their subject.

5.4.3 Teaching and learning: Use of technology

A high percentage of students felt that the use of technology at first-year level is paramount in their success at first-year. The use of visual aids helps identify concepts taught in the classroom to that of the real world and students can identify with the theoretical aspect of the syllabus. Since students come from a technologically advanced era, students viewed the use of technology as a significant contributory factor for passing first-year level. E-learning improves the delivery of lecture material and promotes enthusiasm amongst students.

5.4.4 Student feedback from assessments

Students felt that timely feedback and better assessment procedures would be beneficial to them as timely feedback will allow them to identify their weaknesses and seek assistance to improve their understanding. Timely feedback from lecturers can also assist lecturers identify at-risk students and devise strategies to assist students improve their understanding of the course material.

5.4.5 Inclusive teaching

Inclusive teaching addresses the needs of a multi-cultural student population. The manner in which the lecturer conducts the lectures addresses the needs and abilities of a diversified student population. Students viewed the approachability of lecturers as a very important factor at first-year level because should they be faced with difficulty in their understanding of what is being taught they can approach their lecturers with ease. It must be noted that since students at first year come from different economic and social backgrounds, inclusive teaching incorporates students who have limited or no exposure. Inclusive teaching enhances the learning experience of students which could improve the performance of first-year students.

5.4.6 Critical skills

Twenty-five percent of the first year students indicated that they are repeating first-year level subjects. Students who come from disadvantaged backgrounds do not have the best resources

available to them during their schooling life and hence this could impact their tertiary studies due to their inability to understand certain aspects of the syllabus or identify with it. Lecturers indicated that literacy, numeracy and critical thinking-problem solving skills are essential for a student to succeed at first-year due to the structure of the first-year programme.

5.5 Recommendations to improve students' motivation at first-year level in the Department of CMQS.

5.5.1 Objective 1: Factors that motivate students to choose Construction Management and Quantity Surveying as their career.

5.5.1.1 Career Choice

The high drop-out rate has severe financial consequences for the department and the institution. The department should strive to make the offering more competitive and place the offering as the number one choice in the faculty. Greater industry liaison is crucial in gaining a competitive advantage over its neighbouring institutions. It would be beneficial to prospective students as well as the department if alumni and senior students of the department develop and market the programme at schools. An important collaboration would be for the department to create links with organisations such as the Master Builders Association and other construction affiliations and host construction promotional events. The Department of CMQS must endeavour to target specific areas or schools to promote the programme, taking into account the cultural and linguistic differences as well.

While recruitment officers and the university have some influence and play a role in influencing these first year students, a greater marketing strategy needs to be put in place if DUT is to be the leading first-choice university in KwaZulu-Natal. The Department of CMQS should consider engaging their department staff who are experts in their own field to collaborate with industry to engage in roadshows targeting schools and this can be seen as a strategic effort to attract students who have a keen interest in the programme. Students embark on a study programme

with pre-knowledge and have reasonably expectations what to expect, and this could be the beginning of a motivated student, who is enthusiastic about his/her studies and accept the challenges with a positive approach.

5.5.1.2 Marketing

DUT should review its marketing and communication strategy in relation to informing prospective students and other role players of the programmes offered by the Department of CMQS. The programme name, however, could be a contributing factor as it does not do justice to what the programme offers. Inter-disciplinary linkage in the field of the built environment may benefit first-year students, exposing students to different trends in industry. The Department needs to form a linkage with more schools so that when students register they have a clear expectation of what is required from them to succeed and the transition from secondary to tertiary studies would be a smooth one.

The Department should maintain professional links with industry and professional bodies as this serves as a marketing tool for prospective students. The institution services must match the expectations of the students in order to be competitively advantaged. It would be a useful tool for the Department of CMQS to have an alumni database and for the department to extend invites to these alumni on a bi-annual basis to assist as guest lecturers or industry experts as well as to assist with the recruitment process as graduates are products for industry. The DUT webpage, use of recruitment officers and the institution's career day should be enhanced to attract prospective students.

Where marketing is concerned, Wiese et al. (2009:42), stated that HEIs do not only compete for students and staff, but also for funding. This implies that universities and other institutions of higher education must have a marketing and communication strategy in place that will not only convey and enhance the corporate brand or image of the university, but also inform prospective students and other role-players of the unique characteristics of the institution that will make it the desired university at which to register.

5.5.1.3 Admission/recruitment policy and retention

The student and staff portals can be used as user-centric communication to assist in the recruitment of students with potential to succeed. The admissions policy of the department must state and include the requirements per course and programme as well as the undergraduate information regarding progression. Students registering for the programme will be equipped with departmental and institutional rules, rules for progression and rules pertaining to students who perform poorly prior to the commencement of the academic year.

5.5.2 Objective 2: Identify factors that motivate students' academic performance.

5.5.2.1 Support services awareness campaign

The institution should develop and implement student empowerment campaign that highlights the nature and role of the support systems available to students. Of importance is the counselling and wellness centre, the role of the Student Representative Council and at-risk programmes available for students not achieving their academic goals.

5.5.2.2 Library and media support services

The use of the library should be further enhanced as the students could engage with the various ICT available in the libraries. An impact evaluation should be undertaken to ascertain the quality of library services provided and the future needs of students.

5.5.2.3 Student Funding/Financial Aid Department

Durban University of Technology admits majority of its students from previously disadvantaged backgrounds where affordability to attend lectures, buy food and pay the student fees is a challenge. Currently, these issues are reflected in the #FEESMUSTFALL campaign and it places both the government and the university in a financially unsustainable position. It is therefore critical that the Financial Aid Department educates the students of the opportunities available and the eligibility criteria for loans and scholarships.

5.5.3 Objective 3: Identify factors that could improve a student's performance in the Department of CMQS

5.5.3.1 Enhancing retention of students in the Department of CMQS

A model to predict student success should be developed to predict student success and thereby promoting a lower drop-out rate in the Department. An early-warning assessment system by lecturers should be developed with timely feedback to students, as most students only realise after their first tests that they are struggling to cope.

Peer mentors should support students through their transition from school to tertiary studies, an action which could assist with the retention of students at first-year level as students relate with ease with their peers on a social and educational level. The department should also consider having mentors from other levels of study within the programme. Pre-registration assessments in a subject may give the lecturer an indication of a student's prior knowledge so that the teaching, learning and assessment strategies could be accordingly developed.

5.5.3.2 At-risk students

Attendance should contribute to the Duly Performance (DP) mark. This would motivate students to attend lectures on a regular basis. Students sometimes adopt a "don't care" attitude towards attendance and having a mark contribute towards their DP mark should result in an increase in student attendance. Regular attendance will promote understanding in the different subject areas. The student feedback and comments from the SEQs and LEQs must be taken into account.

Intervention programmes should be put in place for students who struggle with the programme and those students at risk of failing. Continuous monitoring of student performances and evaluation of their overall progress must be undertaken by the Department of CMQS to increase the pass rate of its first-year students.

