Cape Peninsula
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THROUGHPUT RATE OF NURSING STUDENTS IN THE FACULTY OF HEALTH AND WELLNESS SCIENCES AT A UNIVERSITY OF TECHNOLOGY

by

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Dissertation submitted in fulfilment of the requirements for the degree

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THROUGHPUT RATE OF NURSING STUDENTS IN THE FACULTY OF HEALTH AND WELLNESS SCIENCES AT A UNIVERSITY OF TECHNOLOGY

A Research Dissertation

by

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DEDICATION

This dissertation is dedicated to:

Paul, and my son Paul, for their unselfish support, inspiration, encouragement and understanding throughout my studies which was often filled with trials and tribulations.

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To My Heavenly Father: Thank you for imparting the gift of wisdom, faith, courage and perseverance to me. You are my healer, provider and comforter and I'll be forever in your debt.

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My extended family, friends & colleagues: I salute you for the continued love and support that inspires me.

LIST OF ABBREVIATION

CPUT	Cape Peninsula University of Technology
DVD	Digital Versatile Disks
ECP	Extended Curriculum Programme
ETQA	Education and Training Quality Assurance Body
HEQC	Higher Education Quality Committee
HoD	Head of Department
IMCI	Integrated Management of Childhood Illness
NQF	National Qualifications Framework
OSCE	Objective Structures Clinical Examinations
PGWC	Provincial Government Western Cape
SATAP	Standardised Assessment Test for Access Placement
SANC	South African Nursing Council
SAQA	South African Qualification Authority
WCCN	Western Cape College of Nursing

ABSTRACT

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The Peninsula Technikon and Cape Technikon merged at the beginning of 2005 and became the Cape Peninsula University of Technology (CPUT). The University consists of six faculties, namely the faculty of: Applied Sciences, Business Studies, Education, Engineering, Health and Wellness Sciences, and Informatics and Design.

The high failure rate in the undergraduate nursing course in the faculty of Health and Wellness Science at CPUT, mooted this research due to the devastating impact student failure has on society as a whole. The academic selection criteria and its impact on throughput rates in particular as it pertains to undergraduate nurses enrolled for the 4 year B.Tech qualification, will become the subject of research scrutiny.

Descriptive research will be conducted in this dissertation, which will take place in the social world, will be theoretical in nature using both phenomenological and positivistic research paradigms. Case study research will serve as the research method.

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GLOSSARY OF TERMS

Affective skills: Willingness to receive or to carry out the scientific approach (South Africa, 1978).

Psychomotor skills: Procedures which are essential in order to satisfy basic needs (South Africa, 1978).

Interpersonal skills: Therapeutic communication: empathy, congruency, acceptance, constancy, observation, reporting and record keeping, therapeutic handling of anxiety, aggression, attachment and withdrawal by individuals, support in death and bereavement, self assertion, rendering health education, taking a nursing history, emotional support (South Africa, 1978).

CHAPTER 1: SCOPE OF THE RESEARCH

1.1 INTRODUCTION AND MOTIVATION

The Peninsula Technikon and Cape Technikon merged at the beginning of 2005 and became the Cape Peninsula University of Technology (CPUT). The University consists of six faculties, namely the faculty of: Applied Sciences, Business Studies, Education, Engineering, Health and Wellness Sciences, and Informatics and Design. The Minister of Education in his presentation to cabinet published in the Government Gazette (December 2002), recommended that the undergraduate nursing programmes in the Western Cape be offered at the newly merged institutions, namely the CPUT and the University of the Western Cape.

In 2003, the National Department of Education granted permission to the Peninsula Technikon to offer the undergraduate 4 year nursing programme B.Tech. Nursing Science, this will lead to the registration of the 'enrolled' students, as professional nurses. Since 2005, the undergraduate nursing programme at the CPUT is offered in collaboration with the Western Cape College of Nursing (WCCN). In the years prior to 2005, applicants who registered at the WCCN were allowed to enroll onto the programme, without having any Biology or Science subjects to their credit.

Candidates are selected for the degree: B.Tech. Nursing Science in the year proceeding their official year of study at the CPUT. During the first intake for 2005, applicants could also apply having a matric certificate, with at least a good pass in Biology and an aggregate of 950+. Applicants are required to meet the entrance requirements, which is a senior certificate with at least five subjects passed on Higher or Standard grade. Lower grade subjects are not acceptable. Two of the eleven languages are required, one of which must be English or Afrikaans. Specific to this programme, two or more of the following subjects are required, namely Biology or

Physiology and Physical Science or Mathematics. Grade nine and senior certificate applicants are evaluated in terms of their symbols, namely at least an E-symbol at higher grade or a D-symbol at the standard grade. Candidates with more than two of above mentioned subjects are recommended to be selected. The assumption is that such students would have had sufficient exposure to the required subjects in order to improve their chances of success in the undergraduate nursing programme.

As there is a dire shortage of nurses, the Provincial Government of the Western Cape has made available funding to invest in the training of nurses. After student selection, the predetermined number of students are notified of the following: Unconditionally selected (candidates who have a matric certificate and meet the admission requirements), provisionally selected (candidates who was selected based on grade 11 results on condition that they pass their matric certificate with the minimum admission requirements), waiting list and rejected list (candidates who do not qualify). A large number of late applications (walk-ins) are processed during the registration period each year, as people who were accepted onto the course often do not turn up for registration. Consequently, to meet the admission targets, these late applicants who have good results, are being accepted.

In spite of the entrance criteria having being amended, there is still a high drop out rate in all the levels of study. It is hypothesised that often students enter the nursing course, for reasons other than a passion for nursing.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

At the beginning of 2005, two hundred and six first year nursing science students were registered with only one hundred and fifty five students being successful to proceed to the 2nd year of study in 2006. Of the 2006 intake, only one hundred were successful to proceed to the 3rd year study in 2007. Of the one hundred students remaining, only seventy one students completed their course, culminating in a success rate of only 34,5%.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Against the above background, the research problem to be investigated within the ambit of this dissertation reads as follows: "The poor throughput rate of nursing students in the Faculty of Health and Wellness Sciences at the CPUT has an adverse impact on the already critical shortage of qualified nurses in South Africa".

1.4 THE RESEARCH QUESTION STATEMENT

The research question to be researched within the ambit of this dissertation, reads as follows: "How can the throughput rate of nursing students be improved to alleviate the critical shortage of nurses in South Africa?"

1.5 INVESTIGATIVE (SUB-) QUESTIONS

The investigative questions to be researched in support of this research question, the following:

- What is the perception of students about their work load in order to establish if the academic environment is conducive to enhanced performance?
- Why is clinical and practical exposure of the students important to their success?
- What criteria can be used to identify, analyse and interpret the throughput rate of undergraduate nursing students?
- What are the key determinants of nursing student failure?

1.6 PRIMARY RESEARCH OBJECTIVES

The key research objectives of this dissertation are:

- To determine, which external and internal factors are the dominant determinants of student failure.

- To determine the number and type of evaluations i.e. tests, projects, assignments and practical clinical hours worked.
- To determine the weighting of each component of the evaluation process and required sub-minimum.
- To determine which elements should be submitted for moderation prior to evaluation, and when these should be submitted.
- To formulate a conceptual approach to the teaching of the B.Tech. Nursing science course.

1.7 THE RESEARCH PROCESS

Remenyi, Williams, Money and Swartz (2002:64-65), explain the research process as consisting of eight specific phases, which will also be applied within the execution of this research project:

- Reviewing the literature.
- Formalising a research question.
- Establish the methodology.
- Collecting evidence.
- Analysing the evidence.
- Developing conclusions.
- Understanding the limitations of the research.
- Producing management guidelines or recommendations.

1.8 RESEARCH DESIGN AND METHODOLOGY

Descriptive research will be conducted in this dissertation, which will take place in the social world, will be theoretical in nature using both phenomenological and positivistic research paradigms. The, 'phenomenological' research paradigm, which is used to answer questions about the complex nature of phenomena, often with the purpose of describing and understanding the phenomena from the participants' point

of view, is also commonly referred to as the 'qualitative' research paradigm (Leedy & Ormrod, 2001:101). Case study research will serve as the research method.

1.9 DATA COLLECTION DESIGN AND METHODOLOGY

The Cape Peninsula University of Technology Health and Wellness Sciences Department will serve as the sampling frame, while nursing science students will serve as the unit of analysis in this dissertation. The sample will be selected on the basis of probability sampling, using random selected students falling in two categories, namely those who have passed the course, and those who have failed. Questionnaires and personal interviews will serve as data collection methodology.

1.10 DATA VALIDITY AND RELIABILITY

Issues pertaining to data validity and reliability considered important to this research study are elaborated upon below. According to Collis and Hussey (2003:186), 'validity' is concerned with the extent to which the research findings accurately represents what is happening. More specific, whether the data is a true picture of what is being studied. According to Cooper and Schindler (2006:318-320), three major forms of validity can be identified, namely 'content validity', 'criterion related validity' and 'construct validity', which is expanded upon below to provide a holistic perspective of each of the concepts:

- **Content validity:** Content of the measuring instrument is the extent to which it provides adequate coverage of the investigative (sub-) questions guiding the study. If the instrument contains a representative sample of the universe of subject matter of interest, then content validity is good.
- **Criterion-related validity:** Reflects the success of measures used for prediction or estimation. Any criterion measure must be judged in terms of the following four qualities:
  - **Criterion is relevant:** If the criterion is defined and scored in the terms we judge the proper measures of success.

- **Freedom from bias:** When the criterion gives each respondent the opportunity to score well.
- **Reliability:** A reliable criterion is stable and reproducible.
- **Availability:** The information specified by the criterion must be available.

- **Construct validity:** In attempting to evaluate construct validity, both the theory and the measuring instrument being used should be considered. According to Collis and Hussey (2003:59), construct validity relates to the problem that there are a number of phenomena, which are not directly observable, such as motivation, satisfaction, ambition and anxiety. These are known as hypothetical constructs, which are assumed to exist as factors, which explain observable phenomena.

Reliability (also referred to as 'trustworthiness'), is concerned with the findings of the research (Collis & Hussey, 2003:186). The findings can be said to be reliable if you or anyone else repeated the research and obtained the same results. There are three common ways of estimating the reliability of the responses to questions in questionnaires or interviews, namely 'test re-test method'. 'split-halves method' and the 'internal consistency method':

- **Test re-test method:** The questions are asked of the same people, but on two separate occasions. Responses of the two occasions are correlated and the correlation coefficient of the two sets of data computed, thus providing an index of reliability.
- **Split-halves method:** The questions or interview record sheets are divided into two equal halves. The two piles are then correlated and the correlation coefficient of the two sets of data computed, thus providing an index of reliability.
- **Internal consistency method:** Every item is correlated with every other item across the entire sample and the average inter-item correlation is taken as the index of reliability.

1.11 ETHICS

In context of research, according to Saunders, Lewis and Thornhill, (2000:130), "... *ethics* refers to the appropriateness of your behaviour in relationship to the rights of those who become the subject of your work, or are affected by it". Most ethical issues in research and which were observed during this research study fall into one of four categories namely, protection from harm, informed consent, right to privacy, and honesty with professional colleagues (Leedy & Ormrod, 2001:107-108). These four categories are expanded upon below:

- **Protection from harm:** In cases where the nature of a study involves creating a small amount of psychological discomfort, participants should know about it ahead of time, and any necessary debriefing or counselling should follow immediately after their participation.
- **Informed consent:** Participants should in advance be told about the nature of the study to be conducted, and be given the choice of either participating or not participating. Furthermore, they should be given the right to withdraw from the study at any time, as participation in a study should be strictly voluntary. Leedy and Ormrod (2001:108), suggest that an informed consent form that describes the nature of research as well as the nature of the required participation be presented to participants in a research study. Such a form should, according to Leedy & Ormrod (2001:108), contain the following information:
- A brief description of the nature of the study.
- A description of what participation will involve in terms of activities and duration.
- A statement indicating that participation is voluntary and can be terminated at any time without penalty.
- A list of potential risk and/or discomfort that participants may encounter.
- The guarantee that all responses will remain confidential and anonymous.
- The researcher's name, plus information about how the researcher can be contacted.

- An individual or office that participants can contact, should they have questions or concerns about the study.
- An offer to provide detailed information about the study (e.g., a summary of findings) upon its completion.
- A place for participants to sign and date the consent form, indicating agreement to participate.
- **Right to privacy:** Any research study should respect participants' right to privacy. In general, a researcher must keep the nature and quality of participants' performance strictly confidential.
- **Honesty with professional colleagues:** Researchers must report their findings in a complete and honest fashion, without misrepresenting what they have done or intentionally misleading others as to the nature of their findings. Under no circumstances should a researcher fabricate data to support a particular conclusion, no matter how seemingly 'noble' that conclusion may be.

1.12 RESEARCH ASSUMPTIONS

The following assumptions will pertain to this research study:

- Not all students participating in the study are from the Western Cape Province.
- All students would have passed matric.
- All students are registered with the CPUT.
- All students are registered with the SANC (South African Nursing Council) as students.

1.13 RESEARCH CONSTRAINTS

The following research constraints will impact on the research study:

- The study will be limited to students who enrolled for their first year of study at CPUT, for the 4 year undergraduate nursing science programme commencing 2005.
- The study will not consider students who discontinued their studies during the first or second year of study.
- No distinction will be made as to whether the student stays in 'residence' or at home.
- The study will not assess the cultural factors relating to performance of student nurses.

1.14 CHAPTER AND CONTENT ANALYSIS

The chapter and content analysis which would apply to this research dissertation, the following:

Chapter 1 - Scope of the research.

Chapter 2 - Background to the research environment.

Chapter 3 - Throughput rates: A literature review.

Chapter 4 - Survey design and methodology.

Chapter 5 - Analysis and interpretation of results.

Chapter 6 - Conclusion.

1.15 CONCLUSION

In Chapter one an overview of the research study was described. It comprised of the motivation for the study, the problem statement, the research questions, the purpose of the study, the objectives of the study, the research and methodology, and ethical considerations as well as the division of chapters. The importance of this research is to minimize the drop-out rate and to determine how the throughput rate of nursing students can improve to alleviate the critical shortage of nurses in South Africa. In Chapter two the background to the research environment will be discussed.

CHAPTER 2: BACKGROUND TO THE RESEARCH ENVIRONMENT

2.1 INTRODUCTION

During the last decade, the health care delivery system in South Africa has undergone significant changes, which were influenced by changes in the political environment. A nurse, whether working in a community clinic or large hospital is responsible for the majority of patient care. Nurses perform some of the most important duties during a patient's stay at the hospital, from monitoring vital signs to administering necessary medications and managing the hospital ward. Nurses also provide a 'human face' as to what can sometimes be perceived as a cold clinical environment. However, in recent years there has been a critical shortage of nurses in the healthcare industry, this shortage is expected to increase exponentially over the next few years. It is therefore vital that nurse education and the supply of nurses form an integral part of transformation of health services in South Africa (Ntshona, 2002:2). According to the Department of Health (2006), there is a need to significantly increase the production of all categories of nurses in order to fulfill the healthcare needs of both the public and private sector in South Africa. Attracting new nursing recruits to the profession is an important part of increasing production (Mkhize and Nzimande 2007:7).

The reasons for the perceived difficulty in attracting learners onto the nursing programme as a career are multi-factorial, and may differ from context to context. In South Africa, the low status of the profession, heavy workloads, and poor access to personal development programmes have been proposed as some of the reasons learners are not attracted to nursing as a career (Department of Health, 2006). Other negative perceptions concerning nursing as a career are that the workload is physically demanding, and that the shortage of nurses in the workplace increases the stress levels at work (Buerhaus, Donelon, Ulrich, Kirby, Norman & Dittus 2005:110-118). Of concern is that some of the perceptions about nursing do not reflect reality

(Kohler and Edwards 1990:26-30), an aspect which requires to be corrected in order to attract more high school leavers to the profession. Positive perceptions include that nursing offers good job security, substantial pay rises and a wide choice of career paths (Buerhaus *et al;* 2005:110-118). However, these appear to be overshadowed by negative feelings about the profession.

2.2 NURSING STAFF SHORTAGE IN THE WESTERN CAPE

As there is a dire shortage of nurses, the Western Cape Provincial Government has made available funding to invest in the training of nurses. According to Household (2004:Online), who holds the position of Head of the Western Cape Department of Health, refers to "Various news reports on staff shortages at Red Cross, Tygerberg and other Western Cape Hospitals, which have sought to create an impression that public health services in the Western Cape finds itself in a crisis". While facing serious challenges, including critical staff shortages in some of the hospitals, Houseman emphasises that neither Tygerberg hospital nor any other hospital in the Western Cape is or will be closed for emergencies. According to Household, no closure policy is in place, and while patients may be redirected to other hospitals at times, no patient has been or will be turned away. Services continue as normal as they strive to ensure equal access to health care for all people.

From this the analogy can be drawn that the critical shortage of doctors in some areas is exacerbated by the shortage of experienced nurses. Health management, along with clinics is grappling with this shortage on a daily basis.

Household (2004:Online), believes that the problem is not limited to the Western Cape, or for that matter South Africa, it is an international problem. To place the shortage of medically trained professionals in context, Household highlights that approximately 2000 positions for medically qualified staff including medical officers; specialists etc in medical facilities are filled at the time, however points out that specific shortages are experienced for professional and specialist nurses. Household

extends his concern by citing the fact that in total, 9500 nursing posts throughout the Western Cape, exist, however 1 700 are unfilled. The situation is exacerbated by the shortage of doctors and nurses thus impacting heavily on current staff creating dissatisfaction and discontent in the industry.

2.3 BENEFITS OF THE NURSING PROGRAMME

The benefit of pursuing a nursing career is international recognition for the tertiary qualification, registration at the SANC, and entry into professional nursing practice. Furthermore, after four years of studying the nursing course, it provides hands-on experiences in a variety of health care facilities. Upon graduation, a large demand exists for job opportunities for registered/qualified nurses both locally and abroad. In this profession, nurses have a variety of nursing career choices to choose from. If one wishes to make a difference in the lives of others, a nursing career could satisfy this objective. Nursing students are already making tangible differences in their communities and during their clinical training. The largest nursing employment offerings will be hospitals, physicians' offices, outpatient care centers, nursing care facilities, and home health care. Hospital nursing, forms the largest group of nurses, and are assigned with specialised duties in the likes of taking care of patients belonging to- intensive care, pediatrics, orthopedics, and psychiatry, obstetric and other sections. Within the context of this employment spectrum, there is almost always something new and different for a nurse to do.

A Nurse registered under section 16 of Act 50 of 1978, fall into one of the following categories:

- A general nurse.
- A psychiatric nurse.
- A mental health nurse.
- A mental defectives nurse.
- A fever nurse.
- A sick children's nurse.

- A nurse (general, psychiatry, midwifery, community) trained in terms of the regulations published under R2118 of 30 September 1983 and R425 of 22 February 1985.
- A midwife.

2.4 NURSING PROGRAMME COMPETENCIES

The development of competencies for nursing staff must be subject to rigor and pedagogy (Reilly & Oermann 1999:291). The objectives stipulated for the R425 nursing science programme is that a student nurse will become a professional nurse on completion of the R425 programme, and should be able to direct and control interactions with patients. This by implication calls for the requirement to apply interpersonal skills within the context of social interactions.

The research of Troskie (1993:56) returned that the factor of orientation has clear tangent planes with the factor of setting standards. Searle and Pear (1992:136), believes that competent communication remains important to all nurses, encompassing the following aspects:

- Careful listening.
- Meticulous explanation to patients on issues pertaining to their health condition.
- Consultation with a patient.
- Meaningful touch.
- Consideration.
- Courtesy.
- Oral, written and mechanical means of communication.
- Assisting a patient to communicate his/her needs to others.
- Communication with his/her relatives and friends.

Landeen, Byrne and Brown (1995:881), conducted a study on the lived experiences of psychiatric student nurses through self-reflective journals. Findings returned that

students felt that communication skills and the therapeutic relationships were critical in working with psychiatric patients, and they were also of the opinion that respect was an important aspect of all patient/nurse relationships.

Sibeko and Greef (1995:15), conducted a study on psychiatric nurses' communication with psychiatric patients in South Africa. Findings returned that psychiatric nurses' views on communication with psychiatric patients could be either a 'stumbling block' or 'facilitating' the process, aspects which one elaborated upon below:

- **Stumbling blocks:** The professional nurses are unable to improve or maintain their relationship with the patient, unable to minimise obstacles in their communication and they cannot communicate well because of their limited communication skills.
- **Facilitating:** If the professional nurses are able to incorporate communication into all phases of the nursing process and establish an ongoing therapeutic nurse patient relationship can be established.

Assessment planning, implementation and evaluation of nursing care of patients depend upon effective and efficient communication between nurses and the patients. Guidelines for good communication according to Sibeko and Greef (1995:19), include the following:

- Improvement and maintenance of nurse patient relationships by being available to the patient and setting aside time for individual and group therapies, which are essential for restoration and maintenance of patients' mental health.
- Assistance should be provided to psychiatric nurses, who need assistance to improve their problem -solving skills pertaining to work-related problems, and problems affecting both the nurses and the patients.
- Attending of lectures or in-service training on communication to improve communication skills levels.

In particular, psychiatric nurses are expected to be competent in performing interpersonal relationship nursing activities. According to Edwards (1995:222), student nurses' views about the role of the mental health nurse in England encompasses:

- Respecting patients and being reassuring.
- Listening skills.
- Exploring and giving information.
- Counseling skills.
- Being able to relate to an individual.
- Providing touch and comfort.

Doornbos (1997:22), in support of the above identified bereavement counseling and general counseling as the most common skills practiced by psychiatric nurses in England.

2.5 FACTORS IMPACTING ON THE QUALITY OF NURSING SERVICE

Stress, a condition of physical or mental strain caused by inability to adjust to factors in the environment thus resulting in physiological tension or pressure (Blackwell's Nursing Dictionary 1997:641), has been identified as one of the primary contributions, which impact on the quality of nursing service provided.

According to Kushnir (1986:13), stress is an adaptive response that is a consequence of any external action, situation or event that places special physical and or psychological demands upon a person. According to Laposa, Lynn, Fulterton and Vancouver (2003:24), stress is a psychobiological reaction of the body to physical or psychological demands that threaten or challenge the organism's wellbeing. Work-related stress is estimated to affect at least a third of the workforce in any one year. It costs hospitals, and health organisations billions of rand per year in lost productivity, and it accounts for over half the working days lost due to an absence from work. Stress is linked to a wide variety of diseases, and

the European Foundation estimates that lifestyle and stress-related illness accounts for at least half of all premature deaths (Williams & Cooper, 2002:1).

In certain occupations such as the caring professions stress can be an occupational hazard. The following list by Williams and Cooper (2002: 16-17), describes some of the changes that may indicate that someone is suffering from stress:

Altered appearance:

- Lack of care in appearance.
- Looks miserable.
- Looks tired.
- Looks nervous, apprehensive.
- Looks agitated.

Altered habits:

- Eating more, eating less.
- Drinking more.
- Smoking more.
- Increased absence.
- More accident prone.

Altered behaviour:

- Irritability.
- Aggression.
- Mood swings.
- Poor concentration.
- Poor decision-making.
- Reduced performance.

According to Lee (2003:87), heavy workload, poor staffing, dealing with death and dying, inter-staff conflict, strain of shift work, careers, and lack of resources and

organisational support, have been identified as the major sources of job stress.

2.6 CONCLUSION

In this chapter, the background to the research study was described, the problem statement formulated, and the purpose and significance of the study elaborated upon. According to Buchan (2002:Online), in October 2001 government chief nurses and other delegates from 66 countries met to discuss how best to deal with the challenge of, the global growth of nursing shortages. Nursing shortages in the United Kingdom and elsewhere have been a repetitive phenomenon, due to an increasing demand, as in the instance of South Africa.

The research in this dissertation will show that only a third of the nursing students who initially enrolled passed their final year of studies. According to Naudé and Hörne (2003:Online), measures need to be put in place to improve the situation without lowering standards, an aspect which in South Africa is of particular concern.

CHAPTER 3: STUDENT THROUGHPUT RATES: A LITERATURE REVIEW

3. 1 INTRODUCTION

Student throughput rates in general in South Africa are an aspect of major concern. In particular, the throughput rates of nursing students are of national interest as the whole health industry is dependent on quality nursing staff. In this chapter, throughput rates at universities, and in particular that of nursing students will be evaluated in terms of the following:

- The entrance requirements.
- Definition of 'drop-out'.
- Academic quality student performance, assessment criteria.
- Continual quality improvement on throughput rate.
- Quality and the cost-effectiveness of teaching and learning in Higher Education.
- Quality assurance and assessment.

3.2 ENTRANCE REQUIREMENTS

The entrance requirements for all courses offered at Universities should be made available to guidance teachers at secondary school level, where pupils can make independent subject choices for their future. According to Killen and Fraser (2002:1), Higher Education Institutions need to be confident when admitting students, who will be capable of successfully completing the course in which they are permitted to enrol. Furthermore, students should not be admitted knowing, for whatever reason, that the individual has no chance of academic success as it would be immoral (Killen & Fraser 200:1). According to Riggs and Riggs (1990;41-6), and Manning, Killen and Taylor (1993:36-46), the two most common predictive measures for success at University, namely school matriculation results and standardised admission tests, have only limited empirical support. According to Van Eeden, De

Beer and Coetzee (2001:171-178), multiple measures used in combination, can be more predictive than individual measures, as can specific measures such as the mathematics ability of students entering engineering courses. However, it seems that most predictors that are based solely on pre-enrolment measures have limited potential. In South Africa, attempts to predict student performance in higher education are 'currently complicated by pressure to ensure that students represent the different racial groups in the country' (Van Eeden, de Beer & Coetzee, 2001:171).

To determine whether students having Science subjects in matric including 'matric endorsement' and at which school this was attained, influences their success in their studies. Ramsden (1988:24), remarks that enough time should be made available to students to relate and distinguish between new ideas and previous knowledge, relate concepts to everyday experience, relate and distinguish between evidence and argument, and organise and structure content. Students also need help to gain a perspective on what they are learning, and why and how they are learning it, as well as a concern for learning it themselves (Chambers 1992:141:153). Matriculation symbols are proving to be a poor indicator for academic success. Students in previous years (2005-2007) performed academically better than current students who have been selected with higher matriculation symbols in Biology and Mathematics. Prior to 2000, literally thousands of applications to study undergraduate nursing were received. This number has steadily diminished to 1,600 applications in 2007 for the 2008 intake. Fewer applicants who met the required criteria for selection were received. Of the 1 600 applicants only 400 met the required minimum criteria. The nursing programme tends to loose a number of selected students with good academic symbols to other Faculties/Institution/Professions. Of the 280 applicants who were selected in 2007 only 180 students commenced with their studies, while 50 of the provisionally selected students, no longer met the stipulated criteria.

3.2.1 Selection Criteria

Selections of candidates for the degree B.Tech. Nursing Science takes place in the proceeding year of official study. During the first intake for 2005, applicants could apply with a matric certificate with at least a good pass mark in Biology and an aggregate of 950+. Applicants are required to meet the entrance requirements, which is a senior certificate with at least five subjects passed on Higher or Standard grade. Lower grade subjects are not acceptable. Two of the eleven languages are required, one of which must be English or Afrikaans. Specific to this programme, two or more of the following subjects are required: Biology or Physiology and Physical Science or Mathematics. Applicants who are currently in the process of doing their matric the year prior to their studies at the CPUT, are required to send in an application form which is accompanied by a grade eleven end of year result and grade twelve June results. They are evaluated in terms of their symbols namely, at least an E-symbol HG or D-symbol SG. Candidates with more than two of above mentioned subjects are recommended to be selected. The assumption is that such students would have had sufficient exposure to the required subjects in order to improve their chances of success in the undergraduate nursing programme.

After student selection, the predetermined number of students are notified in terms of the following: 'Unconditionally selected' (candidates who has a matric certificate and meet the admission requirements), 'provisionally selected' (candidates who was selected with grade 9 results on condition that they pass their matric certificate with the minimum admission requirements), 'Waiting List' and 'Rejected List' (candidates who do not qualify). A large number of late applications (walk-ins) are processed during the period of registration each year, as people who were accepted onto the course often do not turn up for registration. Consequently, to meet the admission targets, these late applicants who have good results, are being accepted.

The main aim of selection in higher education is to identify students who will succeed in a specific academic programme. In reality, selected students will either pass or fail

(the true and false positives) and some rejected students would have been able to pass (the false negatives). The social and financial costs of selecting the wrong students are high. The aim of selection should therefore be to minimise the false positives and false negatives in the selected and rejected groups. An effective selection mechanism will ensure a high percentage of successful students and reject as few potentially successful students as possible. According to Zaaiman, Van der Flier and Thÿs (2000:1-21) citing (Hunter and Hunter 1984; Schmidt 1989; Bartram 1995), factors that should increase the effectiveness of a selection test include high predictive validity, selecting top-down instead of at random above a cut-off score, and a large applicant pool that is varied in ability around the required ability level.

The evaluation of selection fairness involves psychometric as well as contextual aspects of the selection mechanism (Jensen 1980:341-354; Linn 1984:33-47). The discussion here will focus on fairness in terms of the acceptability of the selection mechanism to those affected by it. Selection involves making decisions about the futures of applicants. This means that selection decisions impact directly on individuals, communities and on society in general. Not being selected generates feeling of rejection and disappointment that can lead to a sense of inferiority and/or injustice among applicants, regardless of background (Lerner 1978:3-27). One must therefore expect selection decisions to be challenged legally and politically.

The acceptability of a selection mechanism depends on the context in which the selection occurs. A selection mechanism can be psychometrically valid, however unacceptable to the community. On the other hand, it is easier to defend a psychometrically valid selection mechanism as being fair on the grounds of empirical evidence.

It is often said that satisfying the requirements of fairness and effectiveness in an efficient and acceptable way may not be easy (Drenth, Van der Flier and Omari 1983:93-217; Altink and Thijs 1984:74-79; Herman 1995:261-274). According to Zaaiman *et al.* (2000:1-21), this is especially true in a society where past injustices

and inequalities have left members of certain population groups academically disadvantaged than others. The selection of the students with the highest probability to succeed may lead to under representation of the disadvantaged groups. The selection of more disadvantaged students through the implementation of affirmative action may lead to a smaller probability of success in the selected group, as well as the rejection of qualified, privileged applicants. The selection practitioner must find the optimal fit between fairness and effectiveness for the required situation (Zaaiman *et al.*, 2000:1-21). This may require investing resources in support programmes, with the aim of which is to ensure that the selected students who enroll, but with academically weaker results also stand a fair chance of success in their undergraduate academic career.

3.2.2 Standardised Assessment Test for Access Placement (SATAP)

In spite of the entrance criteria being amended, there is still a high drop out rate at all the levels of tertiary studies. It is postulated that often students enter the nursing course, for reasons other than a passion for nursing. All students entering the Faculty of Health and Wellness Sciences will undertake a placement 'assessment' prior to registration. The mechanism used is the Standardised Assessment Tests for Access Placement (SATAP), which is a nationally recognised technique through which the department will be able to place its students in either a 4 or 5 year programme, thereby increasing the probability that the student will graduate. Where students are placed on the 5 year programme (termed the Extended Curriculum Programme or ECP), a modified curriculum in nursing is offered, and where the regular programme has been enriched in quality. Applicants are notified of the outcome of the test within 7 days after they undertake the assessment. Depending on the outcome of the SATAP test, students may either be placed on the mainstream (regular) programme, or on the Extended Curriculum Programme (ECP). ECP is especially funded by the Government to ensure that students graduate, with special attention being given to student learning. Students are expected to attend at least 80% of the lectures, practical and tutorials or any other formal learning events. Students will also be

expected to attend to complete 80% of tasks set to the satisfaction of the lecturer, even where no marks are awarded for the tasks. Students who do not adhere to these rules may be excluded from the programme. If a student is on the ECP, the Provincial Government Western Cape (PGWC) bursary will be paid over 2 years i.e. half the bursary value will be paid during the 1st year of ECP, and the second part of the bursary amount during the 2nd year of the ECP. (Annexure C).

3.2.3 Orientation to Nursing

According to Watson and Lea (1998), as cited by Vanhanen and Janhonen (2000:1055), age and sex have the greatest influence on the perceptions of caring among nurses. Furthermore, it is reported that females have more technical and professional aspects of caring than males. The assumption is that life experience seems to change the perception of caring towards an emphasis on the technical and professional aspects of caring and according to Greenhalgh *et al.* (1998) as cited by Vanhanen and Janhonen (2000:1055), the expectation of changes in the patient's behaviour. Male nurses on the other hand are considered being accessible and readily available for the patients, as less important than female nurses.

According to Vanhanen and Janhonen (2000:1055), the expectations applied to a nursing career within the caring orientation are based on a sense of being useful to others and an opportunity for personal growth. Currently the lack of personal growth amongst nurses leads to dissatisfaction in their work places.

3.2.4 Poor Language Ability

The Western Cape College of Nursing changed from a dual language system (Afrikaans and English) to an 'English preferred language' policy. This has brought more harmony amongst the students, but has increased the failure rate amongst the selected students. Afrikaans speaking students, who in all likelihood would have passed as they wrote in their mother tongue, are now failing. However, there is not as

much dissent amongst the students, because they feel that they are all being equally disadvantaged by writing in their second language.

Both locally and internationally, a number of factors have highlighted the lack of student language proficiency in recent years (Booyzen, 2007:72). Currently no institution deals with homogeneous group of students who share the same language and culture, or the same home language and or attended the same school. In most instances, one can assume that most university classes in South Africa consist of students who can speak at least two to three or even more languages. Even though some students are privileged to know more than one language, the medium for teaching at most universities is English, which students find difficult as a spoken and written medium.

According to Naudé (2004:120), language proficiency refers to the degree to which the learners exhibit control over the use of language. Most students in South African classrooms have a dominant language of communication, which is not necessarily the language of instruction at the institution of learning. Although there are eleven official languages in South Africa, English and Afrikaans remain central to this country's Government and Administration. English is the most powerful language of the two, which is used in all high domains, from government and administration, education as well as the economy. Afrikaans, the secondary language to English is also prominent in terms of political power. According to Mda, (2000:156-171), the African languages remain on the same margins of power and are used mainly as vehicles for transmission of cultural heritage for generation to generation.

Normally it is assumed that students who attended rural and township schools are 'under prepared', having difficulty with regard to writing and reading at university level. It is evident that previous studies show the majority of students are under prepared for university studies, and the reason being the difference between the ways of communicating specific to a particular discipline of school and university.

It is evident that in Africa, a black child generally experience mother-tongue education for the first four years of primary education. Research undertaken at WCCN highlighted the following concerns:

- Attrition rate escalating.
- Failure rate.
- Lack of motivation for nursing.

It is of concern that many students do not enroll to study nursing as a career choice or a desire to serve humanity, but rather to enroll due to other extraneous factors (e.g. the availability of bursaries by the Provincial Government Western Cape (PGWC)). Students express the following opinions when asked why they decided to study nursing:

- 'My parents did not want me lying around the house doing nothing',
- 'the bursary will assist my family to pay off their debts',
- 'I did not know what else to study'.
- 'Lack of knowledge regarding nursing as a profession'.

Students do not realise that they would have to do practical (working with the patients) in the hospital. Many students have dropped out because they only wanted to do the theory of nursing. Poor study techniques/lack of insight into study needs/poor writing and reading ability. Students do not realise that they are lacking in these skills and do not feel the necessity for remedial classes.

3.3 DEFINITION OF DROP-OUT

In most instances, 'persistence' is viewed in positive terms, while 'drop-out' is viewed negatively. The emotive values assigned to these terms, can be in conflict with the values assigned by students to the concepts. The students may understand drop-out as a positive step, either towards attaining their goals, or establishing their identity. The proper understanding of 'persistence' and 'drop-out' should therefore be based upon an understanding of the role the student's individual goals play in the decision to 'persevere' or drop-out from their studies. Tinto (1982:12), define 'drop-out' as:

"The failure to complete a given course of action or attain a desired goal for which the individual first entered a particular institution of higher learning. It is dependent not only on individual intentions but also on the social and intellectual process by which individuals come to realize desired goals within particular higher educational settings".

The concept of 'drop-out' falls within two categories namely, 'voluntary' and involuntary', which due to their importance, calls for closer scrutiny.

3.3.1 Voluntary and involuntary drop-out

Voluntary and involuntary drop-out is often an overlooked aspect of discussion on issues of 'persistence' and 'drop-out' at higher education institutions. Involuntary withdrawal most often takes the form of dismissal on academic grounds. It usually results from the individual's inability or unwillingness to meet the minimum standards of academic performance, required to maintain enrolment. In some instances, it is due to a violation of institutional rules or regulations. Involuntary drop-out is typically associated with insufficient intellectual competence or a lack of the skills required to meeting the demands of higher education work or socio-economic burdens. An example of this being academic exclusions, are where students do not meet the minimum academic requirements. The reasons for such exclusions can point to unwillingness, or the lacking of either motivation or interest in a particular course (Booysen, 2007:53).

Voluntary drop-out occurs despite the maintenance of satisfactory levels of academic performance. Such withdrawals often involve the brightest and more creative students on campus. Instead, voluntary drop-outs are primarily the result of the individual's intentions and commitments and the nature of the personal experiences in the academic and social communities of the higher education institution (Galligani, 1994:7).

3.3.2 The timing of drop-out

Drop-out from higher education may take place at many different times during the academic career of students. It is important to examine the timing of withdrawal, as different causal factors are associated with different times. There are four critical periods (commonly referred to as 'points') (Refer Figure 3.1), during which students can drop-out of the system (Gouws & Van der Merwe, 2004:253-254).

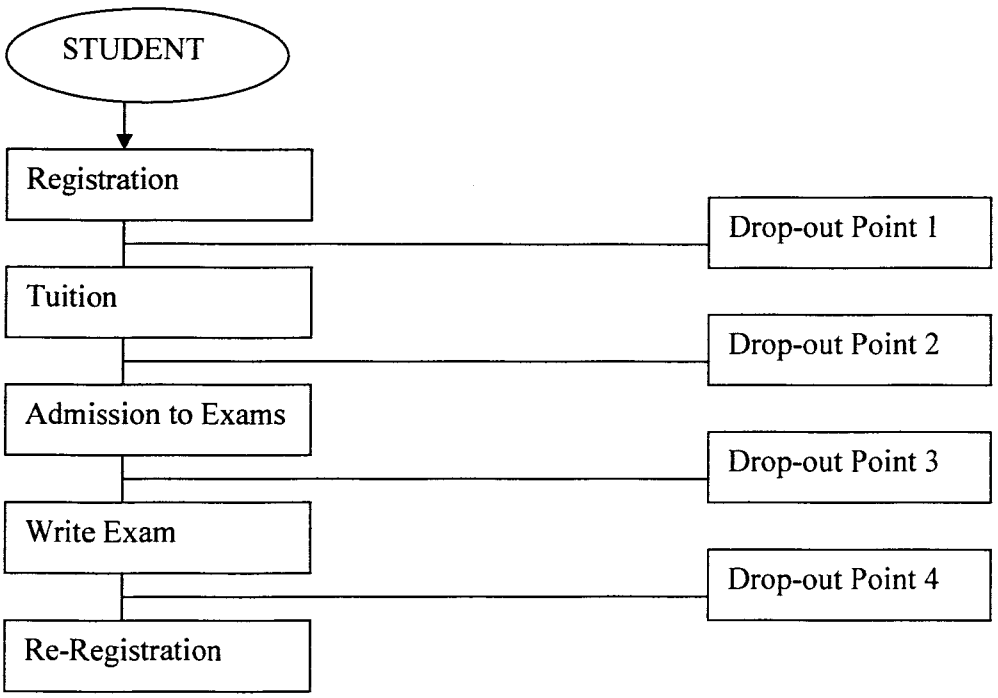

Figure 3.1: Student study cycle dropout points (**Source:** Gouws & Van der Merwe, 2004:254

Drop-out point 1: Students who cancel after registration.

Drop-out point 2: Students, who register and start with the tuition phase, but withdraw sometimes during the study cycle before admission to the examination.

Drop-out point 3: Students who comply with the requirements for a valid year mark and are admitted to the examination, but who withdraw and do not write the examination.

Drop-out point 4: Students who fail their examinations.

The first 'point' takes place during the period after the application process was successful and students have registered. Students get their first real tangible impression of an institutions' social and academic character at this time. Such 'impressions' are instrumental in the formation of the expectations students bring with them regarding the nature of campus life. The formation of unrealistic or mistaken expectations about the social or academic climate of the institution, can lead to disappointment and initiate a series of actions, which eventually lead to drop-out of individuals.

The second 'point' is when students formally start with tuition during the first semester. The first four to six weeks are often the most difficult for students to adapt to new challenges. They must negotiate the transition from the relatively secure environment of home to the strange and sometimes impersonal world of campus life. Students must now fend for themselves.

The third 'point' is when students officially qualify for a year mark to go and write exam, but drop-out before the examination. There can be various reasons for this, which can include that the student feel that the year mark is not good enough, or because of stress and stress related issues as referred to in Chapter 2.

The fourth and final 'point' refers to the period after the examination is finished before the next year's registration. Most ends of the first year drop-outs is voluntary. Students leave the institution because they are not satisfied. They either drop-out of higher education altogether, or they transfer to another institution.

Two studies, one an early study by Iffert (1957:27) and the other a later study by Barger and Hall (1964:339-246), show that the first drop-out of first year students usually occur during vacation or other times when the institutions is not in session. Iffert (1957:27), also found that more students dropped out of institutions with quarter systems than at institutions with semester systems. The author was of the

opinion that this was possibly because of the increase in the number of 'stopping points', or the more time constraining pressure in a quarter systems.

3.3.3 Financial implications of high drop-out

A cost factor is linked to the education and training of students. The money spent on a student could be perceived as 'adding value'. The cost related to unsuccessful students or students who drop out of the system might be perceived as 'wasted resources'. The high drop-out rates are unacceptable and represent a huge waste of financial and human resources each year (RSA, 2001:25).

3.4 REVIEW OF THE VARIABLES INFLUENCING DROP-OUT

There is adequate international literature on post-enrolment as well as socio-economic factors which influence the success of a student. Studies such as students' motivation (Talbot, 1990:53-57), students' approach to studying (Meyer, 1990:67-89), culture expectations (Ginsburg, 1992:6-8), psychosocial factors (McKenzie & Schweitzer, 2001:21-33), student's academic literacy (Amos & Fisher, 1998:17-23), students time management skills (Lahmers & Zulauf, 2000:544-566), peer culture (Gainen, 1995:5-14) and student support structure offered by the university (Kleeman 1994:137-149) serves to emphasise this phenomena. The most important factors in students' academic success at university appear to be interest in the course, motivation, self-discipline and effort, as well as socio-economic factors, none of which can be predicted directly from matriculation results.

To date, the largest study yet in this respect was commissioned by the Committee of University Principals in the late 1982 on the grounds of the alarm at the failure rate, particularly amongst first year students, conducted by the Human Sciences Research Council (Badenhorst, Foster & Lea, 1990:39-45). According to Booysen (2007:64), a number of factors including age, school aggregate, gender, population group,

examining body, home language and university were included in the analysis of both first-year and final university results as influencing drop-out rates.

3.4.1 External Impacts Upon Drop-out

According to Tinto (1975:97), very frequently integration can be affected by events in social system external from the institution's limited social and academic systems of higher institution. It is also recognised that a person can withdraw from higher education for various reasons that have little to do with interaction within the institutional systems.

3.5 ACADEMIC QUALITY STUDENT PERFORMANCE, ASSESSMENT CRITERIA

The researcher aims to investigate the fact that nursing students need guidance in the learning process in particular due to the difficulty to take notes during lectures. Most nursing students have difficulties in understanding tasks and concepts used in class. It is apparent that English language difficulties map to the poor writing of assignments or tests.