5.5.3.3 Teaching and Learning: Use of Technology

Armed with the latest technology and kept abreast with the latest technological changes, students may find "chalk and board" sessions boring and challenging, thereby developing a sense of disinterest in the subject. The old traditional methods of teaching must be changed to maintain the attention of students at lectures. Innovative and creative teaching ideas need to be devised by lecturers, especially at first-year level. It is recommended that student-centredness should direct teaching and learning to encourage students to think "out of the box" and lecturers develop new and innovative teaching methods.

5.5.3.4 Student feedback from assessments

Lecturers should provide timeous feedback to students to enhance student learning by recollecting the thought process used to answer questions. Timely feedback must be informative so that students are aware of their weaknesses and aids them improve on their shortcomings. Students can develop strategies at an early stage to help them improve on their weaknesses. When students are given timely feedback, they can engage with their peers and brainstorm ideas and enter into discussions thereby enhancing the learning process.

5.5.3.5 Inclusive teaching

Academics must take students' learning styles and socio-economic backgrounds into consideration during course delivery. Students perceive their education as a form of status when considering the background from which they come. Escaping from their previous situation could also encourage some students to perform well to ensure success. It could be that although "escape" into the real world poses an opportunity, what students really do with this freedom and environment needs to be seen. The students' academic and social adjustment could have an impact on the academic performance of these students.

5.5.3.6 Critical skills

Numeracy, mathematical and literacy skills are key aspects of the programme and require a proper understanding of all three components. The entrance requirements for the programme should be revisited and options of other subjects should be considered for entry requirements. Tutors should be employed by the department so that students have extra tutorial sessions, which must be then made compulsory, thereby decreasing the student's chance of failure. Students' needs for an increase in the practical component will capture the interest of the student and this could be beneficial to both lecturer and student. Students need to engage with the academic rigour of the course and demonstrate the interconnectedness between theory and practice.

5.6 FUTURE RESEARCH

This study included only the first-year students from the Department of CMQS. Future studies should include students at different levels of study and the remaining departments within the Faculty. A more detailed research should be undertaken with regards to the specific learning approaches of students and the teaching styles of lecturers. The current transformation in higher education, namely, re-curriculum, and a call for free education could affect first-year students' motivation and should be further investigated.

5.7 CONCLUSION

The study has successfully determined the factors that affect student motivation at first-year level by answering the stipulated research questions and making the necessary recommendations. Students should be motivated to achieve their goals through effective marketing strategies, engaging institutional support services and an environment that encourages students to experience an enjoyable campus life that prepares them for the world of work. In this regard, Durban University of Technology has to evaluate student-staff relationships, the teaching and learning strategies and factors that affect student academic performances. The level of critical skills, use of technology and relevance of the curriculum needs to be upgraded.

BIBLIOGRAPHY

Alam, M. T. A., Farid, S. 2011. Factors affecting teachers' motivation. *International Journal of Business and Social Science*, 2 (1): 299-304.

Alija, S. 2013. How attendance affects the general success of the student. *International Journal of Academic Research in Business and Social Science*, 3 (1): 168-182.

Ames, C. A. 1990. What teachers need to know? *Teachers College Record*, 91, (5): 409-421.

Apperson, J.M., Laws, E.L., Seepansky, J.A. 2006. The impact of presentation graphics on student' experience in the classroom. *Computers and Education* 47, 123-124.

Arends. R.I., Kilcher, A. 2010. Teaching for Student Learning. Becoming an accomplished teacher. First Edition. Routledge, New York.

Athanassiou, N., McNett M. J., Harvey, C. 2003. Critical thinking in the classroom: Bloom's taxonomy as a learning tool. *Journal of Management Education*, 27 (5): 533-555.

Bahramy, I. M and Araghi, M. 2013. The identification of demotives in EFL University Students. *International Journal of Basic and Applied Science*, 1 (4): 840-845.

Bailey, A., Zanchetta, M., Velasco, D., Pon, G., Hasssan, A. 2015. Building a scholar in writing (BSW): A model for developing students' critical writing skills. *Nurse Education in Practice* 15: 524-529.

Barrie, C.S. 2006. Understanding what we mean by the generic attributes of graduates. *Higher Education*, (51): 215-241.

Bawa, A.C. 2013. Righting an inverted pyramid: Managing a perfect storm. *Alternation Special Edition*, (9): 25-45.

Bell, J. 2010. Doing your research project. A guide for first-time researchers in education, health and social science. Fifth edition. Open University Press, Maidenhead.

Biggs J., Tang, C. 2011. Teaching for quality learning at university. What the student does. Fourth Edition. Open University Press. McGraw Hill, England.

Blerkom,Van D.F. 2006. College study skills: Becoming a strategic learner. Fifth Edition. Thomas Wadsworth, United States.

Bonds-Raacke, J., Raacke, J. 2012. Research Methods. Are you equipped? Prentice Hall, New Jersey.

Bowden, J.H-L. 2013. "What's in a relationship?". Affective commitment, bonding and the tertiary first-year experience – a student and faculty perspective. *Asia Pacific Journal of Marketing and Logistics*, 25 (3): 428-451.

Bloom S.B, Engelhard, D., Furst, E.D., Hill, W.H. and Krathwohl, D.R. 1956. Taxonomy of Educational Objectives. The Classification of Educational Goals. Handbook 1: Cognitive Domain. David McKay Company, Inc.

Brophy, J. 2010. Motivating students to learn. Third Edition. New York and United Kingdom, Taylor & Francis.

Centre for Higher Education: Work Integrated Learning: Good Practice Guide. 2011. HE Monitor: No 12.

Chen, K-N., Lin, P-C. 2011. Information literacy in university library user education. *Aslib Proceedings: New Information Perspectives*, 63 (4): 399-418.

Chepchieng, M.C., Mbugua, S.N and Kariuki, M.W. 2006. University students' perception of lecturer-student relationships: a comparative study of public and private universities in Kenya. *Educational Research and Reviews*, 1 (3): 80-84.

Choudary, D., Garg, P.K. 2013. 95% Confidence Interval: A misunderstood statistical tool. *Indian J Surg*, 75(5): 410. Available: DOI: 10.1007/s12262-012-0555-z (accessed 4 November 2016).

Couros, G. 2010. Creating the Optimal Learning Environment. *Ecology of Education*. www.ecologyofeducation.net. (Accessed 22 July 2013).

Covington, M. V. 2000. Goal theory, motivation and school achievement: An integrative review. *Annual Review of Psychology*, (51): 171-200.

Cresswell, J.W. 2009. *Research Design*. Qualitative, Quantitative and Mixed Methods Approach. 3rd Edition. United Kingdom, Sage Publishers Inc.

Dahlquist, G. 2006. Ethics in Research: Why and How. *Scandinavian Journal of public Health*, 34 (5), 449-452.

Domizio, P. 2008. Giving a good lecture. Diagnostic Histopathology 14:6.