Students' perceptions about what will enhance their chances of success or diminish their chances of failure at university seem to have a strong influence on their approach to study, even when those perceptions are misguided (Tait, Van Eeden & Tait 2002:177-182). In the same realm, lecturers' perceptions of what factors contribute to student success appear to influence their approach to teaching and their relationship with students (Killen 1994:199-212; Jacobs & Gravett 1998:54-60. More often than not, lecturer' and student' views about the extent to which various factors might influence academic success, are incongruent. However, differences in perceptions can be identified, as it is possible for both students and lecturers to address them and thus enhance the chances that students will be successful (Killen 1994:199-212; Killen & Fraser 2002:1).

Case studies were used as a teaching and learning method at the Harvard Law School in 1871, and this method was used in the first class to graduate from Teacher's College, USA in 1930 (Tomey 2003:1). It was a method designed to incorporate teaching, problem-solving and decision-making skills (Waterman 1995:2). Uys (1998:1), is of the opinion that case-based programs focus on the process of learning and finding a balance between the content learnt, and the process of actual learning. Quinn (1995:174), defines case studies as textual descriptions of specific situations, either be genuine or fictional, that provide a trigger for the discussion of issues and the examination of real-life events. It gives a student a better view of understanding what was discussed. According to Dowd and Davidhizar (1999:42), in a study on using case studies to teach clinical problem-solving, "it is a student centred learning strategy that allowed students to solve real world problems in the safe environment of classroom". As affirmed by Uys and Gwele (2005:145), the case-study method is used to facilitate a more active and self-directed learner who is able to discuss real life issues of the clinical specialty, within the classroom setting. Cassimjee (2007:414), explains that this approach is especially useful in the South African context, where learners are usually second-language English speakers, and have difficulty in adjusting to a tertiary-level of study.

3.5.1 Lecturing staff support to students

According to Slavin (1995:172), in the case of nursing students, research has shown that the physical and psychological (emotional) environment in the classroom as well as in the clinical area, has significant affects on their learning responses. Research done by Brown (1981), Stephenson (1984), Dawson (1987), Marriot (1991) as cited by Forest, Brown and Pollock (1996:1261), suggest that the nurse educator/s interpersonal effectiveness is an attribute which is evaluated by students as being most important. As affirmed by Tang, Chou and Chiang (2005:191), it is the nurse educator/s attitude rather than his/her professional ability which is the most crucial factor in determining his/her effectiveness as a teacher.

According to Forrest *et al.* (1996:1263), institutions involved in educating nursing students have to emphasise that the prime role of the educator in the clinical area is to meet the needs of the students. Shin (2000:259), indicates that there are six goals of learning in a clinical setting from nursing students' perspectives, which include: To do no harm to a patient, to help patients, to integrate theory-based knowledge into clinical practice, to learn clinical practice skills, and to look good as a student and most of all as a nurse.

The South African Nursing Council (SANC) has a unique programme outline for the course leading to enrolment as a nursing student, which includes clinical teaching. Clinical teaching is an essential part of nursing students' education and training. History has shown that it is in the clinical area that nursing students learn the 'art', which is associated with the nursing profession. Having being taught this skill during lectures, students must be able to apply the skill safely and correctly in any clinical area. It is vital that nursing students are supported in this area in the form of facilitation, learning, practice and counselling to provide safe clinical care.

3.5.2 The nature of assessments

Assessments are based on what was taught in class by the lecturer, and how the learner understood the work. According to Hamachek (1995:374), after teaching and learning there must be a fair way of assessing the type and amount of learning that has occurred, as well as its effects. Perhaps the most significant single influence on students' learning is their perception of assessment (Ramsden 1988:24). The nature of assessment clearly has an influence on students' approaches to specific learning tasks (Gow & Kember 1990:316).

Teaching and assessment methods often encourage a surface approach to learning when they are not aligned to the aims of teaching the subject (Biggs, Kemper & Leung, 2001:138). Students could for example, set out with the intention to use an in depth approach to understand the material in the course. However, more often then

not they find that the assessment require them to reproduce defined bodies of knowledge. After endeavouring to understand the material, they then learn it by off heart so that they can reproduce it in tests or examinations, and obtain good marks (Kember 1996:349). As a result, assessment can encourage passive reproductive forms of learning while simultaneously hiding the inadequate understanding to which such forms of learning inevitably lead (Ramsden 1988:24). Assessments are also proven to be evidence whether competence has been achieved in class and clinical areas. Assessment determines if the learner possesses the necessary pre-requisites for accomplishing the objectives (Reilly & Oermann 1992:153).

3.5.3 Self-discipline

First time entering students will have to learn about self-discipline, and how to manage themselves. They must realise that they are entering the 'adult world', while being on their own. An important part is to cope with different types of problems in the likes of peer pressure. According to Fraser (2003:261), there was a strong agreement on the importance of 'self-discipline' as a factor contributing to success (ranked 2nd, 4th and 2nd by the lecturer, first-year students and senior students respectively), and of the 'lack of self discipline' as a factor contributing to failure (ranked 2nd, 4th and 6th by the lecturers, first-year students and senior students, respectively). As may have been expected due to the similarities of concepts, there was also strong agreement on the importance of 'self motivation' as a factor contributing to success (ranked 1st, 8th and 1st by the lecturers, first-year students and senior students respectively), and of 'lack of self motivation' as a factor contributing to failure (ranked 3rd, 6th and 3rd by the lecturers, first-year students and senior students respectively).

3.5.4 Social Problems

Students more often than not have social, financial and health problems, considered to be major obstacles to academic success. According to Vygotsky (1962:88),

developmental learning theoreticians believe that learning is brought about by cognitive, moral and social development, furthermore that social growth is caused mainly by social interaction. Fraser (2003:254) citing Chikte and Brand (1996) and Goduka (1996), is of the opinion that students entering South African universities come from a wide range of social and cultural backgrounds that give them very different life experiences, different educational opportunities, and a great variety of expectations.

Feelings of individuals regarding social isolation, alienation, rejection and prejudice are thought to be significant factors affecting undergraduate persistence in higher education. Individual feelings of isolation and alienation result from the inability of students to become integrated into the campus community (Seveland, 1992 as cited by Galligani, 1994:43).

The social and cultural forces in defining literacy are largely determined by the environmental forces at work with society (Leu & Kinzer 2000:111-112). However, a major concern that may influence of cultural forces is defining the nature of literacy can be seen as one of the important starting points of reading and writing. According to McEwan (1992:54), different literacy levels arise in society due to different academic traditions. Theoretical orientations derived from the subject matter thus play a part in the different ways in which literacy is approached.

3.6 CONTINUAL QUALITY IMPROVEMENT ON THROUGHPUT RATE

'Student progress', a rule refers to the time spent by lectures, practical work, clinical hours, workshops, debates, tutorials, and independent learning, which includes all the work needed to prepare for examinations to meet course requirements. There are clear tangent planes between overloaded tasks and memorising, and between over-demanding courses and bad teaching to poor performance in examinations (Entwistle & Tait 1990:169-194). From this the analogy can be drawn that for in-depth and effective learning, students need help and time to develop individual perspectives on

the subject matter. From a student perspective, students perceive that they are the researcher to execute the fact that students are 'thrown in at the deep end' without guidance or time to execute. Research undertaken at the Indira National Open University showed that loaded curricula resulted in students who invariably fell short of time to delve deeply into their studies and who were left with no choice but to adopt a surface approach to learning (Garg, Panda & Panda 1992:Online).

3.6.1 The SANC (South African Nursing Council)

The South African Nursing Council (SANC), a statutory body governed by the Nursing Act, (Act No. 50 of 1978), as amended by the Nursing Act, (Act No. 19 of 1997), has a responsibility of regulating the education, training and practice of nurses. The SANC is accredited as an Education and Training Quality Assurance Body (ETQA) in terms of Section 5 (i) (a) (ii) of the South African Qualifications Act (Act No. 58 of 1995). The SANC is therefore responsible for monitoring and auditing achievements according to national standards, as well as keeping nursing education in line with international standards. As a quality assurance body the SANC ensures that quality nursing care is provided to all citizens of the country.

3.6.2 South African Qualification Authority (SAQA) Act (Act No. 58 of 1995)

The South African Qualification Authority (SAQA), is the statutory body that sets the standards of educational outcomes in the country. It sees to the establishment and implementation of the National Qualifications Framework (NQF). The NQF provides for the registration of all educational programmes to be registered according to the levels on the framework. The nursing education belongs to the third band of the National Qualifications Framework. The Higher Education Quality Committee delegates the quality assurance aspects to the Higher Education Committee. The student nurses under study are at level six of the NQF.

The availability of sufficient and competent health professionals with appropriate skills is central to the success of the transformation process of the health care system in South Africa. The 1997 White Paper for the Transformation of the Health System in South Africa established a number of important principles to guide human resource planning, production and management. This policy document identified the following critical areas for the nursing profession:

- Evaluate the appropriateness of the existing scopes of practice to the context of health care delivery in South Africa.
- Identify the categories of nurses required to deliver a cost-effective and a high standard of health care.
- Align the scopes of practice of different categories of nurses in accordance with the health care delivery needs.
- Evaluate the education and training of nurses in terms of appropriateness, cost benefit, core competencies and standards for practice.
- Promote and maintain a caring ethos within the nursing profession.
- Ensure that national health priorities are addressed in all nursing education programmes.
- Create a cadre of competent and skilled nurses who are lifelong learners and critical thinkers.
- Promote the ability of every nurse to evaluate and assure quality in his / her practice.

3.7 QUALITY AND THE COST-EFFECTIVENESS OF TEACHING AND LEARNING IN HIGHER EDUCATION

The important goal of quality and the cost-effectiveness of teaching and learning in Higher education are aimed at helping students to take ownership of their learning. The Institutional Research & Planning Office (Bellville Campus of the CPUT) is focusing on cost-effectiveness, in which educators can deliver their intellectual material as a whole targeting the transformation in teaching and learning. Student fee structures are being perceived as unfair by students. Students must pay part of the tuition fees in order to be registered, as in the instance of a student in any other course, before a certain date. From an institutional income point of view, the main

concern is that in targeting the teaching and learning throughput rate, is also to ensure that the institution receive a subsidy for each registered student and to monitor whether all students meet their set goals. If a student fails and cannot be promoted to the next level of studies, most of the students then cancel the course and try to be successful in another course in a different faculty. The institutional statistics will then show that that particular student's academic record is incomplete.

According to Shivambu (2005:Online), the number of students in higher education has grown exponentially during the last 10 years, however the throughput and graduation rates have not improved. The Minister of Education raised a concern that only one in five students registered for a three year qualification in 2000, graduated in 2003, and half of those who have registered, dropped out. A further concern was raised by the Minister that the Government was spending close to R1.5 billion a year on students, who fail at tertiary institutions. MacKinnon (2000:Online), is of the opinion that attraction and retention of higher degree studies is important to all universities and part of the 'branding', that distinguishes the universities from other further and higher education providers.

3.8 QUALITY ASSURANCE IN ASSESSMENT/DATA

Assessment in Higher Education (HE) should involve the use of assessment criteria, which fully outline what students need to know. The importance of assessment criteria and feedback in HE learning is strongly promoted by the Higher Education Quality Committee (HEQC) of SA. (Refer to Annexure D). The following principles are under discussion at the CPUT, with respect to the examination criteria:

- Assessments of the CPUT are conducted according to nationally recognised criteria for assessment such as those from the Department of Education, the Higher Education Quality Committee (HEQC), the South African Qualifications Authority (SAQA), the Norms and Standards for Educators and the Education and Training Quality Assurance (ETQA) regulations (No 19231 of 8/9/98). Until the HEQF is legislated and becomes operational the

University is still governed by Formal Technikon Instructional Programmes in the RSA (NATED 151(99/01) and (SAPSE).

- The University subscribes to the assessment principles and ethics of legitimacy, creditability, flexibility, fairness, validity, reliability and practicability as associated with the National Qualifications Framework (NQF).
- The 40:60 or 50:50 assessment systems are considered to be equitable to a continuous assessment system with a final summative assessment. All forms of assessment systems currently conducted within the University have been considered and catered for. i.e. the 40:60, 50:50 and continuous assessments, as are any variations to these systems.
- This dispensation works from the principle that all courses at the University will consist of continuous assessment together with, or culminating in, a final summative assessment. While any component of the assessment may be viewed as summative, the final summative assessment of a course should aim to integrate all a student' competencies in terms of the purpose of the course in relation to the programme, the stated outcomes and associated assessment criteria for the course, the theoretical, practical and reflexive competencies required of the course, the level descriptors applicable to the level of the course and the critical cross field outcomes required for the programme.
- The final summative assessment may be conducted using any methodology agreed to by the assessor, moderator and Head of Department, however for the purposes of offering a service the Assessment and Graduation Department will only be able to render co-ordination and administrative assistance for:
- The final summative assessments take place as written assessments. The administration involved in conducting any other form of final summative assessment remains the responsibility of the relevant department, and needs to conform to the security and administrative arrangements detailed in this document. This includes the arrangements for invigilation.
- The continuous assessment activities that are conducted as a written assessment fall within the two assessment weeks specified by the University.

- The principles of this policy may be implemented flexibly, if significant deviations from the principles can be justified to the relevant authorities and other stakeholders. Where staff has assessment strategies that depart significantly from these guidelines, they need to provide a rationale for executive approval by the relevant Dean/s and the Deputy vice Chancellor (Academic).

3.8.1 General assessment strategy required by programmes

- All programmes should produce an assessment strategy that is to be approved by the relevant faculty board.
- All summative assessments should be set by academic staff employed by the University, or by assessors approved by the University, for example in the case of workplace assessment or professional body requirement.
- Assessment should be frequent and aligned to a course's specific outcomes and their associate assessment criteria. It should facilitate learning through formative processes. To this end there should be an assessment strategy for each programme/course/module.
- The number, and types, of summative (for recorded marks and promotion, against explicit criteria) and formative (predominantly to enhance learning or for diagnostic testing rather than for promotion purposes) assessments are planned holistically and coherently for each course taking into account the assessment requirements of the entire programme and the impact of assessment on students.
- It is recommended that summative assessments in the first term of study of a programme be limited and lightly weighted as students are likely to be in a steep learning curve.
- The assessment strategy should include an explanation of how formative assessments will prepare students for any summative assessments.
- The strategy should be flexible enough to accommodate a diversity of students without compromising standards set by the programme, the University and the relevant professions.

- Procedure for reviewing the effectiveness and suitability of assessments should be stated and implemented.
- The assessment strategy and requirements should be made transparent to students through the learning guide.
- The assessment strategy should be aligned to the HEQC criteria for Programme Accreditation and with respect to level descriptors of applied competence and student autonomy, all assessments should be in alignment with the NQF level descriptors.
- The assessment strategy should be available for quality development and quality assurance scrutiny.

3.8.2 Frequency and weighting of summative assessments

- A student is expected to complete all summative assessments. There should be a record indicating the extent to which each student has completed the assessments.
- There should be a minimum of:
    - One integrated summative assessment where a course is offered for a period of less than one term (3 months);
    - Two integrated summative assessments per course/module offered over a semester (6 months);
    - Four integrated summative assessments per course offered over a period of one year;
    - Final summative assessment/s should not exceed 60% or be less than 40% of the final mark allocated for a course/module/course, except where there is only one summative assessment, or where a dissertation or like assessment is required. The final summative assessment should cover many of the theoretical, practical and reflective competencies expected from students for the course/subject/module.

- Students may not be excluded from the final summative assessment. This means that minimum marks for coursework assessments should not be used to exclude students from final summative assessments/examinations.
- In cases where merging departments/Faculties cannot agree on the ratio of continuous assessment to a final summative assessment, (usually an issue of whether it should be 40:60 or 60:40) the fallback position should be 50:50.

3.8.3 Pass Requirements

- The pass mark for all courses is 50% unless otherwise prescribed by statutory bodies, such as professional bodies. These prescribed requirements will be stated in course requirements and all efforts should be made by the department concerned to familiarise students with these additional requirements.
- A candidate, who fails to obtain the prescribed sub-minimum as set by the course criteria for assessment, fails the course.
- In a course comprising two (2) or more question papers in the final assessment, the required sub-minimum has to be obtained in each individual paper.
- A candidate obtaining 75% or more in any course passes that course with distinction, and it will be recorded as such on the diploma/degree.

3.8.4 Rules for the awarding of grades

For all qualifications the following shall apply:

- Less than 50% = Fail.
- 50-59% = Pass.
- 60-69% = Lower second class pass.
- 70-74% = Upper second class pass.
- 75-100% = First class pass/distinction/cum laude.

In the case of doctorates no mark is awarded and the candidate is adjudged as passing or failing. (Annexure D).

3.8.5 Moderation

- All summative assessments (methods and instruments) should be moderated either internally or externally depending on the level of the course, prior to assessment in terms of the assessment design and marking criteria.
- For summative assessment where more than one marker is involved, at least 60% of the final marks should be moderated via a system of internal moderation to check the reliability of the marking. The process of internal moderation should be documented. Where a programme is offered at more than one campus, a procedure of mutual moderation will be implemented.
- In summative assessment for courses at the exit level of the qualifications (excluding qualifications awarded through assessment by thesis only), external moderators/assessors should be appointed to examine at least 60% of the credits at the exit level at which a qualification is awarded. For example, for summative assessment of a Bachelor's degree at level 7 of the NQF, a minimum of 120 credits are examined and moderated externally. The number of credits at the exit level of qualifications will vary for qualifications and will need to be obtained from the SAQA registration.
- For exit-level subjects/courses/modules, there should be external moderation of the final summative assessment. External moderation will include a focus on the design of tasks and their assessment criteria as well as evaluation on the marking of assessments.
- Moderation should cover 60% of the credits awarded. Where the final summative assessments is worth less than this 60%, then other assessments bringing the total to 60% should be moderated.
- Moderation should be used to provide developmental feedback to staff on their assessment practices. The external moderator should receive a report on the internally moderated assessments. The external moderator should submit a

report on the process and outcomes of the moderation to the HoD who will discuss and monitor improvements with the lecturer concerned.

- External moderators' reports should include comments on:
  - the validity of the assessment methods and instruments in relation to the selected content and learning outcomes, ideally prior to their implementation;
  - the quality of student learning and the standard of student attainment across the spectrum of results in relation to learning outcomes and NQF level descriptors and international academic/professional standards;
  - the reliability of the marking process;
  - the quality of feedback given to students;
  - any concerns regarding the alignment of course/subject/module aims, outcomes, curriculum, teaching methodology and assessment
  - any concerns or irregularities with respect to the observation of national, institutional or professional regulations.

It is the responsibility of the Head of Department to act on comments made and where relevant incorporate these into the academic planning cycle and the professional development requirements of staff. (Assessment Manual: 2007).

3.9 CONCLUSION

In this chapter, a literature review was conducted on students' throughput rates at tertiary institutions. This phenomenon is not only a South African problem, but also a world problem as similar tangent planes with respect to drop out rates apply. Unique reasons for drop outs apply though to South African students, which is dissimilar to reasons for drop outs elsewhere. Of concern is the fact that students follow a Nursing career and enter university for short term monetary benefits to their families, as opposed to applying the funds to the benefit of their education.

Of the primary conclusions which can be drawn are that the nursing education system is producing fewer graduates than it should, and which is culminating in an

aspect of national concern as the nations health system is on the verge of collapsing as a result evaluation methods were also described according the aspects involved in the process of facilitating a reflective learning environment in the context of clinical nursing.

CHAPTER 4: RESEARCH SURVEY DESIGN METHODOLOGY

4.1 INTRODUCTION

In this chapter, the methodology and research survey design, including the population and sample process are expanded upon. Uys and Basson (1991:37-38), describes 'methodology' as the total strategy for a study while the research design according to White (2005:8), should specifically focus on two aspects which are:

- **The research approach**: Is it a qualitative or quantitative, or both?
- **The research methods:** Allow the researcher to conduct the research in such a way, that answers will be found to the research question and associated investigative questions?

4.2 THE SURVEY ENVIRONMENT

The data were gathered, from the Integrated Tertiary Software (ITS) system at the Cape Peninsula University of Technology, for students who registered for the first time for the R425 qualification at the CPUT for the period 2005 to 2008. The unit of analysis that the researcher used in this study was a body of individuals which Collis and Hussey (2003:123), define as, "A body if individuals: includes groups of people and organizations, for example a project team, a working group, a department of operational unit". The WCCN and the Nursing department are working in collaboration to accommodate the nursing students registered at the university.

4.3 AIM OF THIS CHAPTER

The principal aim of this chapter and the survey contained therein is to determine what the key factors are for obtaining poor results by the nursing students. The ultimate objective being to solve the research problem as defined in Chapter 1, Paragraph 1.3, and which reads as follows:

"The poor throughput rate of nursing students in the Faculty of Health and Wellness Sciences at the CPUT has an adverse impact on the already critical shortage of qualified nurses in South Africa".

The aim is also to gain information on the reasons why students discontinue their studies and to minimize the drop-out rate.

4.4 CHOICE OF SAMPLING METHOD

According to Babbie (2005:112), the researcher must decide whom or what to study. A sample is a subnet of a population and should represent the main interest of the study (Collis & Hussey 2003:56).

Emory and Cooper (1995:28) define two methods of survey sampling namely:

- The conventional sample, whereby a limited number of elements smaller than the chosen population are chosen (typically randomly) in such a manner as to accurately represent (without Bias) the total population (this sampling method was used in this research survey).
- The census approach, where an attempt is made to survey every element within the population.

The study sample comprised of 100 nursing students of which only 60 responded to the questionnaires.

4.5 THE TARGET POPULATION

With any survey, it is necessary to clearly define the target population, which Collis and Hussey (2003:56), define as follows:

"A population is any precisely defined set of people or collection of items which is under consideration".

As researched by Burns and Grove (2001:47), the target population is all elements (individuals, objects or substances) that meet certain criteria for inclusion in a given universe. In this instance the population consists of student nurses registered in 2005 at the Western Cape College of Nursing in collaboration with the Nursing Department at CPUT. Questionnaires and interviews will serve as data collection methodology for this research.

For this survey, 100 questionnaires will be completed by randomly selected, 3rd and 4th year students who are still in the process of completing the nursing course. All lecturers teaching this particular students will be directly involved in this research.

4.6 DATA COLLECTION

According to Emory and Cooper (1995:180-181), three primary types of data collection (survey) methods can be distinguished namely:

- Personal interviewing.
- Telephone interviewing.
- Self-administered questionnaires/surveys.

The primary data collection method used in this survey is the self-administered questionnaires. The purpose of a questionnaire according to Polit and Hungler, (1993:444), is a series of questions in a document used to gather self-report information form respondents through self-administration.

4.7 MEASUREMENT SCALES

The survey will be based on the well-known Likert scale (Likert, 1932:1-55), whereby respondents were asked to respond to questions or statements (Parasuraman 1991:410). The reason for choosing the Likert scale, the fact that the scale can be used in both respondent-centred (how responses differ between people) and stimulus-centred (how responses differ between various stimuli) studies, most appropriate to

glean data in support of the research problem in question (Emory and Cooper 1995:180-181). The advantages in using the popular Likert scale according to Emory and Cooper (Emory and Cooper 1995:180-181) are:

- Easy and quick to construct.
- Each item meets an empirical test for discriminating ability.
- The Likert scale is probably more reliable than the Thurston scale, and it provides a greater volume of data than the Thurston differential scale.
- The Likert scale is also treated as an interval scale.

According to Remenyi, Money & Twite (1995:224), interval scales facilitate meaningful statistics when calculating means, standard deviation and Pearson correlation coefficients.

4.8 THE DEMAND FOR A QUALITATIVE RESEARCH STRATEGY

Reliability according to Uys and Basson (1991:75-76), mean the degree of consistency or accuracy with which an instrument measures the attribute it is designed to measure. According to Uys and Basson (1991:80), validity means the degree to which an instrument measures what it is supposed to measure. While this author acknowledges that a number of strategies can be applied in similar research projects, the well-known concepts of objectivity, reliability etcetera, inherited from the empirical analytical paradigm, is suggested for business research in more or less the traditional way. Quoting Thorndike & Hagen (1969), these concepts are defined by Emory & Cooper (1995:156), as follows:

- **Practicality:** Practicality is concerned with a wide range of factors of economy, convenience, and interpretability.
- **Validity:** Validity refers to the extent to which a test measures what we actually wish to measure. Yin (2003:34) identifies 3 subsets to the concept validity, namely: Construct validity, internal validity and external validity.
- **Reliability:** Reliability has to do with the accuracy and precision of a measurement procedure.

4.9 SURVEY SENSITIVITY

Research conducted in areas of a sensitive nature, pose particular challenges to the researcher. The following guidelines from various academics serve to illustrate the mitigation process, which can be deployed in an instance where research is conducted in areas of a sensitive nature:

- A qualitative investigation of a particularly sensitive nature conducted by Oskowitz & Meulenberg-Buskens (1997:83), qualified the importance of handling mission critical issues as identified above when the authors stated:

  "Thus any type of qualitative investigation could benefit from the researchers being skilled and prepared, and the sensitive nature of an investigation into a stigmatizing condition made the need for such an undertaking even more imperative in the current study".

- The sensitivity of certain issues and issues identified as impacting the research negatively in the environments being evaluated, not only demand intimate personal involvement, but also demand the 'personal and practical experience' of the researcher. This view was upheld by Meulenberg-Buskens (1997), as being imperative to assure quality in qualitative research being undertaken. Checkland (1989:152), supports this view however extends the concept with the opinion that: "The researcher becomes a participant in the action, and the process of change itself becomes the subject of research".

4.10 SURVEY DESIGN

Collis and Hussey (2003:2-15), are of the opinion that, 'if research is to be conducted in an efficient manner and make the best of opportunities and resources available, it must be organised. Furthermore, if it is to provide a coherent and logical route to a reliable outcome, it must be conducted systematically using appropriate methods to

collect and analyse the data. A survey should be designed in accordance with the following stages:

- **Stage one:** Identify the topic and set some objectives.
- **Stage two:** Pilot a questionnaire to find out what people know and what they see as the important issues.
- **Stage three:** List the areas of information needed and refine the objectives.
- **Stage four:** Review the responses to the pilot.
- **Stage five:** Finalise the objectives.
- **Stage six:** Write the questionnaire.
- **Stage seven:** Re-pilot the questionnaire.
- **Stage eight:** Finalise the questionnaire.
- **Stage nine:** Code the questionnaire.

The survey design to be used in this instance is that of the descriptive survey as opposed to the analytical survey. The descriptive survey is according to Collis & Hussey (2003:2-15), frequently used in business research in the form of attitude surveys. Particular care was taken to avoid bias in the formulation of the questions.

4.11 THE VALIDATION SURVEY QUESTIONS

The author has developed one survey questionnaire. According to Collis and Hussey (2003:55), it is essential that the data used is highly specific and precise. A questionnaire was posed to 3rd and 4th year Nursing Students (R425).

Questionnaire content are listed below.

Question 1: How old are you?

Question 2: What is your gender?

Question 3: What is your marital status?

Question 4: To what racial group do you belong?

Question 5: What is the highest level of education you have completed?

Question 6: Do you have any additional nursing qualification?

Question 7: Should you have, please indicate how long you have been busy in this profession.

Question 8: What motivated you to apply for the nursing programme?

Question 9: Do you regard yourself as having the personality to be a professional nurse?

Question 10: After having been in the programme for 6 months or more, did the course meet your expectations?

Question 11: Do you think the workload is excessive?

Question 12: If Yes, is there too much theory or too much practical?

Question 13: In your opinion are the teaching facilities adequate?

Question 14: Did you have positive learning experiences while studying the nursing programme?

Question 15: Did you have negative learning experiences while studying the nursing programme?

Question 16: Do you need additional support to be more successful in your studies?

Question 17: Are the students provided with adequate notes, etc?

Question 18: Do you get notifications regarding test/examination timetables, clinical hours, etc timeously?

Question 19: Do lecturers give feedback after a test was written?

Question 20: Are you available for consultation by appointment with lecturers outside of normal lecture times?

4.12 CONCLUSION

This chapter addresses the rationale for a case study design, executed within the qualitative and quantitative research paradigms. A questionnaire was used as a research tool to gain valuable insight into the reasons as to why students enrolled for the nursing programme. In this instance the questionnaire was more cost effective to administer and anonymity was ensured during the data collection, as findings could not be linked to a specific respondent.

In chapter 5, data gleaned from the survey conducted in this chapter will be analysed using descriptive and inferential statistics.

CHAPTER 5: ANALYSIS AND INTERPRETATION OF RESULTS

5.1 INTRODUCTION

This chapter discusses the statistical analysis of a survey conducted at the Faculty of Health and Wellness Sciences at the CPUT in order to determine whether the poor throughput rate of nursing students at the institution has an adverse impact on the already critical shortage of nurses in South Africa.

To serve the purpose of this research, descriptive and inferential statistics were used to analyse the data. The data has been analysed by using SAS software. As descriptive statistics, frequency tables displayed in Paragraph 5.3 shows the distributions of statement responses and biographical variables.

5.2 ANALYSIS METHOD

5.2.1 VALIDATION SURVEY RESULTS

A descriptive analysis of the study results are reflected below. The distribution of all variables are indicated in table format for ease of reference. Each variable is tested to fall within the boundaries.

5.2.2 DATA FORMAT

The data was provided in its original questionnaire format. A database in Micro Soft Access is developed and the questionnaires were captured in the database. It was then imported into SAS-format through the SAS ACCESS module.

5.2.3 PRELIMINARY ANALYSIS

Descriptive statistics (Uni-variate analysis) were used to establish the frequency distribution of all the categorical variables. The table which contains the frequencies, percentages, cumulative frequencies and cumulative percentages are shown in Paragraphs 5.3.1 (Also see computer printout in Annexure A).

5.2.4 INFERENTIAL STATISTICS

The following inferential statistics are performed on the data:

- The chi-square tests for equal proportions were performed on the statements to indicate whether one choice was preferred above another.
- In cases where expected frequencies were above 5 for the different groups, comparisons were made with respect to gender and race by using the Pearson chi-square test. Fisher-Exact tests were used where the expected frequency were less than 5.
- Mostly the analysis will concentrate on the total sample's outcome and mostly on descriptive statistics.

5.2.5 ASSISTANCE TO RESEARCHER

The conclusions made by the researcher, is validated by the statistical report. The final report written by the researcher was validated and checked by a qualified statistician to exclude any misleading interpretations.

5.2.6 SAMPLE

The target population is the Nursing Science students at CPUT Health and Wellness Sciences Department who registered in 2005 at the Western Cape College of Nursing. A random sample of 100 students was drawn from this department, consisting of third and fourth year students who are still in the process of completing the nursing course.

5.3 ANALYSIS

Sixty respondents responded to the questionnaires (60% realization of the original selected sample).

5.3.1 DESCRIPTIVE STATISTICS

In Table 5.1, the descriptive statistics for all the responses on the statements are presented. It shows the frequencies in each category and the percentage out of total sample. It is of importance to note that the descriptive statistics are based on the total sample where the inferential statistics will be based on non missing information. In some cases, the respondents did not indicate their response on a statement. These non responses are also included and are indicated as the 'unknown' category.

TABLE 5. 1: Descriptive statistics of responses to statements

Variables	Categories	Frequency	Percentage out of total
Biographic variables			
2. Gender	Male	17	28.3%
	Female	43	71.7%
3. Marital status	Married	8	13.3%
	Single	51	85.0%
	Divorced	1	1.7%
4. Race	Black	21	35.0%
	White	2	3.3%
	Coloured	37	61.7%
5. Highest level of education	High School Graduate	37	61.7%
	College (Not completed)	7	11.7%
	College Graduate	4	6.7%
	University (Not completed)	8	13.3%
	University Graduate	4	6.7%

Variables	Categories	Frequency	Percentage out of total
6. Do you have any additional nursing qualification?	Yes	6	10.0%
	No	54	90.0%
7. Indicate how long you have been busy in this profession	Less than 6 Months	1	1.7%
	Less than 1 year	9	15.0%
	1-5 Years	23	38.3%
	5 years and above	1	1.7%
	Unknown	26	43.3%
8. Motivation to apply for nursing programme	Not accepted for another course	1	1.7%
	Role model in nursing profession	5	8.3%
	Like to work with people	25	41.7%
	Self-disciplined and understanding	5	8.3%
	Offer a full bursary	4	6.7%
	Job satisfaction	4	6.7%
	Unknown	16	26.7%
Statements			
9. Do you regard you as having the personality to be a professional nurse?	Yes	57	95.0%
	No	3	5.0%
10. After having been in the programme for 6 months or more, did the course meet your expectations?	Yes	34	56.7%
	No	25	41.7%
	Unknown	1	1.7%
11. Do you think the workload is excessive?	Yes	49	81.7%
	No	8	13.3%
	Unknown	3	5.0%
12. If Yes, is there too much theory or too much practical?	Too much theory	13	21.7%
	Too much practical	21	35.0%
	Unknown	26	43.3%

Variables	Categories	Frequency	Percentage out of total
13. In you opinion are the teaching facilities adequate?	Yes	27	45.0%
	No	27	45.0%
	Unknown	6	10.0%
14. Did you have positive learning experiences while studying the nursing programme?	Yes	52	86.7%
	No	7	11.7%
	Unknown	1	1.7%
15. Did you have negative learning experiences while studying the nursing programme?	Yes	34	56.7%
	No	19	31.7%
	Unknown	7	11.7%
16. Do you need additional support to be more successful in you studies?	Yes	42	70.0%
	No	18	30.0%
17. Are the students provided with adequate notes?	Yes	29	48.3%
	No	28	46.7%
	Unknown	3	5.0%
18. Did you get notifications regarding test/examination timetables, clinical hours etc.?	Yes	51	85.0%
	No	8	13.3%
	Unknown	1	1.7%
19. Do lecturers give feedback after a test was written?	Yes	55	91.7%
	No	1	1.7%
	Unknown	4	6.7%
20. Are you available for consultation by appointment with lecturers outside of normal lecture times?	Yes	54	90.0%
	No	6	10.0%

5.3.2 UNI-VARIATE GRAPHS

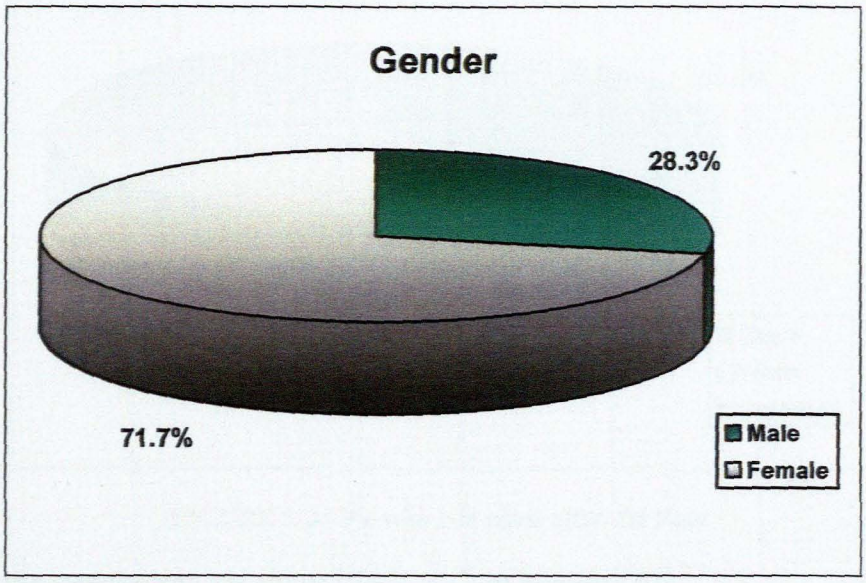

FIGURE 5. 1: Pie with 3-D visual effect for Gender

More of the respondents are female (71.7%).

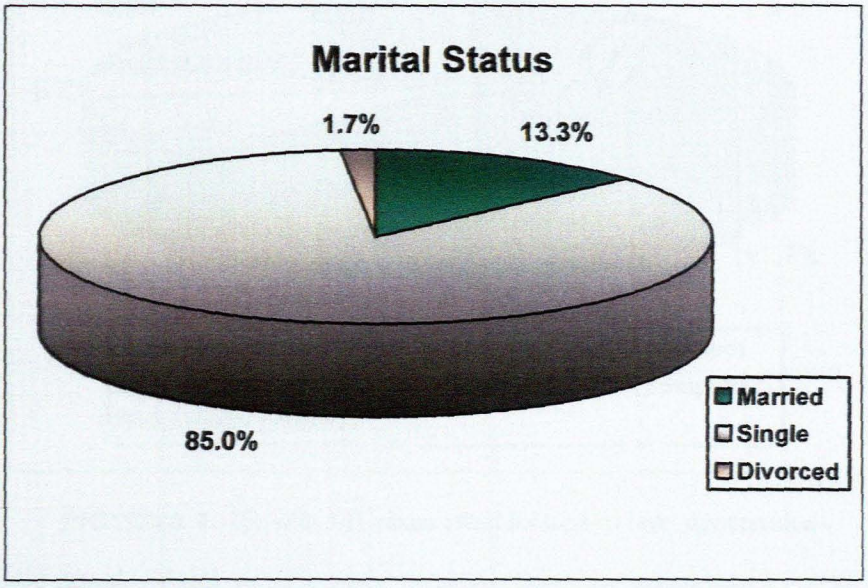

FIGURE 5. 2: Pie with 3-D visual effect for Marital Status

Most of the respondents are single (85.0%).

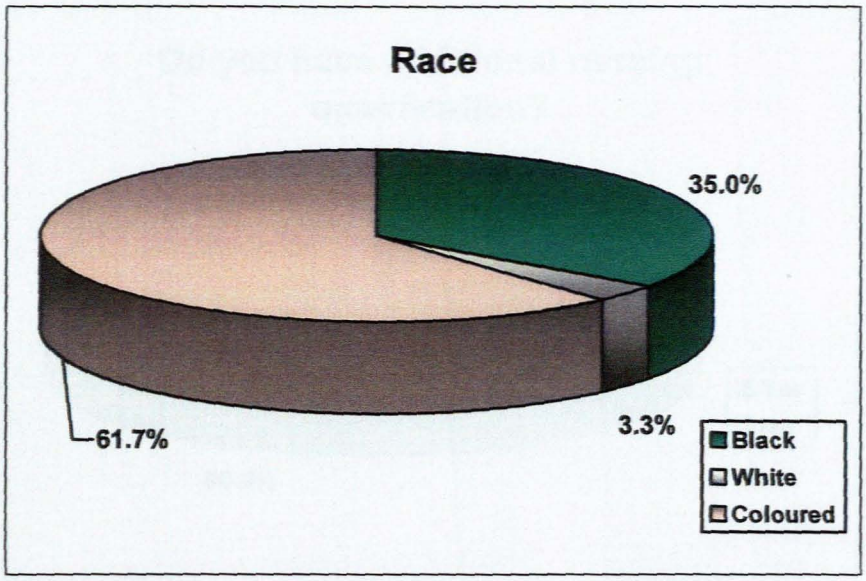

FIGURE 5. 3: Pie with 3-D visual effect for Race

Most of the respondents are either Black or Coloured (96.7%)

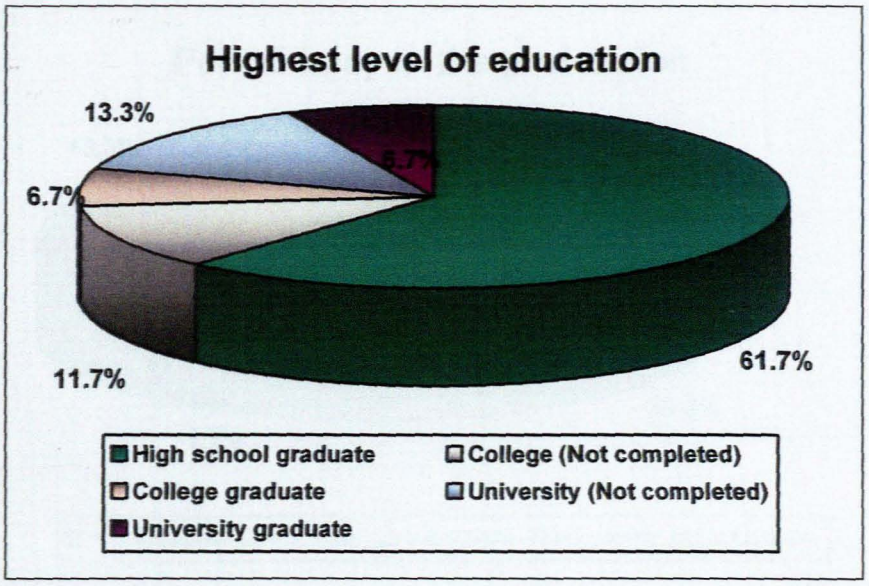

FIGURE 5. 4: Pie with 3-D visual effect for highest level of education

Nearly two thirds of the respondents' highest level of education is a high school graduate.

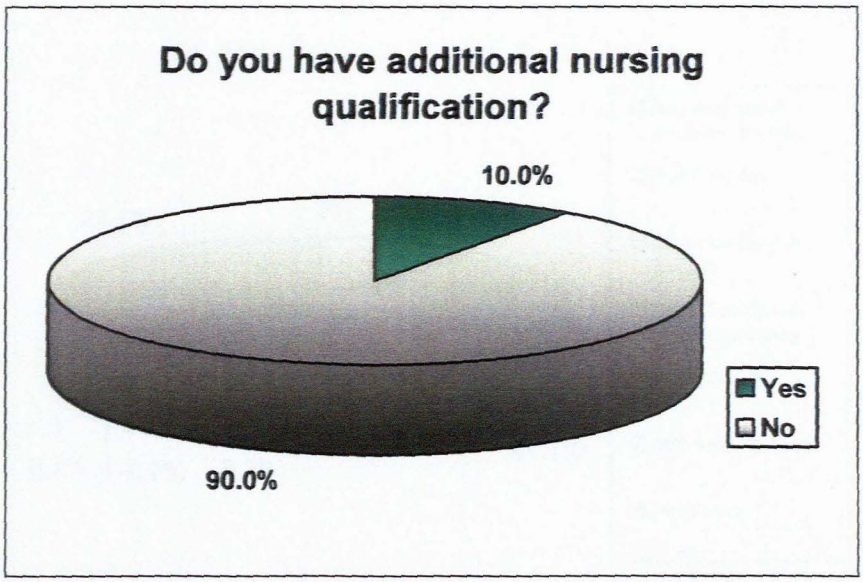

FIGURE 5. 5: Pie with 3-D visual effect showing additional nursing qualification

Ten percent of the respondents have an additional nursing qualification.

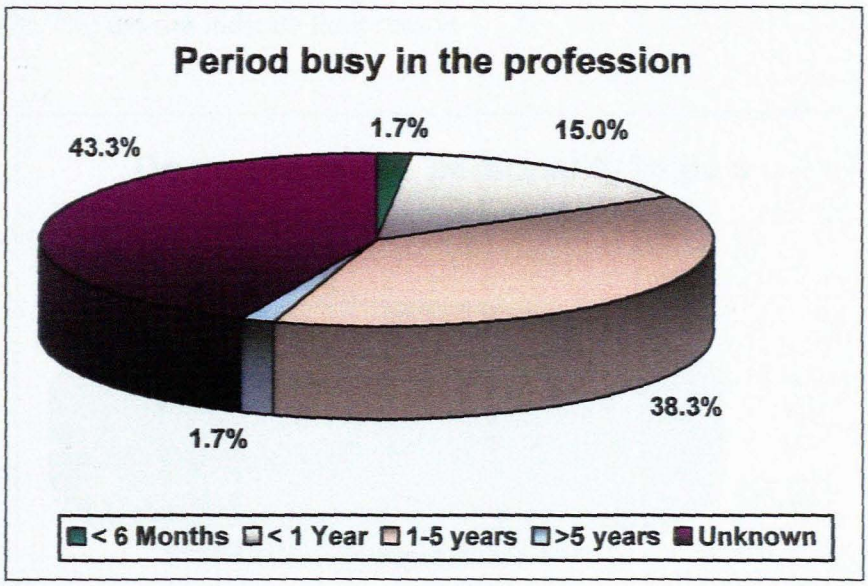

FIGURE 5. 6: Pie with 3-D visual effect for period in profession

Note must be taken that a large percentage of the respondents (43.3%) did not indicate how long they are in the nursing profession and 38.3% indicated that they are 1-5 years in the nursing profession.