Duangjan, J. 2014. Factors affecting the learning responsibility of first-year students at Suratthani Rajabhat University. Canadian Center of Science and Education. Asian Social Science, 10 (3): 79-85.

Dunne, C., Somerset, M. 2014. Health promotion in university: what do students want? *Health Education*, 104 (6): 360-370.

Eryilmaz, M. 2015. The effectiveness of blended learning environments. *Contemporary issues in educational research*, 8 (4): 251-256.

Favish, J. 2015. Transformative students are reflecting on new knowledge. Sunday Tribune, Independent Thinking, 26 October 2015: 3.

Faulconer, F., Geissler, J., Majewski, D., Trifilo, J. 2013. Adoption of an early alert system to support university student success. *The Delta Kappa Gamma Bulletin,* Vol 80, 45-48.

Ferer, E. 2012. Working together: library and writing centre collaboration. *Emerald Group Publishing Limited, Service Review,* 40 (4): 543-557.

Fitzpatrick, J., Cronin, K., Byrne, E. 2011. Is attending lectures still relevant in Engineering Education? *European Journal of Engineering Education*, 36 (3): 301-312.

Gaff, J.G. 1991. New life for the college curriculum. Assessing achievements and furthering progress in the reform of general education. Josey-Bass Inc. Publishers, San Francisco.

Ghazivakilu, Z., Nia, R.N., Panadhi., Karimi, M., Gholsorkhi, H. Ahmadi, Z. 2014. The role of critical thinking skills and learning styles of university students in their academic performance. *Journal of Advances in Medical Education and Professionalism*, (3): 95-102.

Glynn, S.M., Aultman, L.P., Owens, A.M. 2005. Motivation to learn in general education programs. *The Journal of General Education*, 54 (2): 150-170.

Gravetter, F.J.2012. Research Methods for the Behavioral Sciences. Fourth Edition, International Edition. Wadsworth, Cengage Learning.

Grix, J. 2002. Introducing students to the generic terminology of social research. *Politics*. 175-186.

Guillemin, M., Gillam, L. 2004. Ethics, Reflexivity and "Ethically important moments" in research. *Qualitative Inquiry*, 10 (2): 261-280.

Hagenauer, G., Volet, E.S. 2014. Teacher-student relationship at university: an important yet under-researched field. *Oxford Review of Education,* 40 (3): 370-388.

Hammer, S.J., Green, W. 2011. Critical thinking in a first-year management unit: the relationship between disciplinary learning, academic literacy and learning progression. *Higher Education Research and Development*, 30 (3): 303-315.

Handstedt, P. 2012. General Education Essentials. A guide for college faculty. Josey-Bass Inc. Publishers, United States.

Harackiewicz, J. M., Barron K. E., Pintrich, P. R., Elliot A. J., Thrash T. M. Revision of achievement goal theory necessary and illuminating. *Journal of Educational Psychology*, 94 (3): 638-645.

Jaskyte, K., Taylor, H., Smariga, R. 2009. Student and Faculty Perceptions of Innovative Teaching. *Creativity Research Journal*. Taylor and Francis. (Accessed 18 June 2012).

Jones, L. 2007. The Student-Centred Classroom. Cambridge University Cambridge University Press. New York. (Accessed 8 June 2013).

Keesee, G. S. 2011. Learning theory and instructional design/technology (online). Available: http: //teachinglearningresources.pbworks.com (Accessed 5 July 2013).

Kember, D., Amber, H., Hong, C. 2009. Characterising a teacher and learning environment capable of motivating student learning. *Learning Environment Research*, 13 (1): 43-57.

Krathwohl, D. R. 2002. A revision of Bloom's Taxonomy. Theory into practice: An overview. *Educational Research,* 4: 212-218.

Kudrinskaia, L. A., Kubarev, V. S. Characteristics of the learning motivation of students in a higher technical educational institution. *Russian Education and Society*, 55 (4): 25-37.

Kusurkar, R. A., Croiset, G., Olle, J. 2011. Twelve tips to stimulate intrinsic motivation through autonomy-supportive classroom teaching derived from Self-Determination Theory. *Medical Teacher*, 33 (12): 978-983.

Leedy, P. D., Ormrod J.E. 2010. Practical Research. Ninth Edition. Planning and Design. Prentice Hall, Colorado.

Leedy, P. D., Ormrod J.E. 2013. Practical Research. Tenth Edition. Planning and Design. Pearson Education Inc., New Jersey.

Leibowitz, B., Van der Merwe, A., Van Schalkwyk, S. 2009. Focus of first-year success. Perspectives emerging from South Africa and beyond. Sun Media, Stellenbosch.

Leung, D.Y.P., Kember, D. 2013. Nurturing graduate attributes through a first-year student experience which promotes the formation of effective learning communities. Journal of Educational Research (1): 230-239.

Lizzio, A., Wilson, K. 2009. Student participation in university governance: role conceptions and sense of efficacy of student representatives on departmental committees. Sun Education, 34 (1): 69-84.

Lombardi, J. 2011. Got motivation? Six great resources for instructors at every level. *College Teaching*, 59 (4): 150-153.

Mather, C. 2007. Between the "local" and the "global": South Africa after apartheid. *Journal of Geography in Higher Education*, 31 (1): 143-159.

McNeill, M., Diao, M.M., Gosper, M. 2011. Students' use of technology in learning: two lenses. *Interactive Technology and Smart Education*, 8 (1): 5-17.

Maimela, T. 2015. Transformative students are reflecting on new knowledge. Sunday Tribune, Independent Thinking, 26 October 2015: 4.

McHugh, M.L. 2013. The Chi-square test of independence. *Biochemia Medica*, 23(2): 143-9. Available: http://dx.doi.org/10.11613/BM.2013.018 (accessed 15 November 2016).

Masoume, B., Araghi M. 2013. The identification of demotives in EFL University Students. *International Journal of Basic and Applied Sciences*, 1 (4): 840-844.

Mbengo, P. 2014. E-learning by Lecturers in selected Zimbabwe State Universities: An application of technology acceptance model. *Journal of Business Administration and Education*, 6 (1): 15-33.

McHugh, M.L. 2013. The Chi-square test of independence. June 2013. *Biochemica Medica*. Department of Nursing, School of Health Sciences and Human Science, National University, 143-149.

Meece, J. L., Anderman, E. M., Aderman, L. H. 2006. Classroom goal structure, student motivation and academic achievement. Annual review of psychology, (57): 487-503.

Mok, H. N., 2014. Teaching tip: The Flipped Classroom. Journal of Information Systems Education, 25 (1): 7-11.

Molopyane, J., Fourie, I. 2015. A framework for workplace information literacy in academic contexts. Library Hi Tech, (4): 201, 562-283.

Moore, S., Armstrong, C., Pearson, J. 2008. Lecture absenteeism amongst students in higher education. A valuable route to understanding student motivation. Journal of Higher Education Policy and Management, 30 (1): 15-24.