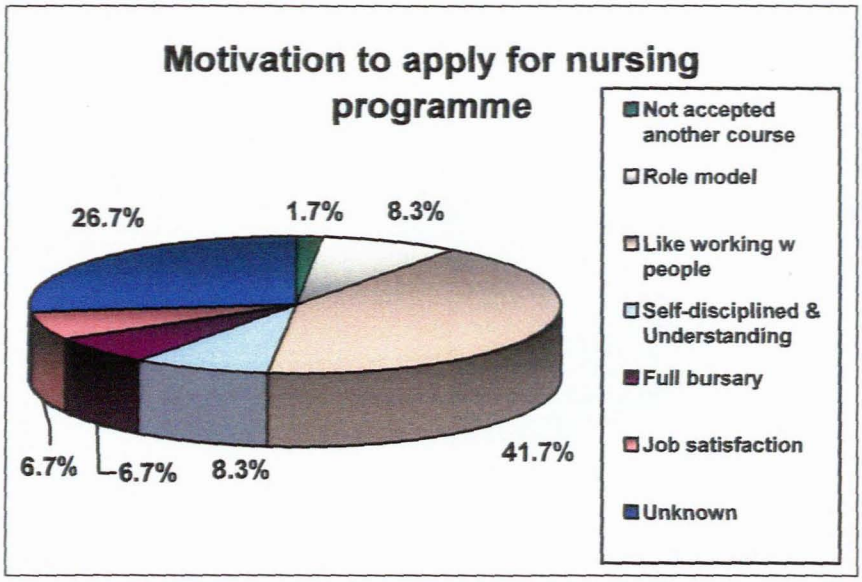

FIGURE 5. 7: Pie with 3-D visual effect for motivation to apply

The main reason that is given by the respondents as motivation to apply for the nursing programme is that they like working with people (41.7%). Just more than a quarter (26.7%) did not indicate their reason.

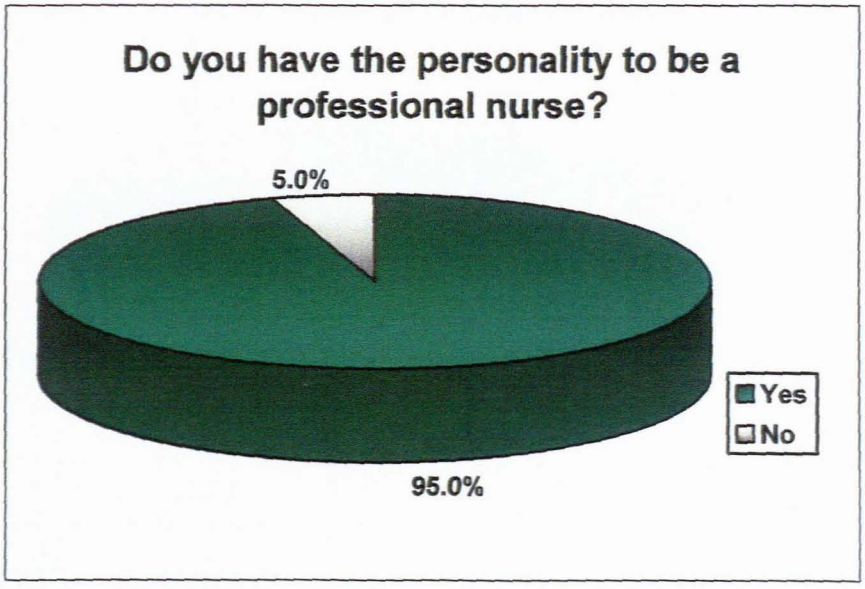

FIGURE 5. 8: Pie with 3-D visual effect for Statement 9

Nearly all the respondents indicated that they have the personality to be a professional nurse (95%).

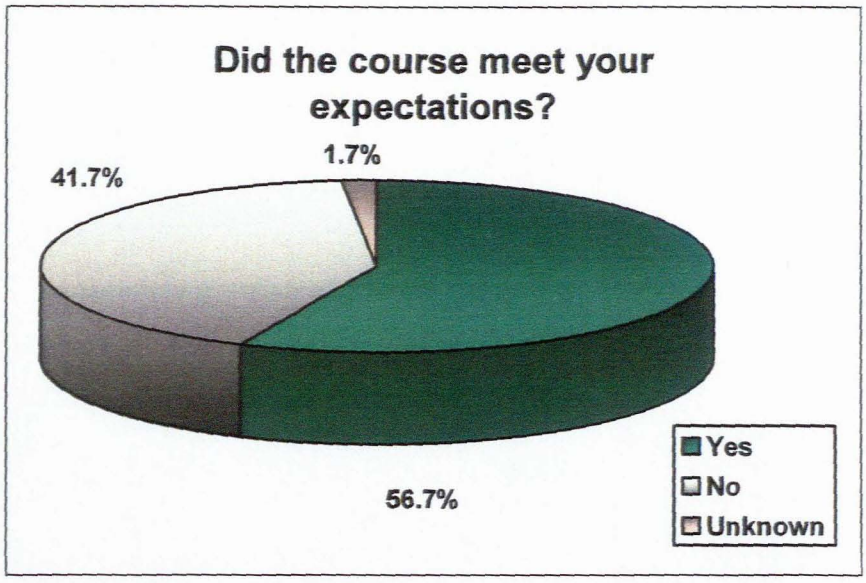

FIGURE 5. 9: Pie with 3-D visual effect for Statement 10

Figure 5.9 shows that just more than half of the respondents indicated that the course meet their expectations (56.7%).

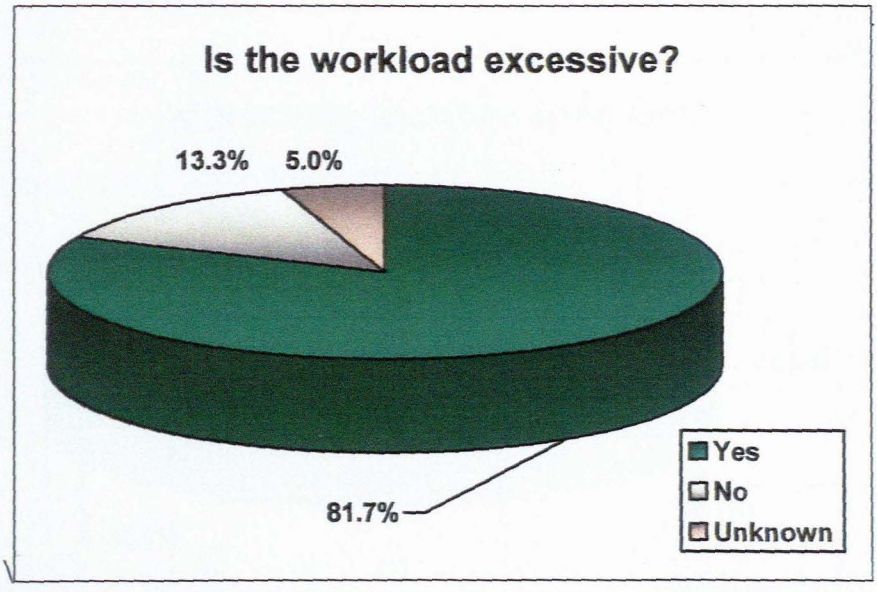

FIGURE 5. 10: Pie with 3-D visual effect for Statement 11

More than eighty percent of the respondents indicated that the work load is excessive.

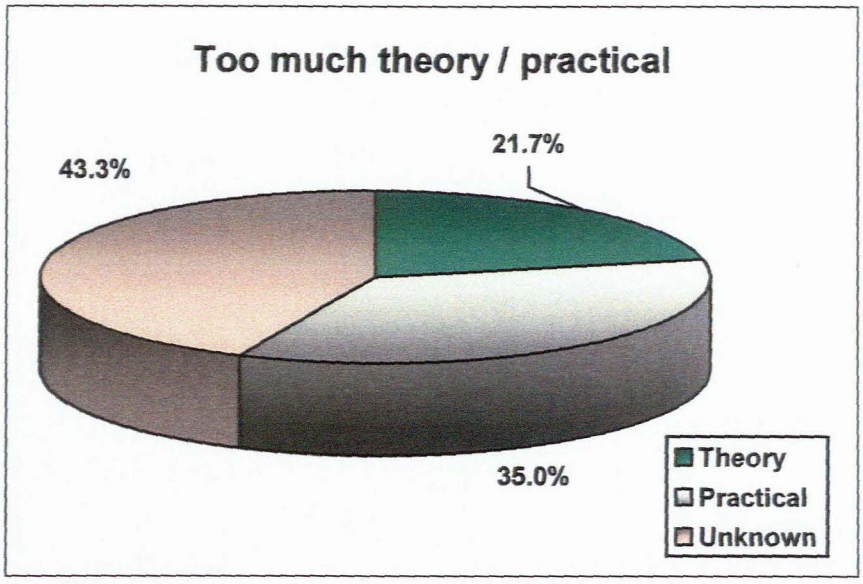

FIGURE 5. 11: Pie with 3-D visual effect for Statement 12

Although 43.3% of the respondents did not indicate whether theory or practical is excessive, more respondents indicated practical (35%) as being an excessive workload rather than theory (21.7%).

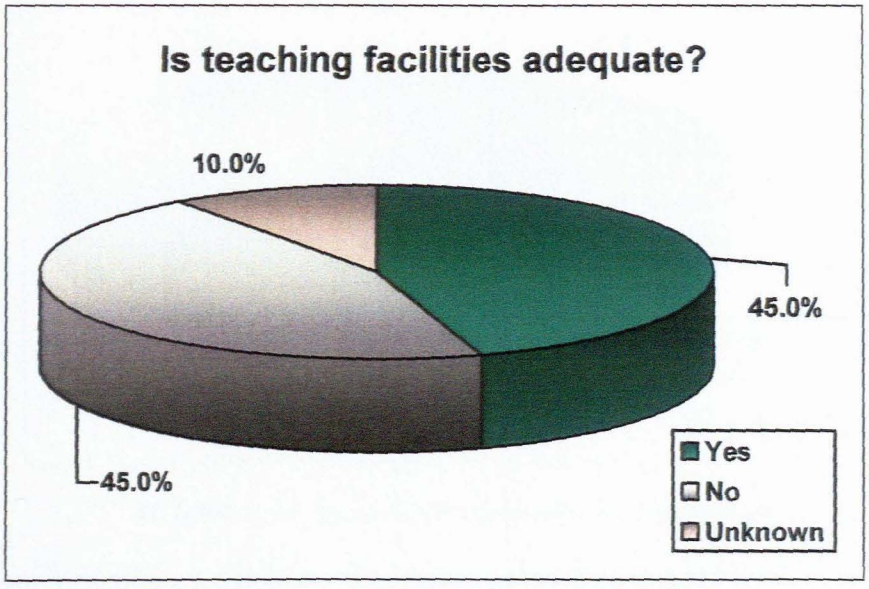

FIGURE 5. 12: Pie with 3-D visual effect for Statement 13

The respondents are equally split whether the teaching facilities are adequate or not.

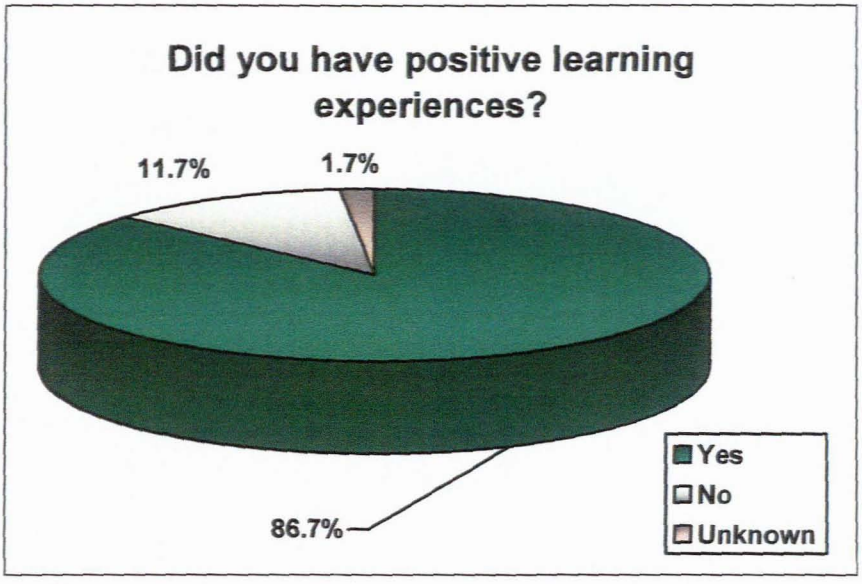

FIGURE 5. 13: Pie with 3-D visual effect for Statement 14

Most of the respondents had positive learning experiences.

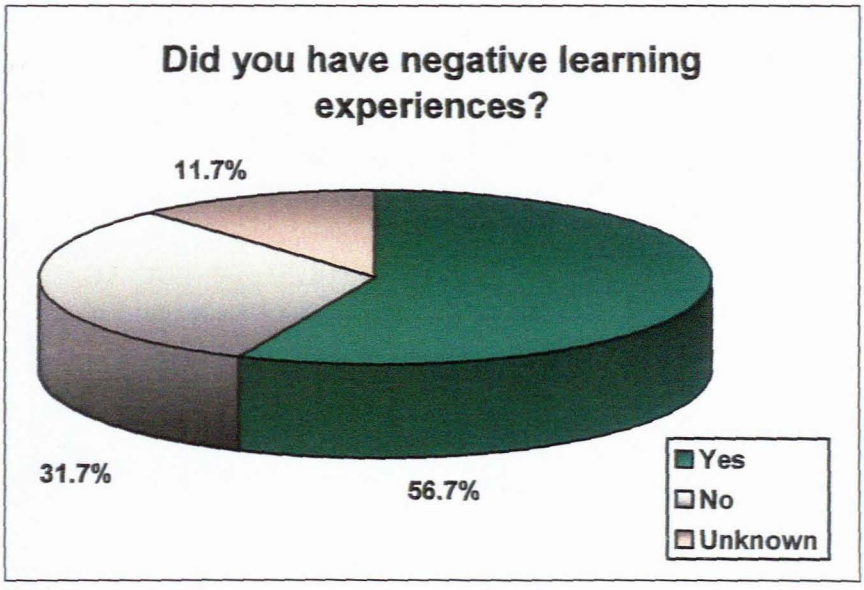

FIGURE 5. 14: Pie with 3-D visual effect for Statement 15

More than 50% of the respondents had negative learning experiences.

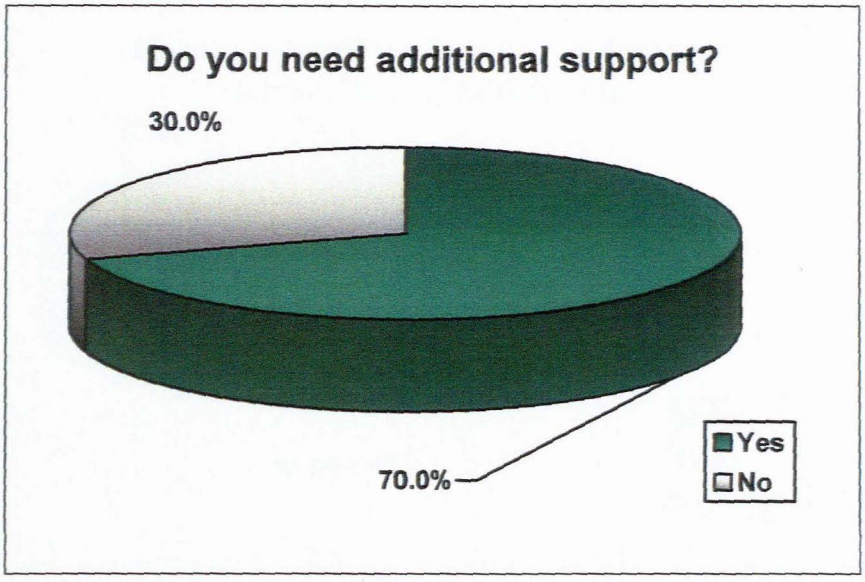

FIGURE 5. 15: Pie with 3-D visual effect for Statement 16

Seventy percent of the respondents needed additional support.

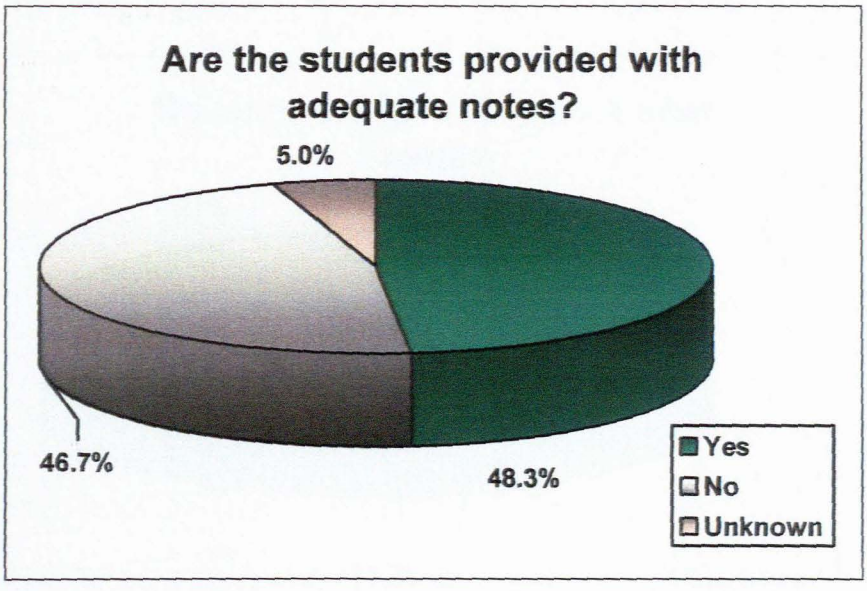

FIGURE 5. 16: Pie with 3-D visual effect for Statement 17

The respondents are equally split whether the adequate notes were provided or not.

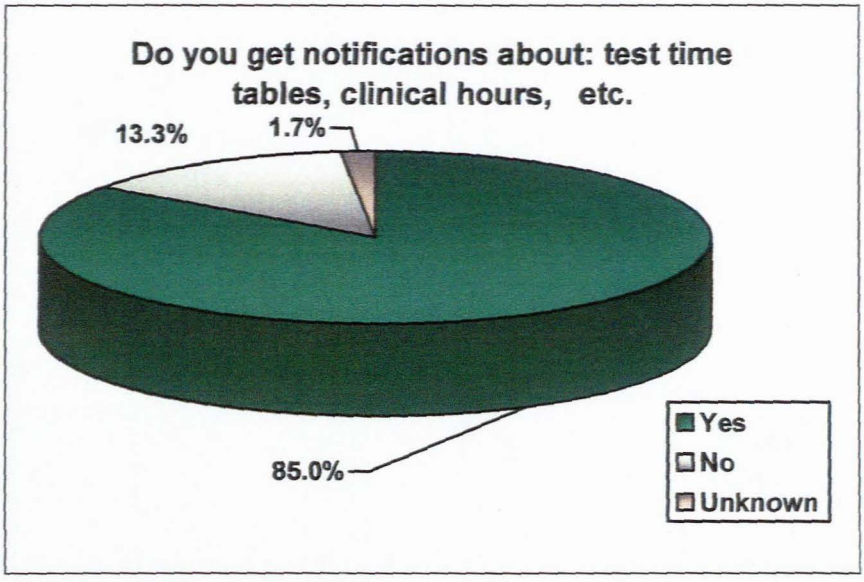

FIGURE 5. 17: Pie with 3-D visual effect for Statement 18

The respondents mostly felt that they got notification about test / exam timetables, clinical hours etc.

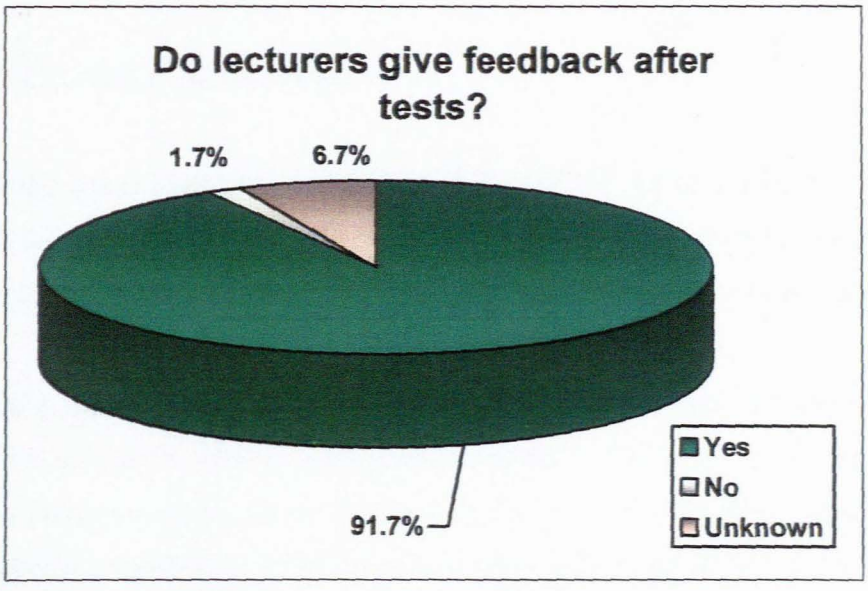

FIGURE 5. 18: Pie with 3-D visual effect for Statement 19

Most of the respondents indicated that the lecturers give feedback after tests (91.7%).

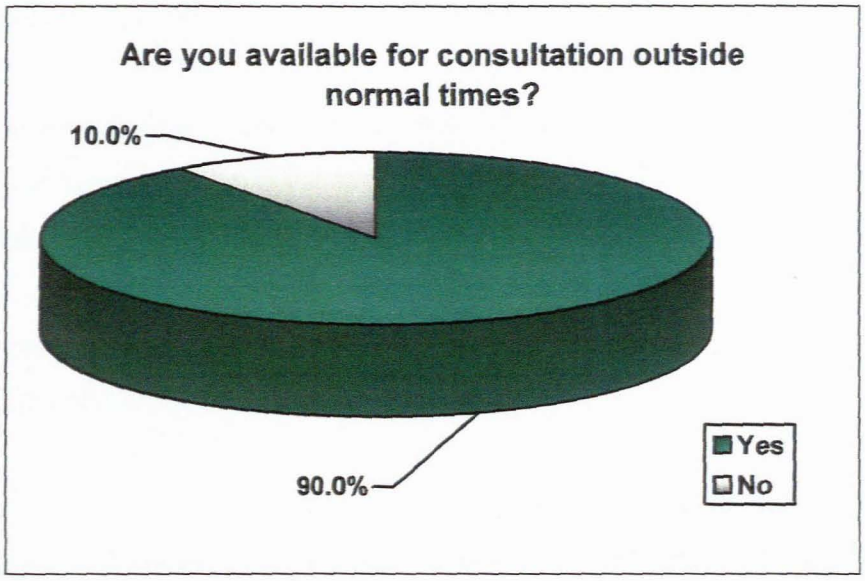

FIGURE 5. 19: Pie with 3-D visual effect for Statement 20

Most of the respondents are available for consultation out of normal times (90.0%)

5.3.3 INFERENTIAL STATISTICS

5.3.3.1 RELIABILITY TESTING

A reliability test (Cronbach's Alpha Coefficient) could not be performed due to the fact that the measuring instrument was only represented by dichotomous variables (Yes/No answers). There was no correlation between the variables in this study.

Cronbach's Alpha is an index of reliability associated with the variation accounted for by the true score of the "underlying construct". Construct is the hypothetical variables (statements) that are being measured (Cooper & Schindler, 2006:216-217). More specific, Cronbach's alpha measures how well a set of items (or variables) measures a single uni-dimensional latent construct.

5.3.3.2 CHI-SQUARE TEST FOR EQUAL PROPORTIONS

There is evidence that the proportions for some of the different statements were not equal. The chi-square test for equal proportions show that the H_0: $P_1=P_2$ are to be rejected, thus $P_1 \neq P_2$. This means that a significant higher / lower proportion of respondents indicated one category rather than one of the other categories. For instance, statistically significant more respondents did not have any additional nursing qualification (90.0%).

The chi-square tests are statistically significant at the $\alpha=0.05$ level of significance for all the statements. This means the proportions for some of the statement responses are not equal. The statistics are reflected in Table 5.2 and in Annexure A.

TABLE 5. 2: Chi-Square tests for equal proportions.

Question / Statement	Sample Size	Chi-Square	DF	P-Value
2. Gender.	60	11.27	1	0.0008***
3. Marital Status.	60	73.30	2	<0.0001***
4. Race.	60	30.70	2	<0.0001***
5. Education.	60	66.17	4	<0.0001***
6. Do you have any additional nursing qualification?	60	38.40	1	<0.0001***
7. Indicate how long you have been busy in this profession?	34	38.00	3	<0.0001***
8. Motivation to apply for nursing programme.	44	52.55	5	<0.0001***
9. Do you regard you as having the personality to be a professional nurse?	60	48.60	1	<0.0001***
10. After having been in the programme for 6 months or more, did the course meet your expectations?	59	1.37	1	0.2413
11. Do you think the workload is excessive?	57	29.49	1	<0.0001***
12. If Yes, is there too much theory or too much	34	1.88	1	0.1701

Question / Statement	Sample Size	Chi-Square	DF	P-Value
practical?				
13. In you opinion are the teaching facilities adequate?	54	0.00	1	1.0000
14. Did you have positive learning experiences while studying the nursing programme?	59	34.32	1	<0.0001***
15. Did you have negative learning experiences while studying the nursing programme?	53	4.24	1	0.0394*
16. Do you need additional support to be more successful in you studies?	60	9.60	1	0.0019**
17. Are the students provided with adequate notes?	57	0.02	1	0.8946
18. Did you get notifications regarding test / examination timetables, clinical hours etc.?	59	31.34	1	<0.0001***
19. Do lecturers give feedback after a test was written?	56	52.07	1	<0.00001***
20. Are you available for consultation by appointment with lecturers outside of normal lecture times?	60	38.40	1	<0.0001***

There are statistically significant more respondents who:

- Are female (71.7%).
- Are single (85.0%).
- Are coloured (61.7%).
- Are high school graduates (61.7%).
- Did not have an additional nursing qualification (90.0%).
- Are 1-5 years busy in this profession (38.3%).
- Indicated that they like working with people as a motivation for applying for the nursing programme (41.7%).
- Regard themselves as having the personality to be a professional nurse (95.0%).
- Think the workload is excessive (81.7%).

- Had positive learning experiences while studying the nursing programme (86.7%).
- Had negative learning experiences while studying the nursing programme (56.7%).
- Need additional support (70.0%).
- Were notified of test or exam timetables, clinical hours etc. (85.0%).
- Indicated that lecturers gave feedback after a test was written (91.7%).
- Are available outside normal lecture hours for consultation by appointment (90.0%).

5.3.3.3 COMPARISONS

Gender and race are compared with respect to the answers given on the statements in the survey. The sample size was too small to compare the other biographical variables with respect to the statements. The expected values in the cells of the contingency table for these variables are in most cases less than 5, resulting in the Pearson Chi-square becoming an invalid test.

The result of these comparisons using the Fisher's Exact Test as statistic to prove association or not, is shown in Tables 5.3 and 5.4.

TABLE 5. 3: Chi-Square tests to compare gender with respect to statements.

Question / Statement	Sample Size	Chi-Square	DF	P-Value
6. Do you have any additional nursing qualification?	60	2.6357	1	0.1218
9. Do you regard you as having the personality to be a professional nurse?	60	2.2853	1	0.1908
10. After having been in the programme for 6 months or more, did the course meet your expectations?	59	0.0140	1	0.6564
11. Do you think the workload is excessive?	57	0.4098	1	0.3980
13. In you opinion are the teaching facilities	54	0.0859	1	0.7207

Question / Statement	Sample Size	Chi-Square	DF	P-Value
adequate?				
14. Did you have positive learning experiences while studying the nursing programme?	59	0.7637	1	0.3204
15. Did you have negative learning experiences while studying the nursing programme?	53	8.6397	1	0.0047**
16. Do you need additional support to be more successful in you studies?	60	0.0039	1	0.6396
17. Are the students provided with adequate notes?	57	5.1792	1	0.0379*
18. Did you get notifications regarding test / examination timetables, clinical hours etc.?	59	0.0656	1	1.0000
19. Do lecturers give feedback after a test was written?	56	0.4073	1	1.0000
20. Are you available for consultation by appointment with lecturers outside of normal lecture times?	60	0.0821	1	1.0000

Statistically significant more of the females (76.3%) than of the males (33.3%) indicated that they had negative learning experiences while studying the nursing programme. Statistically significant more of the males (75.0%) than of the females (41.5%) indicated that they are provided with adequate notes. It seems that more females didn't think that they are provided with adequate notes.

Note that the comparison for race is only done between Blacks and Coloureds because there were only two White respondents.

TABLE 5. 4: Chi-Square tests to compare race with respect to statements.

Question / Statement	Sample Size	Chi-Square	DF	P-Value
6. Do you have any additional nursing qualification?	58	1.1063	1	0.4020
9. Do you regard you as having the personality to be a professional nurse?	58	1.7956	1	0.5467

Question / Statement	Sample Size	Chi-Square	DF	P-Value
10. After having been in the programme for 6 months or more, did the course meet your expectations?	57	0.2193	1	0.7824
11. Do you think the workload is excessive?	55	0.0052	1	1.0000
13. In you opinion are the teaching facilities adequate?	52	2.0734	1	0.2492
14. Did you have positive learning experiences while studying the nursing programme?	57	1.4934	1	0.3319
15. Did you have negative learning experiences while studying the nursing programme?	51	5.0006	1	0.0347*
16. Do you need additional support to be more successful in you studies?	58	0.0160	1	1.0000
17. Are the students provided with adequate notes?	55	9.3786	1	0.0044**
18. Did you get notifications regarding test / examination timetables, clinical hours etc.?	57	0.1241	1	0.7006
19. Do lecturers give feedback after a test was written?	54	1.7321	1	0.3704
20. Are you available for consultation by appointment with lecturers outside of normal lecture times?	58	0.3539	1	0.6154

In terms of race that statistically significant more Coloureds (75.8%) had negative experiences than Blacks (44.4%) and statistically significant more of the Blacks (80.0%) felt that they have adequate notes than of the Coloureds (37.1%).

The similar distribution of gender and race with respect to these two statements was confirmed by cross tabulation of gender and race. It showed that statistically significant more Coloureds were female (86.5%) than Blacks were female (42.9%).

5.4 DISCUSSION AND CONCLUSSION

It is of importance to note that this survey indicated that the target population drawn from the Science students at CPUT Health and Wellness Sciences Department are mainly:

- Female;
- Single;
- Coloured; and
- High school graduates.

Most of the respondents do not have an additional qualification and are 1-5 years employed in the nursing profession.

The students' perception of themselves are that they regard themselves as having the personality to be a professional nurse, and the motivation for applying for the nursing programme is that they like working with people.

The result from this study indicates that:

- Students are notified of test/exam timetables, clinical hours, etc,
- Lecturers give feedback after writing tests,
- Lecturers are available outside normal lecture hours for consultation by appointment,
- The students had positive learning experiences while studying the nursing programme,
- The workload is excessive,
- Students need additional support,
- Students had a negative learning experience.

Whilst the Coloured females believe they had adequate notes and that they had negative learning experiences whilst they were doing the nursing programme, the Black males believed they had adequate notes.

CHAPTER 6: CONCLUSION

6.1 BACKGROUND

In the research thus far the scope of the research was provided in Chapter 1, and a holistic perspective provided of the throughput rate of nursing students at the CPUT in collaboration with the Western Cape College of Nursing. In Chapter two the background to the research environment was discussed.

In chapter 3 a literature review was conducted in the issue of the throughput rate of nursing students (Regulation R425) with specific focus levelled at the following:

- Drop-out rate
- The entrance requirements.
- Academic quality student performance, assessment criteria.
- Continual quality improvement on throughput rate.
- Quality and the cost-effectiveness of teaching and learning in Higher Education.
- Quality assurance and assessment.

In Chapter 4 the research design and methodology was elaborated upon in detail to ultimately culminate in data analysis and interpretation of the results (Chapter 5), following the survey. In this final Chapter 6, the research will be concluded in final analogies drawn.

6.2 THE RESEARCH PROBLEM REVISITED

The research problem which was researched within the ambit of this dissertation in Paragraph 1.3 of Chapter 1, reads as follows:

"The poor throughput rate of nursing students in the Faculty of Health and Wellness Sciences at the CPUT has an adverse impact on the already critical shortage of qualified nurses in South Africa".

The research problem will be mitigated should the recommendations made in this chapter be implemented. The problem of poor throughput rate of nursing students is exacerbated by a critical skill shortage of qualified nurses presently in South Africa. Given the context, there is no readily available off the shelf solution to addressing the nursing crises. A holistic approach and combined efforts from both the public and private sectors to bring about a positive change for the future of the nursing profession in South Africa will need to be adopted with the following serving as guidelines:

- Improving the complement of available nursing is vital to improving the quality of available care and therefore reducing the workload in the healthcare environment.
- Improving working conditions and remuneration so as to attract more student nurses into the profession and therefore encourage nurses working abroad to return to South Africa.
- An analysis of the data indicate the throughput rate of the students for the 4 year programme being low primarily to a mismatch between the skills, knowledge and preparation of the students when they enter the programme.
- Post 1994, there is a perception that more career opportunities have become available to learners, consequently nursing as a career choice has become less popular.
- Strategies need to be developed and implemented to attract more rural students to study nursing.
- Marketing of the nursing programme to attract the appropriate calibre' of student(s) needs to be pursued.

6.3 THE RESEARCH QUESTION REVISITED

The research question which forms the crux of this dissertation reads as follows:

"How can the throughput rate of nursing students be improved to alleviate the critical shortage of nurses in South Africa?"

In order to improve the throughput rate of the students, a strategy should be adopted which balances the quality and cost-effectiveness of the programme. Of importance is not the number of students who enter the programme, but the quality and mix of students who successfully complete their studies in the shortest period of time.

- It is therefore important to address factors negatively influencing students when dealing with students accepted onto the programme, especially aspects related to teaching and learning.
- Revisit the selection criteria, to not only include academic criteria, but also to include criteria which measure the aptitude for commitment to a caring profession.
- Establish clear selection criteria for students who are encouraged to follow the extended curriculum programme, and to monitor the success of these students relative to the mainstream students.
- Communication and computer literacy during the first year of study should be addressed to close the gaps in the language proficiency of students as well integrating the course material to reflect nursing experiences.
- Learner guides and course material should be made available on the Internet via web based programmes to facilitate ease of access to students. This becomes especially critical for students who are trained in rural areas.
- Assessment methods should be less focussed on written exams and tests but rather be weighted more towards tutorials, Objective Structures Clinical Examinations (OSCEs) and practical assessments.
- A closer synergy between the academic work done in the class room and that being practised in the clinical areas should be established.

6.4 THE INVESTIGATIVE QUESTION REVISITED

The investigative questions formulated in support of the research question, can be answered form the research findings and literature review conducted in this dissertation. The investigative questions read as follows:

- How would the perception of students about their work load improve in order to establish if the academic environment is conducive to enhancing performance?
- Will clinical and practical exposure to students be important for their success?
- What criteria can be used to identify, analyse and interpret the throughput rate of undergraduate nursing student?
- What are the key determinants of nursing students' failure?

Given the dire shortage of nurses in South Africa, Nursing Colleges/Institutions are forced to have a huge intake of applicants each year. Statistics have shown that most of the students are poorly prepared who cannot match up to the 'rigour' of the course, in addition the accepted students are not really motivated to study nursing, but rather enter the nursing programme because of the financial incentive i.e. the bursary. New and innovative methodologies need to be developed to assess the 'readiness' of the learners for the nursing programme.

- Currently, the clinical workload on the students is physically demanding, principally due to a shortage of qualified nurses working in the 'services'. Consequently, in order to fill this void, a tremendous demand is placed on students in the clinical areas, which is often beyond the scope of duty of the student nurse.
- Consequently, the students are stressed out when they come off duty, leaving little time for the student to prepare the academic programme of theory classes and assessments.
- The issues are addressed in the short to long term by improving the remuneration packages of presently employed nurses to reverse the migration of nurses to the private sector and abroad.
- Positive aspects related to nursing including positive role models need to be marketed to parents and family members. Positive aspects include a good working environment, a comparable salary and job security.

- Subject matter related to improving interpersonal skills of the student nurses are being introduced in the curriculum so that the nurse of the future can be shown to have the correct attitude and aptitude for a caring profession.

6.5 KEY RESEARCH OBJECTIVES REVISITED

The key research objectives of this dissertation:

- To determine, which external and internal factors are the dominant determinants of student failure.
- To determine the number and type of evaluations i.e. tests, projects, assignments and practical clinical hours worked.
- To determine the weighting of each component of the evaluation process and required sub-minimum.
- To determine which element should be submitted for moderation prior to evaluation, and when these should be submitted.
- To formulate a conceptual approach to the teaching of the B.Tech. Nursing science course.

The research objectives were met through the literature review and the survey by administering a questionnaire to the students, accessing reports from previous audits of the same students and verifying the outcomes.

6.6 RECOMMENDATIONS

The recommendations made hereunder have the objectives to mitigate the research problem, and to provide answers to the research question and associated investigative questions:

6.6.1 Selection criteria

To enable students to have the 'correct' subject choices on entering university, it is recommended that already at school level, learners are coached in terms of career

choices and subjects selected which would map to the career choice. This would call for rigorous career planning initiatives to be undertaken within the last 2 years of the school curriculum.

6.6.2 Academic Remedies

Due to the extremely low command of the English language by most of the students, it is recommended that a special introductory year be introduced at Universities to prepare students who wish to study in the areas of Science, Mathematics and language, to close the gap left by inadequate school tuition. Furthermore, students who are repeating subjects/modules are given a separate block programme so that they receive more individualised attention.

6.6.3 Learning Resources Centre

- The learning resource centre should be upgraded and made more student friendly
- Time that the library is open should be reviewed with a view to extending the hours to possibly 20H00 on week days and also to be open on a Saturday morning.
- The librarian should orientate all students to the library as well as orientating them to accessing of information via the library/Internet etc.
- Digital Versatile Disks (DVDs) on study skills and methods, should be readily made available to students.

6.6.4 Clinical Practica

It is recommended that:

- A simulation laboratory managed by an experienced lecturer be created for demonstrations, for practicing of clinical skills and for practical examinations.
- Clinical educators to be employed to assist with correlation of theory and practica in the simulation laboratory and the clinical areas ($1^{st} - 4^{th}$ years).

- Year program should be re-designed so fewer students are placed in the clinical area at one time allowing all students to get sufficient learning experiences and practice.

6.6.5 Marketing of Nursing as a profession

It is recommended that:

- CPUT conduct regular marketing meetings to attract nursing students.
- That the department of communication/marketing of CPUT and PGWC assist in the marketing initiative.
- Pamphlets be distributed to schools/libraries etc.
- Radio interviews being done especially on the rural radio stations.
- DVD on "Nursing as a profession" being introduced.
- Lecturers/clinical educators attend career exhibitions at schools and halls.
- Marketing nursing in the community shopping malls by taking blood pressures, blood glucose, information to pregnant couples, presentation regarding epilepsy etc.

6.6.6 Other remedies

- Student counsellor assists students with their social, financial and academic problems.
- Assessor training previously done by all lecturers should now being expanded to new lecturers and clinical educators.
- Encouragement of lecturers to study further i.e. Masters/Doctorates and also short courses i.e. Integrated Management of Childhood Illness (IMCI) courses etc.
- Better technology in classrooms i.e. microphones/power point presentations to assist very large groups to see and hear what is being taught.

6.7 CONCLUSION

The shortage of nursing staff is critical and impairs the delivery of many services. The health sector continues to struggle with massive difficulty of recruiting and retaining staff. More nurses need to be trained and retained. The study highlighted that students entering the nursing programme are often under-prepared and lack direction as to their future career choices. An extreme effort is required from educators at tertiary institutions to attract more students to the nursing profession.

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ANNEXURE A:

Gender	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Male	17	28.33	17	28.33
Female	43	71.67	60	100.00

Chi-Square Test

for Equal Proportions

Chi-Square	11.2667
DF	1
Pr > ChiSq	0.0008

Sample Size = 60

Marital_ status	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Married	8	13.33	8	13.33
Single	51	85.00	59	98.33
Divorced	1	1.67	60	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	73.3000
DF	2
Pr > ChiSq	<.0001

Sample Size = 60

Race	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Black	21	35.00	21	35.00
White	2	3.33	23	38.33
Coloured	37	61.67	60	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	30.7000
DF	2
Pr > ChiSq	<.0001

Sample Size = 60

Education	Frequency	Percent	Cumulative Frequency	Cumulative Percent
High School Graduate	37	61.67	37	61.67
College or Tech College (not completed)	7	11.67	44	73.33
College or Tech College Graduate	4	6.67	48	80.00
University or Technikon (not completed	8	13.33	56	93.33
University or Technikon Graduate	4	6.67	60	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	66.1667
DF	4
Pr > ChiSq	<.0001

Sample Size = 60

Q06	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	6	10.00	6	10.00
No	54	90.00	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	38.4000
DF	1
Pr > ChiSq	<.0001

Sample Size = 60

Q06_1

Enrolled nursing assistant
Home care

Q06_1

Frequency	Percent	Cumulative Frequency	Cumulative Percent
2	40.00	2	40.00
3	60.00	5	100.00

Chi-Square Test for Equal Proportions

Chi-Square	0.2000
DF	1
Pr > ChiSq	0.6547

WARNING: The table cells have expected counts less than 5. Chi-Square may not be a valid test.
Effective Sample Size = 5
Frequency Missing = 55

WARNING: 92% of the data are missing.