Morreale, S.P., Osborn, M.M., Pearson, J.C. 2000. Why communication is important: A Rationale for the Centrality of the Study of Communication. Journal of the Association for Communication Administration, 1-25.

Morse, M. T. 1994. Journal of Visual Impairment and Blindness. Jan/Feb 94, 88 (1): 43-52.

Nagaraju, C., Madhavaiah, G., Peter, S. 2013. Teacher-Centred Learning and Student-Centred Learning in English Classroom: The teaching methods realizing the dreams of language learners. International Journal of Scientific Research and Reviews, 2 (3): 124-127.

Noddings, N. 1997. Educational leaders as caring teachers. School Leadership and Management, 26 (4): 339-340.

O'Connor, M. 2003. Perceptions and experiences of learning at university: what is it like for undergraduates? *Research in post-Compulsory Education*, 8 (1): 53-72.

Ocampo, M. L. 2004. A brief History of Educational Inequalities from Apartheid to the Present. Global Perspectives on Human Language: The South African Context. *Journal of Educational Psychology*, 94 (3): 638-645.

Oja, M. 2011. Student satisfaction and student performance. Journal of Applied Research in the Community College, 19 (1): 50-55.

Petruzzellis, L., Romanazzi, S. 2010. Educational value: how students choose university. *Instructional Journal of Educational Management*, 24 (2): 139-158.

Phillips, J. M., Gully, S. M. 1997. Role of Goal Orientation, Ability, Need for Achievement, and Locus of Control in the Self-Efficacy and Goal-Setting Process. *Journal of Applied Psychology*, 82 (5): 792-802.

Pocock, J. 2012. Leaving rates and reasons for leaving in an Engineering Faculty in South Africa: A Case Study. *South African Journal of Science*, 108, (3-4): 60-69.

Prescott, A and Simpson, E. 2004. Effective Student Motivation Commences with Resolving "Dissatisfiers". *Journal of Further and Higher Education*, 28 (3): 247-259.

Republic of South Africa. Department of Higher Education and Training 2012. Green Paper for Post School Education and Training, Government Publisher: Pretoria.

Reschovsky, A. 2006. Financing Schools in the New South Africa. *Comparative Education Review*, 50 (1): 21-45.

Roberts, P., Priest, H., Traynor, N. 2006. Reliability and validity in research. Nursing Standard.

Http: //www.fischlerschool.nova.edu (Accessed 23 July 2013).

Rodriguez, R. 2010. Review of the book How Learning Works: 7 Research-Based Principles for Smart Teaching. *Journal of Applied Christian Leadership*, 50 (1): 21-45.

Ronald, L. J. II, Drummond, D. K., Camara, S. 2007. What is qualitative research? *Qualitative Research Reports in Communication*, 8 (2): 21-45.

Rowley, J. 2014. Designing and using research questionnaires. *Management Research Review*, 37 (3): 308-330.

Ryan, R. M., Deci, E. L. 2000. Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary Educational Psychology, 25: 54-67.

Seabi, J., Seedat, J., Khoza-Shabgase, K., Sullivan, L. 2014. Experiences of university students regarding transformation in South Africa. *International Journal of Educational Management*, 28 (1): 66-81.

Schmulian, A., Coetzee., S. 2011. Class absenteeism: reasons for non-attendance and the effect on academic performance. *Accounting Research Journal*, 24 (2): 178-194.

Schweinle, A., Helming, L. M. 2011. Success and motivation amongst college students. *Goals, College Students, Motivation*, 14 (4): 529-546.

Shaker, R. J. 2007. The Construction Project Manager. Http: //www.construction-pm.com (Accessed 22 July 2013).

South African Council of Higher Education (CHE). 2010. *Community Engagement in South African Higher Education.* Kagisano No 6.

Su, F., 2012. What makes a good university lecturer? Students' perceptions of teaching excellence. *Journal of Applied Research in Higher Education*, 4 (2): 142-155.

Taylor, J. 2013. What is student centredness and is it enough? *The International Journal of the first-year in Higher Education*, 4 (2): 39-48.

Upcraft, M. L., Gardner, J. N., Barefoot, B. O. 2005. Challenging and supporting the first-year student. A handbook for improving the first-year of college. 1st Ed. San Francisco: Jossey-Bass, Wiley Imprint.

Wagner, C., Kawulich, B., Garner, M. 2012. Doing Social Research. A global context. McGraw-Hill Higher Education.

Wiese, M., Van Heerden, N., Jordaan, Y., North, E. 2009. A marketing perspective on choice factors considered by South African first-year students in selecting a higher education institution. *Southern African Business Review*, 13 (1): 39-60.

Wilkes, J., Godwin, J., Gurney, L.J. 2015. Developing information literacy and academic writing skills through collaborate design of an assessment task for first-year engineering students. *Australian Academic & Research Libraries*, 46 (3): 164-175.

Williams, K. C., Williams, C. C. 2011. Five key ingredients for improving motivation. *Research in Higher Education Journal*, 12 (12): 1-23.

Williams R. H., Stockdale, S. L. 2004. Motivation strategies for prospective teachers. *The Teacher Education Classroom*, 39: 212-230.

Wrench, A,. Garrett, R., King, S. 2013. Guessing where the goals are: managing health and well-being during the transition to university studies. *Journal of Youth Studies*, 16 (6): 730-746.

Http: //www.mindtools.com (accessed 15 July 2013)

Http: //www.flu.edu (accessed 21 August 2013)

Http: //changingminds.org (accessed 21 August 2013)

www.asaqs.co.za (accessed 14 August 2013)

www.dut.ac.za (accessed 2 July 2013)

Http: //ww.nwlink.com (accessed on 14 October 2013)

APPENDIX 1

CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, **ANISHA PIRTHIRAJ** (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **059/14**
- 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 sex, age, date of birth, initials and diagnosis 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.

_____	_____	_____ _____	
Full Name of Participant	**Date**	**Time**	**Signature / Right Thumbprint**

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

_____	_____	_____
Full Name of Researcher	**Date**	**Signature**

_____	_____	_____
Full Name of Witness (If applicable)	**Date**	**Signature**
_____	_____	_____
Full Name of Legal Guardian (If applicable)	**Date**	**Signature**

Please note the following:

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level - use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counseling (Department of Health, 2004).

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. wrong date or spelling mistake a new document has to be completed. The incomplete original document has to be kept in the participant file and not thrown away and copies thereof must be issued to the participant.

References:

Department of Health: 2004. *Ethics in Health Research: Principles, Structures and Processes* http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/

Department of Health. 2006. *South African Good Clinical Practice Guidelines*. 2nd Ed. Available at: http://www.nhrec.org.za/?page_id=14

APPENDIX 2

LETTER OF INFORMATION

Title of the Research Study: Factors effecting the motivation of first-year students in the Department of Construction Management and Quantity Surveying at the Durban University of Technology.

Principal Investigator/s/researcher: Anisha Pirthiraj: ND: Business Computing, B Tech: Commercial Administration.