Q07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	26	43.33	26	43.33
< 6 Months	1	1.67	27	45.00
< 1 year	9	15.00	36	60.00
1-5 years	23	38.33	59	98.33
> 5 years	1	1.67	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	47.3333
DF	4
Pr > ChiSq	<.0001

Sample Size = 60

Q08	Frequency	Percent	Cumulative Frequency	Cumulative Percent

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	0	16	26.67	16
26.67				
Not accepted for another course		1	1.67	17
28.33				
Role model in nursing profession		5	8.33	22
36.67				
Like to work with people		25	41.67	47
78.33				
Self-discipline and understanding		5	8.33	52
86.67				
Offer a full bursary		4	6.67	56
93.33				
Job satisfaction		4	6.67	60
100.00				

Chi-Square Test
for Equal Proportions

Chi-Square	52.4667
DF	6
Pr > ChiSq	<.0001
Sample Size = 60	

Q09	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	57	95.00	57	95.00
No	3	5.00	60	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	48.6000
DF	1
Pr > ChiSq	<.0001
Sample Size = 60	

Q09_1

Am caring toward people and always see towards their needs are met
Can work independently and under pressure
Good communication skills. Like being involved with people
I am a leader and enjoy nursing
I am caring
I am confident and can handle the responsibility
I am determined to be a professional nurse
I am easy to talk to and love helping
I am friendly and like caring for people
I am loyal, disciplined, motivated and enjoy interacting with people
I am loyal, hardworking, caring. Have leadership qualities and value the multidisciplinary system
I am mature and dedicated
I am self-disciplined
I am self-disciplined and professional
I am strong
I am very caring
I can work as a team and handle delegating
I deal well with people and teamwork
I have a passion for nursing
I have empathy and sympathy for others
I have responsibility
I have responsibility
I have self-discipline and am reliable
I have the patience and empathy
I interact well with people
I know how to put myself in the patients shoes
I like helping people
I like helping the sick
I like to help people

I like to work with people
I like working with people
I love the responsibility and passion
I love working with people, and have the personality
I take responsibility
I've got a good personality
Like to work with sick peoplel
Like working with other people and helping them
Passion to work with people
Patient and caring
People's person, good listener. Very organized. Leadership abilities
To be a professional nurse
To do the best care I can for patients
Understanding, self-disciplined and leadership qualities
Why not?
You have to know what you are doing

Q09_1

Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	2.13	1	2.13
1	2.13	2	4.26
1	2.13	3	6.38
1	2.13	4	8.51
2	4.26	6	12.77
1	2.13	7	14.89
1	2.13	8	17.02
1	2.13	9	19.15
1	2.13	10	21.28
1	2.13	11	23.40
1	2.13	12	25.53
1	2.13	13	27.66
1	2.13	14	29.79
1	2.13	15	31.91
1	2.13	16	34.04
1	2.13	17	36.17
1	2.13	18	38.30
1	2.13	19	40.43
2	4.26	21	44.68
1	2.13	22	46.81
1	2.13	23	48.94
1	2.13	24	51.06
1	2.13	25	53.19
1	2.13	26	55.32
1	2.13	27	57.45
1	2.13	28	59.57
1	2.13	29	61.70
1	2.13	30	63.83
1	2.13	31	65.96
1	2.13	32	68.09
1	2.13	33	70.21
1	2.13	34	72.34
1	2.13	35	74.47
1	2.13	36	76.60
1	2.13	37	78.72
1	2.13	38	80.85
1	2.13	39	82.98
1	2.13	40	85.11
1	2.13	41	87.23
1	2.13	42	89.36
1	2.13	43	91.49
1	2.13	44	93.62
1	2.13	45	95.74
1	2.13	46	97.87
1	2.13	47	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	1.8298
DF	44
Pr > ChiSq	1.0000

WARNING: The table cells have expected counts less than 5. Chi-Square may not be a valid test.

Effective Sample Size = 47
Frequency Missing = 13

WARNING: 22% of the data are missing.

Q10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1	1.67	1	1.67
Yes	34	56.67	35	58.33
No	25	41.67	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	29.1000
DF	2
Pr > ChiSq	<.0001

Sample Size = 60

Q10_1

Been successful and coping with the work
Covered everything
Gave me a opportunity to practice what I always wanted to do
Have knowledge now
Help me build on my home care knowledge
I could help people live
I expected it not to be easy and meeting different people
I feel confident and more competent
I had background information about nursing.
I like the practical part
I passed
I realized how a nurse must be
I've enjoyed both the practical and theory
I've learned a lot
It is a very broad course
It showed me what was expected of me
It was challenging
Learned a lot about the human body
Learning to help people who can't help themselves
Nursing is challenging
Opened my eyes to how important life is
We had to learn about the sick
Because I can be a nurse while I am studying

Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	4.17	1	4.17
1	4.17	2	8.33
1	4.17	3	12.50
1	4.17	4	16.67
1	4.17	5	20.83
1	4.17	6	25.00
1	4.17	7	29.17
1	4.17	8	33.33
1	4.17	9	37.50
1	4.17	10	41.67
1	4.17	11	45.83
1	4.17	12	50.00
1	4.17	13	54.17

1	4.17	14	58.33
1	4.17	15	62.50
1	4.17	16	66.67
2	8.33	18	75.00
1	4.17	19	79.17
1	4.17	20	83.33
1	4.17	21	87.50
1	4.17	22	91.67
1	4.17	23	95.83
1	4.17	24	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	0.9167
DF	22
Pr > ChiSq	1.0000

WARNING: The table cells have expected counts less than 5. Chi-Square may not be a valid test.

Effective Sample Size = 24
Frequency Missing = 36

WARNING: 60% of the data are missing.

Q11	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3	5.00	3	5.00
Yes	49	81.67	52	86.67
No	8	13.33	60	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	63.7000
DF	2
Pr > ChiSq	<.0001

Sample Size = 60

Q12	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	26	43.33	26	43.33
Too much Theory	13	21.67	39	65.00
Too much Practical	21	35.00	60	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	4.3000
DF	2
Pr > ChiSq	0.1165

Sample Size = 60

Q13	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	6	10.00	6	10.00
Yes	27	45.00	33	55.00
No	27	45.00	60	100.00

Chi-Square Test
for Equal Proportions

Chi-Square	14.7000
DF	2
Pr > ChiSq	0.0006

Sample Size = 60

Q14	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1	1.67	1	1.67
Yes	52	86.67	53	88.33
No	7	11.67	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	77.7000
DF	2
Pr > ChiSq	<.0001

Sample Size = 60

Q15	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	7	11.67	7	11.67
Yes	34	56.67	41	68.33
No	19	31.67	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	18.3000
DF	2
Pr > ChiSq	0.0001

Sample Size = 60

Q16	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	42	70.00	42	70.00
No	18	30.00	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	9.6000
DF	1
Pr > ChiSq	0.0019

Sample Size = 60

Q17	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3	5.00	3	5.00
Yes	29	48.33	32	53.33
No	28	46.67	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	21.7000
DF	2
Pr > ChiSq	<.0001

Sample Size = 60

Q18	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1	1.67	1	1.67
Yes	51	85.00	52	86.67
No	8	13.33	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	73.3000
DF	2

Pr > ChiSq	<.0001
Sample Size = 60	

Q19	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	4	6.67	4	6.67
Yes	55	91.67	59	98.33
No	1	1.67	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	92.1000
DF	2
Pr > ChiSq	<.0001
Sample Size = 60	

Q20	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	54	90.00	54	90.00
No	6	10.00	60	100.00

Chi-Square Test for Equal Proportions

Chi-Square	38.4000
DF	1
Pr > ChiSq	<.0001
Sample Size = 60	

ANNEXURE B:

Table of Gender by Q06

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Male	0	17	17
	0.00	28.33	28.33
	0.00	100.00	
	0.00	31.48	
Female	6	37	43
	10.00	61.67	71.67
	13.95	86.05	
	100.00	68.52	
Total	6	54	60
	10.00	90.00	100.00

Statistics for Table of Gender by Q06

Statistic	DF	Value	Prob
Chi-Square	1	2.6357	0.1045
Likelihood Ratio Chi-Square	1	4.2558	0.0391
Continuity Adj. Chi-Square	1	1.3133	0.2518
Mantel-Haenszel Chi-Square	1	2.5917	0.1074
Phi Coefficient		-0.2096	
Contingency Coefficient		0.2051	
Cramer's V		-0.2096	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	0
Left-sided Pr <= F	0.1218
Right-sided Pr >= F	1.0000
Table Probability (P)	0.1218
Two-sided Pr <= P	0.1703

Sample Size = 60

Table of Gender by Q09

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Male	15	2	17
	25.00	3.33	28.33
	88.24	11.76	
	26.32	66.67	
Female	42	1	43
	70.00	1.67	71.67
	97.67	2.33	
	73.68	33.33	
Total	57	3	60
	95.00	5.00	100.00

Statistics for Table of Gender by Q09

Statistic	DF	Value	Prob
Chi-Square	1	2.2853	0.1306
Likelihood Ratio Chi-Square	1	2.0077	0.1565
Continuity Adj. Chi-Square	1	0.7301	0.3929
Mantel-Haenszel Chi-Square	1	2.2472	0.1339
Phi Coefficient		-0.1952	
Contingency Coefficient		0.1915	
Cramer's V		-0.1952	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	15
Left-sided Pr <= F	0.1908
Right-sided Pr >= F	0.9801
Table Probability (P)	0.1709
Two-sided Pr <= P	0.1908

Sample Size = 60

Table of Gender by Q10

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Male	10	7	17
	16.95	11.86	28.81
	58.82	41.18	
	29.41	28.00	
Female	24	18	42
	40.68	30.51	71.19
	57.14	42.86	
	70.59	72.00	
Total	34	25	59
	57.63	42.37	100.00

Statistics for Table of Gender by Q10

Statistic	DF	Value	Prob
Chi-Square	1	0.0140	0.9058
Likelihood Ratio Chi-Square	1	0.0140	0.9057
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.0138	0.9066
Phi Coefficient		0.0154	
Contingency Coefficient		0.0154	
Cramer's V		0.0154	

Fisher's Exact Test

Cell (1,1) Frequency (F)	10
Left-sided Pr <= F	0.6564
Right-sided Pr >= F	0.5708
Table Probability (P)	0.2271
Two-sided Pr <= P	1.0000

Effective Sample Size = 59
Frequency Missing = 1

Table of Gender by Q11

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Male	13	3	16
	22.81	5.26	28.07
	81.25	18.75	
	26.53	37.50	
Female	36	5	41
	63.16	8.77	71.93
	87.80	12.20	
	73.47	62.50	
Total	49	8	57
	85.96	14.04	100.00

Statistics for Table of Gender by Q11

Statistic	DF	Value	Prob
Chi-Square	1	0.4098	0.5220
Likelihood Ratio Chi-Square	1	0.3907	0.5319
Continuity Adj. Chi-Square	1	0.0466	0.8291
Mantel-Haenszel Chi-Square	1	0.4027	0.5257
Phi Coefficient		-0.0848	
Contingency Coefficient		0.0845	
Cramer's V		-0.0848	

WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	13
Left-sided Pr <= F	0.3980
Right-sided Pr >= F	0.8560
Table Probability (P)	0.2540
Two-sided Pr <= P	0.6735

Effective Sample Size = 57
Frequency Missing = 3

Table of Gender by Q13

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Male	9	8	17
	16.67	14.81	31.48
	52.94	47.06	
	33.33	29.63	
Female	18	19	37
	33.33	35.19	68.52
	48.65	51.35	
	66.67	70.37	
Total	27	27	54
	50.00	50.00	100.00

Statistics for Table of Gender by Q13

Statistic	DF	Value	Prob
Chi-Square	1	0.0859	0.7695
Likelihood Ratio Chi-Square	1	0.0859	0.7695
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.0843	0.7716
Phi Coefficient		0.0399	
Contingency Coefficient		0.0398	
Cramer's V		0.0399	

Fisher's Exact Test

Cell (1,1) Frequency (F)	9
Left-sided Pr <= F	0.7207
Right-sided Pr >= F	0.5000
Table Probability (P)	0.2207
Two-sided Pr <= P	1.0000

Effective Sample Size = 54
Frequency Missing = 6

Table of Gender by Q14

Frequency, Percent,

Row Pct , Col Pct	Yes	No	Total
Male	14	3	17
	23.73	5.08	28.81
	82.35	17.65	
	26.92	42.86	
Female	38	4	42
	64.41	6.78	71.19
	90.48	9.52	
	73.08	57.14	
Total	52	7	59
	88.14	11.86	100.00

Statistics for Table of Gender by Q14

Statistic	DF	Value	Prob
Chi-Square	1	0.7637	0.3822
Likelihood Ratio Chi-Square	1	0.7160	0.3975
Continuity Adj. Chi-Square	1	0.1844	0.6676
Mantel-Haenszel Chi-Square	1	0.7507	0.3862
Phi Coefficient		-0.1138	
Contingency Coefficient		0.1130	
Cramer's V		-0.1138	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	14
Left-sided Pr <= F	0.3204
Right-sided Pr >= F	0.9027
Table Probability (P)	0.2231
Two-sided Pr <= P	0.3995

Effective Sample Size = 59
Frequency Missing = 1

Table of Gender by Q15

Frequency, Percent , Row Pct , Col Pct	Yes	No	Total
Male	5	10	15
	9.43	18.87	28.30
	33.33	66.67	
	14.71	52.63	
Female	29	9	38
	54.72	16.98	71.70
	76.32	23.68	
	85.29	47.37	
Total	34	19	53
	64.15	35.85	100.00

Statistics for Table of Gender by Q15

Statistic	DF	Value	Prob
Chi-Square	1	8.6397	0.0033
Likelihood Ratio Chi-Square	1	8.4710	0.0036
Continuity Adj. Chi-Square	1	6.8718	0.0088
Mantel-Haenszel Chi-Square	1	8.4767	0.0036
Phi Coefficient		-0.4037	
Contingency Coefficient		0.3744	
Cramer's V		-0.4037	

Fisher's Exact Test

Cell (1,1) Frequency (F)	5
Left-sided Pr <= F	0.0047
Right-sided Pr >= F	0.9994
Table Probability (P)	0.0041
Two-sided Pr <= P	0.0050

Effective Sample Size = 53
Frequency Missing = 7

WARNING: 12% of the data are missing.

Table of Gender by Q16

Frequency, Percent , Row Pct , Col Pct	Yes	No	Total
Male	12	5	17
	20.00	8.33	28.33
	70.59	29.41	
	28.57	27.78	
Female	30	13	43
	50.00	21.67	71.67
	69.77	30.23	
	71.43	72.22	
Total	42	18	60
	70.00	30.00	100.00

Statistics for Table of Gender by Q16

Statistic	DF	Value	Prob
Chi-Square	1	0.0039	0.9502
Likelihood Ratio Chi-Square	1	0.0039	0.9501
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.0038	0.9506

Phi Coefficient	0.0081
Contingency Coefficient	0.0081
Cramer's V	0.0081

Fisher's Exact Test

Cell (1,1) Frequency (F)	12
Left-sided Pr <= F	0.6396
Right-sided Pr >= F	0.6051
Table Probability (P)	0.2447
Two-sided Pr <= P	1.0000

Sample Size = 60

Table of Gender by Q17

Frequency, Percent , Row Pct , Col Pct	Yes	No	Total
Male	12 21.05 75.00 41.38	4 7.02 25.00 14.29	16 28.07
Female	17 29.82 41.46 58.62	24 42.11 58.54 85.71	41 71.93
Total	29 50.88	28 49.12	57 100.00

Statistics for Table of Gender by Q17

Statistic	DF	Value	Prob
Chi-Square	1	5.1792	0.0229
Likelihood Ratio Chi-Square	1	5.3694	0.0205
Continuity Adj. Chi-Square	1	3.9242	0.0476
Mantel-Haenszel Chi-Square	1	5.0883	0.0241
Phi Coefficient		0.3014	
Contingency Coefficient		0.2886	
Cramer's V		0.3014	

Fisher's Exact Test

Cell (1,1) Frequency (F)	12
Left-sided Pr <= F	0.9956
Right-sided Pr >= F	0.0227
Table Probability (P)	0.0184
Two-sided Pr <= P	0.0379

Effective Sample Size = 57

Frequency Missing = 3

Table of Gender by Q18

Frequency, Percent , Row Pct , Col Pct	Yes	No	Total
Male	15 25.42 88.24 29.41	2 3.39 11.76 25.00	17 28.81
Female	36 61.02 85.71 70.59	6 10.17 14.29 75.00	42 71.19
Total	51 86.44	8 13.56	59 100.00

Statistics for Table of Gender by Q18

Statistic	DF	Value	Prob
Chi-Square	1	0.0656	0.7978
Likelihood Ratio Chi-Square	1	0.0672	0.7954
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.0645	0.7995
Phi Coefficient		0.0333	
Contingency Coefficient		0.0333	
Cramer's V		0.0333	

WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	15
Left-sided Pr <= F	0.7399
Right-sided Pr >= F	0.5818
Table Probability (P)	0.3217
Two-sided Pr <= P	1.0000

Effective Sample Size = 59

Frequency Missing = 1

Table of Gender by Q19

Frequency, Percent , Row Pct , Col Pct	Yes	No	Total
Male	16 28.57 100.00 29.09	0 0.00 0.00 0.00	16 28.57

Female	39	1	40
	69.64	1.79	71.43
	97.50	2.50	
	70.91	100.00	
Total	55	1	56
	98.21	1.79	100.00

Statistics for Table of Gender by Q19

Statistic	DF	Value	Prob
Chi-Square	1	0.4073	0.5234
Likelihood Ratio Chi-Square	1	0.6802	0.4095
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.4000	0.5271
Phi Coefficient		0.0853	
Contingency Coefficient		0.0850	
Cramer's V		0.0853	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	16
Left-sided Pr <= F	1.0000
Right-sided Pr >= F	0.7143
Table Probability (P)	0.7143
Two-sided Pr <= P	1.0000

Effective Sample Size = 56
Frequency Missing = 4

Table of Gender by Q20

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Male	15	2	17
	25.00	3.33	28.33
	88.24	11.76	
	27.78	33.33	
Female	39	4	43
	65.00	6.67	71.67
	90.70	9.30	
	72.22	66.67	
Total	54	6	60
	90.00	10.00	100.00

Statistics for Table of Gender by Q20

Statistic	DF	Value	Prob
Chi-Square	1	0.0821	0.7745
Likelihood Ratio Chi-Square	1	0.0798	0.7776
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.0807	0.7763
Phi Coefficient		-0.0370	
Contingency Coefficient		0.0370	
Cramer's V		-0.0370	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	15
Left-sided Pr <= F	0.5514
Right-sided Pr >= F	0.7839
Table Probability (P)	0.3352
Two-sided Pr <= P	1.0000

Sample Size = 60

Table of Race by Q06

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Black	1	20	21
	1.72	34.48	36.21
	4.76	95.24	
	16.67	38.46	
Coloured	5	32	37
	8.62	55.17	63.79
	13.51	86.49	
	83.33	61.54	
Total	6	52	58
	10.34	89.66	100.00

Statistics for Table of Race by Q06

Statistic	DF	Value	Prob
Chi-Square	1	1.1063	0.2929
Likelihood Ratio Chi-Square	1	1.2338	0.2667
Continuity Adj. Chi-Square	1	0.3639	0.5463
Mantel-Haenszel Chi-Square	1	1.0872	0.2971
Phi Coefficient		-0.1381	
Contingency Coefficient		0.1368	
Cramer's V		-0.1381	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

```
ffffffffffffffffffffffffffffffffff
Cell (1,1) Frequency (F)          1
Left-sided Pr <= F           0.2836
Right-sided Pr >= F          0.9426

Table Probability (P)        0.2262
Two-sided Pr <= P            0.4020
    Effective Sample Size = 58
       Frequency Missing = 2

       Table of Race by Q09
Frequency,
Percent   ,
Row Pct   ,
Col Pct   ,Yes      ,No       ,   Total
fffffffff,ffffffff,ffffffff,
Black     ,        21 ,         0 ,      21
          ,     36.21 ,      0.00 ,   36.21
          ,    100.00 ,      0.00 ,
          ,     38.18 ,      0.00 ,
fffffffff,ffffffff,ffffffff,
Coloured  ,        34 ,         3 ,      37
          ,     58.62 ,      5.17 ,   63.79
          ,     91.89 ,      8.11 ,
          ,     61.82 ,    100.00 ,
fffffffff,ffffffff,ffffffff,
Total              55          3        58
                94.83       5.17    100.00

       Statistics for Table of Race by Q09
Statistic                     DF       Value      Prob
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff
Chi-Square                     1      1.7956    0.1802
Likelihood Ratio Chi-Square    1      2.7893    0.0949
Continuity Adj. Chi-Square     1      0.5230    0.4696
Mantel-Haenszel Chi-Square     1      1.7646    0.1840
Phi Coefficient                      0.1759
Contingency Coefficient              0.1733
Cramer's V                           0.1759
 WARNING: 50% of the cells have expected counts less
       than 5. Chi-Square may not be a valid test.

       Fisher's Exact Test
ffffffffffffffffffffffffffffffffff
Cell (1,1) Frequency (F)         21
Left-sided Pr <= F           1.0000
Right-sided Pr >= F          0.2518

Table Probability (P)        0.2518
Two-sided Pr <= P            0.5467
    Effective Sample Size = 58
       Frequency Missing = 2

       Table of Race by Q10
Frequency,
Percent   ,
Row Pct   ,
Col Pct   ,Yes      ,No       ,   Total
fffffffff,ffffffff,ffffffff,
Black     ,        13 ,         8 ,      21
          ,     22.81 ,     14.04 ,   36.84
          ,     61.90 ,     38.10 ,
          ,     39.39 ,     33.33 ,
fffffffff,ffffffff,ffffffff,
Coloured  ,        20 ,        16 ,      36
          ,     35.09 ,     28.07 ,   63.16
          ,     55.56 ,     44.44 ,
          ,     60.61 ,     66.67 ,
fffffffff,ffffffff,ffffffff,
Total              33          24        57
                57.89       42.11    100.00

       Statistics for Table of Race by Q10
Statistic                     DF       Value      Prob
ffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff
Chi-Square                     1      0.2193    0.6395
Likelihood Ratio Chi-Square    1      0.2203    0.6388
Continuity Adj. Chi-Square     1      0.0362    0.8491
Mantel-Haenszel Chi-Square     1      0.2155    0.6425
Phi Coefficient                      0.0620
Contingency Coefficient              0.0619
Cramer's V                           0.0620

       Fisher's Exact Test
ffffffffffffffffffffffffffffffffff
Cell (1,1) Frequency (F)         13
Left-sided Pr <= F           0.7715
Right-sided Pr >= F          0.4262

Table Probability (P)        0.1977
Two-sided Pr <= P            0.7824
    Effective Sample Size = 57
       Frequency Missing = 3

       Table of Race by Q11
Frequency,
Percent   ,
Row Pct   ,
Col Pct   ,Yes      ,No       ,   Total
fffffffff,ffffffff,ffffffff,
Black     ,        17 ,         3 ,      20
          ,     30.91 ,      5.45 ,   36.36
          ,     85.00 ,     15.00 ,
          ,     36.17 ,     37.50 ,
fffffffff,ffffffff,ffffffff,
Coloured  ,        30 ,         5 ,      35
          ,     54.55 ,      9.09 ,   63.64
          ,     85.71 ,     14.29 ,
```

	63.83	62.50	
Total	47	8	55
	85.45	14.55	100.00

Statistics for Table of Race by Q11

Statistic	DF	Value	Prob
Chi-Square	1	0.0052	0.9424
Likelihood Ratio Chi-Square	1	0.0052	0.9425
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.0051	0.9429
Phi Coefficient		-0.0097	
Contingency Coefficient		0.0097	
Cramer's V		-0.0097	

WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	17
Left-sided Pr <= F	0.6169
Right-sided Pr >= F	0.6870
Table Probability (P)	0.3040
Two-sided Pr <= P	1.0000

Effective Sample Size = 55
Frequency Missing = 5

Table of Race by Q13

Frequency,
Percent ,
Row Pct ,
Col Pct ,Yes ,No ,

Black	12	7	19
	23.08	13.46	36.54
	63.16	36.84	
	46.15	26.92	
Coloured	14	19	33
	26.92	36.54	63.46
	42.42	57.58	
	53.85	73.08	
Total	26	26	52
	50.00	50.00	100.00

Statistics for Table of Race by Q13

Statistic	DF	Value	Prob
Chi-Square	1	2.0734	0.1499
Likelihood Ratio Chi-Square	1	2.0919	0.1481
Continuity Adj. Chi-Square	1	1.3270	0.2493
Mantel-Haenszel Chi-Square	1	2.0335	0.1539
Phi Coefficient		0.1997	
Contingency Coefficient		0.1958	
Cramer's V		0.1997	

Fisher's Exact Test

Cell (1,1) Frequency (F)	12
Left-sided Pr <= F	0.9586
Right-sided Pr >= F	0.1246
Table Probability (P)	0.0832
Two-sided Pr <= P	0.2492

Effective Sample Size = 52
Frequency Missing = 8

WARNING: 13% of the data are missing.