Co-Investigator/s/supervisor/s: Dr I G Govender: D Admin, B Sc, B Com, MBA, CFP, and LLB.

Brief Introduction and Purpose of the Study: The aim of the study is to determine the factors affecting the motivation of first-year students in the Department of Construction Management and Quantity Surveying at the Durban University of Technology.

Outline of the Procedures: First-year students will be required to complete a questionnaire voluntarily. The questionnaire will be handed to students by the researcher after obtaining permission from the Head of Department. Lecturers will be asked to complete a questionnaire. The issue of confidentiality will be explained to both students and lecturers. The students and lecturers will be given the option of remaining anonymous.

Risks or Discomforts to the Participant: There would be no risks involved or discomfort experienced while students and lecturers are completing the questionnaires.

Benefits: The department would benefit from this research by identifying the factors which hinder a student's development or progress in their first-year of study and ultimately affect the motivation of first-year students. Measures can be implemented early enough thereby increasing the pass rate and reducing the drop out rate in the department.

Reason/s why the Participant May Be Withdrawn from the Study: There would be no adverse consequence to the participant should the participant decide to withdraw from the study.

Remuneration: The participant will not receive any monetary or other type of remuneration.

Costs of the Study: There would be no cost incurred by the participant.

Confidentiality: Confidentiality will be maintained during the completion of the questionnaires as well as the final research report.

Research-related Injury: There would be no research-related injuries to the participants.

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

Please contact Anisha Pirthiraj, the researcher, on 084 5498928 031-3732143, my supervisor: Dr I G Govender on 083 6532121 or 031-3735694, or the Institutional Research Ethics Administrator on 031 373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za.

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population e.g. isiZulu.

APPENDIX 3

Faculty of Management Sciences

Department of Entrepreneurial Studies and Management

Date: 15 September 2014

Dear Participant

It would be appreciated if you could please complete the attached questionnaire. The questionnaire will take approximately 15 minutes. Participation is voluntary and you are free to withdraw from the study at any time without giving reasons, and without prejudice or any adverse consequences. The information you give will only be used for research purposes and will be aggregated with other responses and only the overall or average information will be used. Your identity and individual answers will be kept totally confidential. Should you wish to discuss this further please feel free to contact me or my supervisor (Dr. I.G. Govender telephone: 031 3735695 or ivang@dut.ac.za), or the IREC Administrator, Lavisha Deonarian: 031 373 2900 or LavishaD@dut.ac.za).

Your assistance will be much appreciated,

I,.....……..……., have adequately discussed the study with the researcher, understand that I may withdraw from it at any time without giving reasons, and voluntarily agree to participate by I am currently undertaking a research project as part of my studies towards a Master's Degree in Management Sciences: Business Administration at Durban University of Technology. The aim of this study is to determine the factors affecting the motivation of first-year students in the Department of Construction Management and Quantity Surveying at the Durban University of Technology.

completing a questionnaire.

Signature…….....Date:.....

Yours faithfully,

Anisha Pirthiraj

Student Number:

18950908

_____

Student Details

Anisha Pirthiraj

031-3732143/084 5498928

_____

Supervisor / Promoter

Dr I G Govender

031-3735694/083 6532121

_____

Co-Supervisor/Co-Promoter

Contact Details

_____

Student

Contact Details

_____

Supervisor / Promoter

Contact Details

_____

Co-Supervisor/Co-Promoter

Contact Details

APPENDIX 4

STUDENT QUESTIONNAIRE

Please mark with a cross (X) where appropriate.

1. Biographical Information

1.1 Gender

Male	Female

1.2 Age

18-21	22-24	25+

1.3 Race (for statistical purposes)

Indian	Black	Coloured	White	Other

1.4 Are you a repeat student in the Department of Construction Management and Quantity Surveying?

Yes	No

2. Career Choice

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
I learnt about the course at the DUT career day					
The DUT Recruitment Officers influenced my decision					
I conducted research into the programme					
I registered for the programme due to the sponsorship received					
This was the "only" option available to me					

3. **Motivation can be defined as a way/means to get something done. How would you rate the following in terms of importance that assisted you to be motivated?**

	Very important	**Important**	**Neutral**	**Not important**	**Not very important**
Interaction with peers and fellow students					
The physical environment at DUT.					
The course content					
The use of visual aids or technology to create a better understanding of the course content					
Approachability of lecturers					

4. **What factors are critical for you to pass your first-year of study?**

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Attendance at lectures on a regular basis					
Completion of tasks allocated to me and prescribed reading is important for me to pass my subjects					
Working with peers or fellow class students					
Use of the DUT libraries					
Social networking and interaction with other DUT students					
Balancing academic life with sport					

5. **The facilities/student support services are vital for any first-year university student. How would you rate the following services as being critical to you?**

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Student Counselling					
SRC					
Financial Aid					
Library					
Faculty Office					
Cultural/religious bodies					

6. What factors would improve your performance in the programme?

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Increased interaction with lecturers					
Access to study material online					
More practical exposure to improve understanding					
Improved assessment criteria					
Attendance at lectures					

7. Which of the following skills would you consider being critical in order for you to be successful in this course?

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Numeracy					
Literacy					
Problem-solving					
IT					
Communication					

8. Teaching and learning

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
I am satisfied with the teaching and learning environment at the university					
The facilities at the university create a positive learning environment					
I make adequate use of the library services to supplement my lecture material					
The lecturers in the department are very approachable especially when I experience problems with section/s being taught					

I am aware of the student support systems offered at the university					
I make use of the e-learning facilities available to me such as Blackboard and Moodle					
My lecturers make use of the e-learning tools					
Student consultation times in accordance with my lecturer have assisted my tremendously when I am faced with a difficult section					

9. What suggestions would you make to the Department of Construction Management and Quantity Surveying to improve the teaching and learning experience?

……...

……...

……...

……...

Thank you for your time and input.

APPENDIX 5

QUESTIONNAIRE TO LECTURERS

Please mark with a cross (X) where appropriate.

1. Biographical Data

1.1 Age 25-40 ☐ 41- 55 ☐ 56-65 ☐

1.2 Qualifications NHD/B Tech ☐ M Tech ☐ D Tech/PhD ☐

1.3 Years of lecturing experience <10 ☐ 10-15 ☐ 16-25 ☐ >25 ☐

1.4 Highest level lectured ND ☐ B Tech ☐ M Tech ☐

2. What would you identify as being critical factors for first-year students to pass your subject?

(Please tick)

	Very important	**Important**	**Neutral**	**Not important**	**Not very important**
Interaction with peers and fellow students					
The use of the library for supplementary information					
The use of technology such as online question and answers					
More interaction with lecturers					

3. What would enhance a student's ability to increase a student's academic performance? (Please tick)

	Very important	**Important**	**Neutral**	**Not important**	**Not very important**
Increase in consultation time					
Increase in contact time for the practical component					
Increase in the number of assessments					
Fewer assessments					
On-line access to student material					

4. The following skills are required for a student to pass their first-year of study.

	Very important	**Important**	**Neutral**	**Not important**	**Not very important**
Numerical skills					
Writing skills					
Technological skills					
Literacy skills					
Critical thinking/problem-solving					

5. Teaching and learning are affected by the following issues.

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Students seem interested in the coursework/curriculum in your subject					
Students are enthusiastic and ask questions when they do not understand concepts being taught					
It is important that certain aspects of the curriculum are graphically explained using the latest technology available					
Feedback from the lecturer evaluation questionnaire (LEQ), is indicative of my course delivery					
The facilities at the institution are sufficient to execute my tasks					
Students read notes and course handouts and familiarise themselves with the concepts taught prior to the lectures.					
Students come to my lectures well prepared and participate actively during my lectures					
Students' non-attendance has a considerable impact on the delivery of my lectures					
Students' non-attendance has an impact on their performance and is evident in their assessments					

6. ***Are the resources adequate to conduct your lectures? If not, please explain.***

……

……

……

7. ***What technology do you use in your course delivery?***

……

……

……

8. ***Students come from different social and economic backgrounds. How do you make provision to assist these students? Please explain.***

……

……

……

……

9. ***What suggestions would you make to the Department of Construction Management and Quantity Surveying to improve the teaching and learning experience?***

……

……

……

……

……

Thank you for your time and input.

ANNEXURE A

STATISISTICS FOR STUDENT RESPONSES

Cronbach's Alpha is used as an estimate of the reliability of a test. The theoretical value of alpha varies from 0 to 1. The higher values of alpha are more desirable as it makes the response more reliable. Some professionals as a rule of thumb require a reliability of more than 0.70, before the sample is used.

Cronbach's alpha will generally increase as the inter-correlations among test items increase. Therefore it is also known as a test for internal consistency estimate of reliability scores.

Cronbach's Alpha	**Internal Consistency**
$\alpha \geq 0.9$	Excellent
$0.9 \geq \alpha \geq 0.8$	Good
$0.8 \geq \alpha \geq 0.7$	Acceptable
$0.7 \geq \alpha \geq 0.6$	Questionable
$0.6 \geq \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha
What is your Gender (Biographical)	89.85	203.010	-.191	.856
What is your Age (Biographical)	89.94	201.243	-.058	.855
What is your Race (Biographical)	89.46	200.918	-.038	.856
Are you a repeating student (Biographical)	89.40	199.018	.125	.853
I learnt about the course at Career Day (Career Choice)	87.94	187.093	.401	.848

DUT recruitment Officers influenced my decision (Career Choice)	88.00	187.613	.390	.848
I did my own research (Career Choice)	89.06	197.695	.067	.856
I recieved some sponsorship for this Career (Career Choice)	87.23	192.611	.227	.852
My only option as a career (Career Choice)	87.59	193.364	.161	.855
Interaction between peers (Motivation)	89.43	192.269	.337	.849
The physical environment at Dut (Motivation)	89.26	192.880	.281	.850
The course content (Motivation)	89.70	196.362	.227	.851
Use of Visual aids and Technology (Motivation)	89.65	196.897	.177	.852
Approachability of Lecturers (Motivation)	89.66	195.066	.255	.851
Attending Lectures Regularly (Critical factors)	89.84	196.759	.249	.851
Completion of work set (Critical factors)	89.85	194.558	.406	.849
Working with Peers (Critical factors)	89.49	194.382	.274	.851
Dut Libraries (Critical factors)	89.15	186.859	.481	.846
Social Networking (Critical factors)	88.97	189.451	.395	.848
Balancing academics and sport (Critical factors)	88.91	188.960	.359	.849
Student counselling (Support Services)	88.43	184.699	.563	.844

SRC (Support Services)	88.15	183.182	.529	.844
Financial Aid (Support Services)	88.59	188.439	.343	.849
Library (Support Services)	89.39	189.338	.494	.846
Faculty Office (Support Services)	89.26	189.676	.434	.847
Cultural bodies (Support Services)	88.36	187.825	.430	.847
Increased Lecturer Interaction (Improve Performance)	89.72	196.202	.275	.851
More study material online (Improve Performance)	89.66	197.496	.122	.853
Practical exposure for understanding (Improve Performance)	89.80	194.055	.337	.850
Improved assessment criteria (Improve Performance)	89.51	195.672	.215	.852
Attendance of lecturers (Improve Performance)	89.68	193.209	.400	.849
Numeracy (Skills Required)	89.64	198.556	.089	.854
Literacy (Skills Required)	89.43	196.656	.154	.853
Problem-solving (Skills Required)	89.71	198.616	.089	.854
Use of Technology (Skills Required)	88.71	193.970	.239	.851
Communication with Lecturers (Skills Requir118ed)	89.32	194.800	.217	.852
T&L Satisfaction (T&L)	89.01	190.118	.399	.848
Facilities provide positive learning environment (T&L)	88.89	186.096	.537	.845
I make use of Libraries (T&L)	88.83	183.175	.601	.843

Lecturers are approachable (T&L)	88.94	185.372	.468	.846
Aware of student support systems (T&L)	88.70	184.900	.505	.845
I use the E-Learning system (T&L)	89.21	188.900	.444	.847
Lecturers use the E-Learning system (T&L)	88.84	185.856	.500	.845
Consultation Times between Students and Lecturers	88.63	187.613	.457	.846

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Are you a repeating student (Biographical)	121	1.75	.434	.039
I learnt about the course at Career Day (Career Choice)	118	3.18	1.159	.107
DUT recruitment Officers influenced my decision (Career Choice)	117	3.13	1.079	.100
I did my own research (Career Choice)	116	2.09	.992	.092
I received some sponsorship for this Career (Career Choice)	118	3.86	1.119	.103
My only option as a career (Career Choice)	116	3.66	1.258	.117
Interaction between peers (Motivation)	119	1.78	.835	.077
The physical environment at Dut (Motivation)	119	1.92	.865	.079

The course content (Motivation)	115	1.50	.598	.056
Use of Visual aids and Technology (Motivation)	118	1.46	.636	.059
Approachability of Lecturers (Motivation)	118	1.51	.701	.065
Attending Lectures Regularly (Critical factors)	120	1.40	.614	.056
Completion of work set (Critical factors)	119	1.36	.516	.047
Working with Peers (Critical factors)	119	1.71	.738	.068
Dut Libraries (Critical factors)	120	1.98	.948	.087
Social Networking (Critical factors)	119	2.20	.944	.087
Balancing academics and sport (Critical factors)	120	2.14	1.031	.094
Student counselling (Support Services)	121	2.67	.943	.086
SRC (Support Services)	120	2.93	1.094	.100
Financial Aid (Support Services)	120	2.48	1.159	.106
Library (Support Services)	119	1.80	.787	.072
Faculty Office (Support Services)	120	1.95	.858	.078
Cultural bodies (Support Services)	120	2.80	1.001	.091
Increased Lecturer Interaction (Improve Performance)	119	1.47	.580	.053
More study material online (Improve Performance)	119	1.56	.766	.070

Practical exposure for understanding (Improve Performance)	119	1.36	.647	.059
Improved assessment criteria (Improve Performance)	119	1.66	.730	.067
Attendance of lecturers (Improve Performance)	120	1.53	.661	.060
Numeracy (Skills Required)	120	1.58	.681	.062
Literacy (Skills Required)	119	1.76	.778	.071
Problem-solving (Skills Required)	120	1.53	.698	.064
Use of Technology (Skills Required)	118	2.38	.905	.083
Communication with Lecturers (Skills Required)	120	1.93	.881	.080
T&L Satisfaction (T&L)	121	2.17	.863	.078
Facilities provide positive learning environment (T&L)	121	2.22	.908	.083
I make use of Libraries (T&L)	120	2.28	.980	.089
Lecturers are approachable (T&L)	120	2.23	1.059	.097
Aware of student support systems (T&L)	121	2.45	1.049	.095
I use the E-Learning system (T&L)	121	2.02	.983	.089
Lecturers use the E-Learning system (T&L)	120	2.36	1.083	.099
Consultation Times between Students and Lecturers	118	2.58	1.049	.097

ANNEXURE B

STATISISTICS FOR LECTURER RESPONSES

Cronbach's Alpha Test

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha
Age (Biographical)	36.00	131.500	-.964	.	.945
Qualification (Biographical)	37.00	117.500	-.413	.	.928
Years of Experience (Biographical)	36.40	114.800	-.100	.	.930
Highest Level Lectured (Biographical)	37.00	120.000	-.663	.	.931
More student interaction(Critical)	36.80	103.700	.870	.	.913
More interaction between students and lecturers (Critical)	37.00	106.500	.758	.	.915
More Consultation time (Performance)	35.60	104.300	.813	.	.913
More of a practical component (Performance)	36.40	97.300	.951	.	.908
More assessments (Performance)	35.80	98.700	.799	.	.911
Online Access to materials (Performance)	36.60	96.800	.915	.	.908
Writing (Skills)	36.80	103.700	.870	.	.913
Technological (Skills)	36.80	103.700	.870	.	.913
Literacy (Skills)	37.00	106.500	.758	.	.915

Students are interested in the course (Teaching and Learning)	36.60	104.300	.813	.	.913
Students are enthusiastic (Teaching and Learning)	36.60	96.800	.915	.	.908
Use of latest technology in class (Teaching and Learning)	37.00	106.500	.758	.	.915
LEQ's give me feedback (Teaching and Learning)	36.40	97.300	.951	.	.908
Facilities of appropriate level (Teaching and Learning)	35.20	100.700	.881	.	.910
Students read before coming to class (Teaching and Learning)	35.40	89.300	.921	.	.906
Students prepare for lectures beforehand (Teaching and Learning)	35.40	79.800	.961	.	.909
Students nonattendance impacts lectures (Teaching and Learning)	36.20	94.700	.925	.	.907

The overall score 0.945 exceed the recommended value of 0.70. this indicates an excellent degree of consistency scoring for this study.

One-Sample Test – T Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper

More student interaction(Critical)	7.778	6	.000	1.571	1.08	2.07
More Use of Library (Critical)	8.000	6	.000	1.143	.79	1.49
More Online resources (Critical)	4.804	6	.003	1.429	.70	2.16
More interaction between students and lecturers (Critical)	7.071	6	.000	1.429	.93	1.92
More Consultation time (Performance)	6.708	5	.001	3.000	1.85	4.15
More of a practical component (Performance)	5.477	5	.003	2.000	1.06	2.94
More assessments (Performance)	7.071	6	.000	2.857	1.87	3.85
Fewer Assessments (Performance)	11.529	6	.000	3.429	2.70	4.16
Online Access to materials (Performance)	4.666	6	.003	2.143	1.02	3.27
Numeracy (Skills)	6.971	6	.000	1.286	.83	1.74
Writing (Skills)	7.778	6	.000	1.571	1.08	2.07
Technological (Skills)	6.000	6	.001	1.714	1.02	2.41
Literacy (Skills)	7.071	6	.000	1.429	.93	1.92
Students are interested in the course (Teaching and Learning)	7.120	6	.000	1.857	1.22	2.50
Students are enthusiastic (Teaching and Learning)	4.666	6	.003	2.143	1.02	3.27
Use of latest technology in class (Teaching and Learning)	5.284	6	.002	1.571	.84	2.30

LEQ's give me feedback (Teaching and Learning)	4.500	6	.004	2.571	1.17	3.97
Facilities of appropriate level (Teaching and Learning)	9.295	6	.000	3.429	2.53	4.33
Students read before coming to class (Teaching and Learning)	6.000	6	.001	3.429	2.03	4.83
Students prepare for lectures beforehand (Teaching and Learning)	5.004	6	.002	3.429	1.75	5.10
Students nonattendance impacts lectures (Teaching and Learning)	4.800	6	.003	2.714	1.33	4.10
Student nonattendance impacts student marks (Teaching and Learning)	6.971	6	.000	1.286	.83	1.74

ANNEXURE C

CROSS TABULATION AND CHI-SQUARE TEST: STUDENTS' RESPONSES.

What is your Race (Biographical) * Increased Lecturer Interaction (Improve Performance)

Crosstab

			Increased Lecturer Interaction (Improve Performance)			
			Strongly Agree	Agree		
What is your Race (Biographical)	Indian	Count	22	18		
		Expected Count	24.0	16.2		
	Black	Count	40	26		
		Expected Count	39.4	26.7		
	Coloured	Count	3	1		
		Expected Count	2.3	1.5		
	White	Count	2	1		
		Expected Count	1.7	1.2		
	Other	Count	1	0		
		Expected Count	.6	.4		
Total		Count	68	46		
		Expected Count	68.0	46.0		

Crosstab

			Increased Lecturer Interaction (Improve Performance)	
			Neutral	Total
What is your Race (Biographical)	Indian	Count	2	42
		Expected Count	1.8	42.0
	Black	Count	3	69
		Expected Count	2.9	69.0
	Coloured	Count	0	4
		Expected Count	.2	4.0
	White	Count	0	3
		Expected Count	.1	3.0
	Other	Count	0	1
		Expected Count	.0	1.0
Total		Count	5	119
		Expected Count	5.0	119.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.948[a]	8	.983
Likelihood Ratio	2.615	8	.956
Linear-by-Linear Association	1.423	1	.233

N of Valid Cases			119				

a. 11 cells (73.3%) have expected count less than 5. The minimum expected count is .04.

What is your Race (Biographical) * More study material online (Improve Performance)

Crosstab

			More study material online (Improve Performance)				
			Strongly Agree	Agree	Neutral		
What is your Race (Biographical)	Indian	Count	28	12	2		
		Expected Count	24.4	12.4	4.9		
	Black	Count	35	21	12		
		Expected Count	40.0	20.3	8.1		
	Coloured	Count	3	1	0		
		Expected Count	2.3	1.2	.5		
	White	Count	2	1	0		
		Expected Count	1.7	.9	.4		
	Other	Count	1	0	0		
		Expected Count	.6	.3	.1		
Total		Count	69	35	14		

	Expected Count	69.0	35.0	14.0		

Crosstab

			More study material online (Improve Performance)	
			Strongly Disagree	Total
What is your Race (Biographical)	Indian	Count	0	42
		Expected Count	.4	42.0
	Black	Count	1	69
		Expected Count	.6	69.0
	Coloured	Count	0	4
		Expected Count	.0	4.0
	White	Count	0	3
		Expected Count	.0	3.0
	Other	Count	0	1
		Expected Count	.0	1.0
Total		Count	1	119
		Expected Count	1.0	119.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	7.361[a]	12	.833
Likelihood Ratio	9.164	12	.689
Linear-by-Linear Association	.315	1	.575
N of Valid Cases	119		

a. 15 cells (75.0%) have expected count less than 5. The minimum expected count is .01.

What is your Race (Biographical) * Practical exposure for understanding (Improve Performance)

Crosstab

			Practical exposure for understanding (Improve Performance)				
			Strongly Agree	Agree			
What is your Race (Biographical)	Indian	Count	29	11			
		Expected Count	29.6	10.2			
	Black	Count	51	15			
		Expected Count	48.7	16.8			
	Coloured	Count	2	2			
		Expected Count	2.8	1.0			

	White	Count	1	1			
		Expected Count	2.1	.7			
	Other	Count	1	0			
		Expected Count	.7	.2			
Total		Count	84	29			
		Expected Count	84.0	29.0			

Crosstab

			Practical exposure for understanding (Improve Performance)		
			Neutral	Strongly Disagree	
What is your Race (Biographical)	Indian	Count	2	0	42
		Expected Count	1.8	.4	42.0
	Black	Count	2	1	69
		Expected Count	2.9	.6	69.0
	Coloured	Count	0	0	4
		Expected Count	.2	.0	4.0
	White	Count	1	0	3
		Expected Count	.1	.0	3.0
	Other	Count	0	0	1
		Expected Count	.0	.0	1.0
Total		Count	5	1	119
		Expected Count	5.0	1.0	119.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.053[a]	12	.611
Likelihood Ratio	7.139	12	.848
Linear-by-Linear Association	.482	1	.488
N of Valid Cases	119		

a. 16 cells (80.0%) have expected count less than 5. The minimum expected count is .01.

What is your Gender (Biographical) * Use of Visual aids and Technology (Motivation)

Crosstab

			Use of Visual aids and Technology (Motivation)			
			Very Important	Important		
What is your Gender (Biographical)	Male	Count	49	25		
		Expected Count	50.5	25.2		
	Female	Count	23	11		
		Expected Count	21.5	10.8		
Total		Count	72	36		
		Expected Count	72.0	36.0		

Crosstab

			Use of Visual aids and Technology (Motivation)	
			Neutral	Total
What is your Gender (Biographical)	Male	Count	8	82
		Expected Count	6.3	82.0
	Female	Count	1	35
		Expected Count	2.7	35.0
Total		Count	9	117
		Expected Count	9.0	117.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.666[a]	2	.435
Likelihood Ratio	1.969	2	.374
Linear-by-Linear Association	.999	1	.318
N of Valid Cases	117		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.69.

What is your Gender (Biographical) * Approachability of Lecturers (Motivation)

Crosstab

			Approachability of Lecturers (Motivation)				
			Very Important	Important	Neutral		
What is your Gender (Biographical)	Male	Count	46	27	8		
		Expected Count	49.1	24.5	7.7		
	Female	Count	24	8	3		
		Expected Count	20.9	10.5	3.3		
Total		Count	70	35	11		
		Expected Count	70.0	35.0	11.0		

Crosstab

			Approachability of Lecturers (Motivation)	
			Not Important	Total
What is your Gender (Biographical)	Male	Count	1	82
		Expected Count	.7	82.0
	Female	Count	0	35
		Expected Count	.3	35.0
Total		Count	1	117
		Expected Count	1.0	117.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.933[a]	3	.586
Likelihood Ratio	2.246	3	.523
Linear-by-Linear Association	1.288	1	.256
N of Valid Cases	117		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is .30.

What is your Gender (Biographical) * Increased Lecturer Interaction (Improve Performance)

Crosstab

			Increased Lecturer Interaction (Improve Performance)			
			Strongly Agree	Agree		
What is your Gender (Biographical)	Male	Count	43	34		
		Expected Count	46.6	32.0		
	Female	Count	24	12		
		Expected Count	20.4	14.0		
Total		Count	67	46		
		Expected Count	67.0	46.0		

Crosstab

			Increased Lecturer Interaction (Improve Performance)	
			Neutral	Total
What is your Gender (Biographical)	Male	Count	5	82
		Expected Count	3.5	82.0
	Female	Count	0	36
		Expected Count	1.5	36.0
Total		Count	5	118
		Expected Count	5.0	118.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.511[a]	2	.173
Likelihood Ratio	4.943	2	.084
Linear-by-Linear Association	3.067	1	.080
N of Valid Cases	118		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.53.

What is your Gender (Biographical) * More study material online (Improve Performance)

Crosstab

			More study material online (Improve Performance)				
			Strongly Agree	Agree	Neutral		
What is your Gender (Biographical)	Male	Count	48	25	9		
		Expected Count	47.3	24.3	9.7		
	Female	Count	20	10	5		
		Expected Count	20.7	10.7	4.3		
Total		Count	68	35	14		
		Expected Count	68.0	35.0	14.0		

Crosstab

			More study material online (Improve Performance)	
			Strongly Disagree	Total
What is your Gender (Biographical)	Male	Count	0	82
		Expected Count	.7	82.0
	Female	Count	1	36
		Expected Count	.3	36.0
Total		Count	1	118
		Expected Count	1.0	118.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.557[a]	3	.465
Likelihood Ratio	2.650	3	.449
Linear-by-Linear Association	.859	1	.354
N of Valid Cases	118		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is .31.

APPENDIX 6

57 Caversham Road, Pinetown 3610

Tel: (031) 7024415 *Cell*: 082 5747643

8 December 2016

To:

Anisha Pirthiraj

Dept of Entrepreneurial Studies

Faculty of Management Sciences

DUT

Durban

To Whom it may Concern:

This serves to confirm that I, Brenda Morris, a freelance editor, performed an editing/proofing function on Anisha Pirthiraj's dissertation for a Master's Degree: *Factors affecting the motivation of first-year students in the Department of CMQS at DUT.*

I dealt exclusively with matters relating to spelling and grammar and made no content input to the dissertation.

Yours sincerely

B P Morris
Editor/Proofreader