Table of Race by Q14

Frequency,
Percent ,
Row Pct ,
Col Pct ,Yes ,No ,

Black	17	3	20
	29.82	5.26	35.09
	85.00	15.00	
	32.69	60.00	
Coloured	35	2	37
	61.40	3.51	64.91
	94.59	5.41	
	67.31	40.00	
Total	52	5	57
	91.23	8.77	100.00

Statistics for Table of Race by Q14

Statistic	DF	Value	Prob
Chi-Square	1	1.4934	0.2217
Likelihood Ratio Chi-Square	1	1.4148	0.2343
Continuity Adj. Chi-Square	1	0.5351	0.4645
Mantel-Haenszel Chi-Square	1	1.4672	0.2258
Phi Coefficient		-0.1619	
Contingency Coefficient		0.1598	
Cramer's V		-0.1619	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	17
Left-sided Pr <= F	0.2278
Right-sided Pr >= F	0.9535

Table Probability (P) 0.1813
Two-sided Pr <= P 0.3319
Effective Sample Size = 57
Frequency Missing = 3

Table of Race by Q15

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Black	8	10	18
	15.69	19.61	35.29
	44.44	55.56	
	24.24	55.56	
Coloured	25	8	33
	49.02	15.69	64.71
	75.76	24.24	
	75.76	44.44	
Total	33	18	51
	64.71	35.29	100.00

Statistics for Table of Race by Q15

Statistic	DF	Value	Prob
Chi-Square	1	5.0006	0.0253
Likelihood Ratio Chi-Square	1	4.9381	0.0263
Continuity Adj. Chi-Square	1	3.7235	0.0537
Mantel-Haenszel Chi-Square	1	4.9026	0.0268
Phi Coefficient		-0.3131	
Contingency Coefficient		0.2988	
Cramer's V		-0.3131	

Fisher's Exact Test

Cell (1,1) Frequency (F)	8
Left-sided Pr <= F	0.0275
Right-sided Pr >= F	0.9943
Table Probability (P)	0.0218
Two-sided Pr <= P	0.0347

Effective Sample Size = 51
Frequency Missing = 9
WARNING: 15% of the data are missing.

Table of Race by Q16

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Black	15	6	21
	25.86	10.34	36.21
	71.43	28.57	
	35.71	37.50	
Coloured	27	10	37
	46.55	17.24	63.79
	72.97	27.03	
	64.29	62.50	
Total	42	16	58
	72.41	27.59	100.00

Statistics for Table of Race by Q16

Statistic	DF	Value	Prob
Chi-Square	1	0.0160	0.8994
Likelihood Ratio Chi-Square	1	0.0159	0.8995
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.0157	0.9002
Phi Coefficient		-0.0166	
Contingency Coefficient		0.0166	
Cramer's V		-0.0166	

Fisher's Exact Test

Cell (1,1) Frequency (F)	15
Left-sided Pr <= F	0.5658
Right-sided Pr >= F	0.6705
Table Probability (P)	0.2364
Two-sided Pr <= P	1.0000

Effective Sample Size = 58
Frequency Missing = 2

Table of Race by Q17

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Black	16	4	20
	29.09	7.27	36.36
	80.00	20.00	
	55.17	15.38	
Coloured	13	22	35
	23.64	40.00	63.64
	37.14	62.86	
	44.83	84.62	
Total	29	26	55
	52.73	47.27	100.00

Statistics for Table of Race by Q17

Statistic	DF	Value	Prob
Chi-Square	1	9.3786	0.0022
Likelihood Ratio Chi-Square	1	9.8866	0.0017
Continuity Adj. Chi-Square	1	7.7380	0.0054
Mantel-Haenszel Chi-Square	1	9.2080	0.0024
Phi Coefficient		0.4129	
Contingency Coefficient		0.3817	
Cramer's V		0.4129	

Fisher's Exact Test

Cell (1,1) Frequency (F)	16
Left-sided Pr <= F	0.9997
Right-sided Pr >= F	0.0023
Table Probability (P)	0.0020
Two-sided Pr <= P	0.0044

Effective Sample Size = 55
Frequency Missing = 5

Table of Race by Q18

Frequency,
Percent ,
Row Pct ,
Col Pct ,

	Yes	No	Total
Black	18	3	21
	31.58	5.26	36.84
	85.71	14.29	
	36.00	42.86	
Coloured	32	4	36
	56.14	7.02	63.16
	88.89	11.11	
	64.00	57.14	
Total	50	7	57
	87.72	12.28	100.00

Statistics for Table of Race by Q18

Statistic	DF	Value	Prob
Chi-Square	1	0.1241	0.7246
Likelihood Ratio Chi-Square	1	0.1220	0.7269
Continuity Adj. Chi-Square	1	0.0000	1.0000
Mantel-Haenszel Chi-Square	1	0.1219	0.7270
Phi Coefficient		-0.0467	
Contingency Coefficient		0.0466	
Cramer's V		-0.0467	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	18
Left-sided Pr <= F	0.5143
Right-sided Pr >= F	0.7821
Table Probability (P)	0.2963
Two-sided Pr <= P	0.7006

Effective Sample Size = 57
Frequency Missing = 3

Table of Race by Q19

Frequency,
Percent ,
Row Pct ,
Col Pct ,

	Yes	No	Total
Black	19	1	20
	35.19	1.85	37.04
	95.00	5.00	
	35.85	100.00	
Coloured	34	0	34
	62.96	0.00	62.96
	100.00	0.00	
	64.15	0.00	
Total	53	1	54
	98.15	1.85	100.00

Statistics for Table of Race by Q19

Statistic	DF	Value	Prob
Chi-Square	1	1.7321	0.1881
Likelihood Ratio Chi-Square	1	2.0187	0.1554
Continuity Adj. Chi-Square	1	0.0734	0.7864
Mantel-Haenszel Chi-Square	1	1.7000	0.1923
Phi Coefficient		-0.1791	
Contingency Coefficient		0.1763	
Cramer's V		-0.1791	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	19
Left-sided Pr <= F	0.3704
Right-sided Pr >= F	1.0000
Table Probability (P)	0.3704
Two-sided Pr <= P	0.3704

Effective Sample Size = 54
Frequency Missing = 6

Table of Race by Q20

Frequency, Percent, Row Pct, Col Pct	Yes	No	Total
Black	19	2	21
	32.76	3.45	36.21
	90.48	9.52	
	35.19	50.00	
Coloured	35	2	37
	60.34	3.45	63.79
	94.59	5.41	
	64.81	50.00	
Total	54	4	58
	93.10	6.90	100.00

Statistics for Table of Race by Q20

Statistic	DF	Value	Prob
Chi-Square	1	0.3539	0.5519
Likelihood Ratio Chi-Square	1	0.3411	0.5592
Continuity Adj. Chi-Square	1	0.0031	0.9555
Mantel-Haenszel Chi-Square	1	0.3478	0.5554
Phi Coefficient		-0.0781	
Contingency Coefficient		0.0779	
Cramer's V		-0.0781	

WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Fisher's Exact Test

Cell (1,1) Frequency (F)	19
Left-sided Pr <= F	0.4597
Right-sided Pr >= F	0.8699
Table Probability (P)	0.3296
Two-sided Pr <= P	0.6154

Effective Sample Size = 58
Frequency Missing = 2

Table of Race by Gender

Frequency, Percent, Row Pct, Col Pct	Male	Female	Total
Black	12	9	21
	20.69	15.52	36.21
	57.14	42.86	
	70.59	21.95	
Coloured	5	32	37
	8.62	55.17	63.79
	13.51	86.49	
	29.41	78.05	
Total	17	41	58
	29.31	70.69	100.00

Statistics for Table of Race by Gender

Statistic	DF	Value	Prob
Chi-Square	1	12.3076	0.0005
Likelihood Ratio Chi-Square	1	12.1806	0.0005
Continuity Adj. Chi-Square	1	10.2919	0.0013
Mantel-Haenszel Chi-Square	1	12.0954	0.0005
Phi Coefficient		0.4607	
Contingency Coefficient		0.4184	
Cramer's V		0.4607	

Fisher's Exact Test

Cell (1,1) Frequency (F)	12
Left-sided Pr <= F	0.9999
Right-sided Pr >= F	7.214E-04
Table Probability (P)	6.486E-04
Two-sided Pr <= P	8.019E-04

Effective Sample Size = 58
Frequency Missing = 2

ANNEXURE C:
Marking scales for SATAP tests

You need to convert all the marks to percentages. Marks are not the same for all the tests. These figures are based on averages from previous tests. Thus a 'good' means that the student scores above average in that test and a 'requires some help' on or below the average. Disadvantage does not refer to race but to educational background. Thus a black student from a good model C school would, for the purposes of testing, be placed in the advantaged range. The rationale for different ranges is that disadvantaged students will have achieved a reasonable mark even though they have been in a resource poor environment.

We use the colour coding on excel spreadsheets to get a holistic picture of each candidates potential.

Test	Level	% Range disadvantaged	% Range advantaged
Academic literacy	Good (green)	60 +	70 +
	Requires some help (yellow)	41 – 59	55 - 69
	Ideal foundation (brown)	25 - 40	40 - 54
	Very poor (red)	< 25	< 40
Maths and maths reasoning	Good (green)	50 +	75 +
	Require some help (yellow)	35 - 49	65 - 74
	Ideal foundation (brown)	20 - 34	50 - 64
	Very poor (red)	< 20	< 50
Quantitative academic reasoning (numeracy)	Good (green)	55 +	75 +
	Require some help (yellow)	35 - 54	55 - 74
	Ideal foundation (brown)	20 - 34	40 - 54
	Very poor (red)	< 20	<40
Science reasoning test	Good (green)	60 +	70 +
	Require some help (yellow)	41 – 59	55 - 69
	Ideal foundation (brown)	25 - 40	40 - 54
	Very poor (red)	< 25	< 40

ANNEXURE D:

EXAMINATION AND PROMOTION POLICY: 2004
EX SENATE MEETINGS: 7 JULY 2003, 3 OCTOBER 2003, 23 APRIL 2004 & 21 MAY 2004, 5 NOVEMBER 2004 & 26 NOVEMBER 2004, 12 DECEMBER 2005, 24 MARCH 2006, 13 OCTOBER 2006, 24 NOVEMBER 2006, 12 OCTOBER 2007

WESTERN CAPE COLLEGE OF NURSING

EXAMINATION POLICY

2008

THE ASSESSMENT POLICY AND EXAMINATION RULES ARE APPLICABLE TO ALL SOUTH AFRICAN NURSING COUNCIL DIPLOMA PROGRAMMES OFFERED AT THE COLLEGE

The College Senate retains the right to revise its examination and promotion rules periodically. Any alterations to these rules shall, on the date specified in the notice of promulgation, be published on the notice boards and become binding for all candidates.

CONTENTS **Page**

PREAMBLE

- The assessment system shall include continuous and summative assessment of both the theoretical and clinical components.
- All continuous assessments count towards a minimum entry requirement.
- If specific practical core competencies are a pre-requisite students must be found competent in all of these.

- **Applicable to the R425 Four-year Diploma only:**
    - These Examination Rules [particularly those regarding deferment and progression] must be read in conjunction with the Provincial Government Western Cape: Departmental Policy for Full-time Higher Education Bursaries
    - In terms of the Provincial Government Western Cape policy a student will have a maximum of six [6] years from the year of first registration in which to complete the programme. Three [3] years will be allowed for completion of the first two years of training, and three years for completion of the third and fourth years of training. Refer also to Rules for Progression (point 10).

EXAMINATION RULES

1 CONTINUOUS ASSESSMENT

1.1 A sub-minimum achieved in a system of continuous assessment secures entry to theory and practical summative assessments.

1.2 The continuous assessment contributes 50% to the final examination mark [FEM] **except** where a student obtains at least 50% in an examination mark and the continuous assessment mark causes him/her to fail. In this case the continuous assessment mark is not taken into account.

2 SUMMATIVE ASSESSMENT

The summative assessment is taken as a **1st Opportunity examination**, or as a **2nd Opportunity examination** when the 1st Opportunity examination was deferred or failed.

2.1 Duly Performed [DP] criteria for entry to Examinations

2.1.1 Continuous assessment mark

The following entry criteria apply:

Theory: - a minimum of 35%

Practica: - a minimum of 40%

- all continuous practica assessments must be done by students to obtain entry to the practica examination

2.1.2 Theoretical hours:

2.1.2.1 A student must have a record of a **minimum of 65%** classroom attendance per subject per semester/per year.

2.1.2.2 It is the student's responsibility to apply to the College Management if he/she wishes to cite and prove special circumstances for non-compliance with theoretical hours.

2.1.2.3 Penalty for non-compliance with theoretical hours:

- a student will **not** gain entry to the theory examination.
- in those subjects namely Ethos and Professional Practice and Community Nursing Science, for which no examination is scheduled in the second and third year, the progression rule as set out in 11.1 will apply.

2.2 **1st Opportunity Examination**

The 1st Opportunity examination is considered to be the "primary" examination.

2.3 **2nd Opportunity Examination**

2.3.1 A student who fails or defers the 1st Opportunity examination has the opportunity to take the 2nd Opportunity examination.

2.3.2 This examination will have the same content, format and duration as the 1st Opportunity examination.

2.3.3 A student who fails a 1st Opportunity examination that consists of two [2] examination papers [paper 1 & paper 2] will have to take a 2nd Opportunity examination in the paper/s that has a mark below 50%.

2.4 **Deferred Examination/Deferred continuous assessment**

2.4.1 The following rules for deferment of an examination shall apply to theory and practical examinations and to continuous assessments:

2.4.1.1 The College Management may grant a deferment to a student who is unable to take an examination/continuous assessment for the following reasons and who has applied for such a deferment according to the prescribed procedure below.

2.4.1.2 A student shall apply in writing to the Head of College for a deferment.

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2.4.1.3 The Head of College must receive the application within three (3) working days after the date of the 1st Opportunity examination/continuous assessment. The deadline is 16:00 on the 3rd day.

- In the case of **ill health**, a student shall submit an authentic medical certificate and/or verifiable supporting documents;
- In the case of **reasonable and verifiable circumstances**, a student shall submit supporting documents.

2.4.1.4 Where a subject has two (2) examination papers, a student may apply for deferment of the paper that has not been written.

2.4.1.5 If a student fails a Deferred examination in a subject **there will not be another opportunity until a next examination cycle to take a further examination in that particular subject.**

2.5 Under extra-ordinary circumstances, (if the first and/or second opportunities were missed and if approved by Senate), a further opportunity may be considered, but if granted will be taken at the next examination cycle for that subject.

PLEASE NOTE: **Students who do not follow the above procedure for application for deferment will not be allowed to take the deferred examination/deferred continuous assessment.**

3 CRITERIA FOR A PASS

3.1 **Theory**

In order to pass, a student must achieve the following:

- 50% in the final examination mark [FEM] **or** 50% in the examination mark [EM] (see 1.2).

3.2 **Practica**

In order to pass, a student must achieve the following:

- a **sub-minimum** of 50% in the examination mark [EM]
- 50% in the final examination mark [FEM] **or** 50% in the examination mark [EM] (see 1.2).

4 **CALCULATION OF THE FINAL EXAMINATION MARK**

GUIDING PRINCIPLES:

- **The marks for all examinations (1st, 2nd opportunity and deferred) will be calculated according to the same criteria**

4.1 The final examination mark [FEM] for theory and practica will be calculated as follows:
50% of the examination mark [EM]

\+

50% of the continuous assessment mark

4.2 **However**, where a student obtains at least 50% in an examination mark and the continuous assessment mark causes him/her to fail, the continuous assessment mark is not taken into account.

4.3 In the event of a theory examination with two papers, the examination mark [EM] will be calculated as follows:
50% of mark achieved in paper 1 + 50% of mark achieved in paper 2.

4.4 In the event of one of two papers having been written in a 2nd Opportunity theory examination the EM is calculated as follows:
50% of mark achieved in re-written paper + 50% of mark achieved in the paper that was passed.

5 **PUBLICATION OF RESULTS**

5.1 The examination result of a student who does not achieve the **sub-minimum** in the **Practica** examination will be published as a fail.

5.2 2nd Opportunity examination results after a failed 1st Opportunity examination will be published as pass or fail with no percentage given.

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5.3 An **asterisk** next to an examination result will indicate that a student has an examination mark [EM] of at least 45%.

6 **CONDONEMENT**

A **maximum** adjustment of **2%** in both the theory and practica component of a subject will be applied **once** in the examination cycle only to the **final examination mark [FEM]** to pass or to obtain distinction in an examination. See point 4.1 for explanation of the final examination mark.

7 **DISTINCTION**

To obtain a distinction a student must have obtained 75% in the Final Examination Mark [FEM].

8 **DISCUSSION OF EXAMINATIONS**

8.1 A student who obtains **45%** or more as indicated by an asterix on the published examination results in the 1st Opportunity examination script or practica mark sheet, may request a discussion of the script /practica mark sheet.

8.2 A **written request** from a student for a discussion of 1st opportunity examinations must be received by the Head of College **within three (3) working days** from **publication** of the **examination results**. The deadline is 16:00 on the 3rd day.

8.3 **Simultaneous request for a re-count/re-mark:**

- A request for a **discussion** of the 1st Opportunity theory examination scripts will be seen to **include a request for a re-count/re-mark.** The activation of a re-count/re-mark is subject to point 8.3 and 9.3.
- A request for a **discussion** of Practica examination mark sheets will **include a request for a re-count but not a re-mark,** due to the nature of the practica examination, which does not facilitate re-marking of the exam. The activation of a re-count is subject to point 8.3.

8. 4 The discussion of examination scripts/practica examination mark sheets will take place within three [3] working days of receipt of the request.

8.5 The nature of the discussion of the examination scripts/practica mark sheets is an **academic discussion between the lecturer and the student.**

8.6 The following people may be present at the discussion:

- The student who made the request
- An academic staff member [i.e. an academic subject representative]
- The representatives of choice of both the student and academic staff member
- A member of the executive management

8.7 The academic staff member present will guide the academic discussion and the relevant scripts/practica mark sheets, question papers and memoranda will be available for scrutiny by the student.

8.8 A maximum of 30 minutes per 50 mark examination will be allowed for discussion.

8.9 A written record of the meeting will be:

- Compiled by the manager who attended the meeting;
- Kept in the students file [original report];
- Given to the student [copy];
- Kept in the examination file [copy];

8.10 All members present at the discussion will be required to sign the report.

9 **RE-COUNT OF MARKS**

9.1 A student who has failed any examination may request a re-count of the marks in an examination script/practica mark sheet. To facilitate decision making by a student an asterisk next to an examination result will indicate an examination mark [EM] of at least 45%.

9.2 A **written request** from a student for a re-count of marks must be received by the Head of College **within three (3) working days** from **publication** of the **examination results**. The deadline is 16:00 on the 3rd day.

9.3 A fee per script as determined annually by Senate is to accompany the written request or must be paid **after** the discussion in order to activate the commencement of the re-count process.

9.4 If, after the re-count, a student passes the examination there will be a 100% refund of the fee.

9.5 If, after the re-count, a student still does not pass the examination, irrespective of more marks having been found, there will be no refund.

9.6 The re-count shall be done by an independent person not on the establishment of the Western Cape College of Nursing or of the moderating university for that subject, approved by an Examination Committee.

10 **RE-MARK OF THEORY EXAMINATION SCRIPTS**

10.1 A student who has failed an examination may request a re-mark of an examination script. To facilitate decision making by a student an asterisk next to an examination result will indicate an examination mark [EM] of at least 45%.

10.2 A **written request** from a student for a re-mark of an examination script must be received by the Head of College **within three (3) working days** from **publication** of the **examination results.** The deadline is 16:00 on the 3rd day.

10.3 A fee per script as determined annually by Senate is to accompany the written request or must be paid **after** the discussion in order to activate the commencement of the re-mark process.

10.4 The re-mark shall be done by an independent marker, approved by an Examination Committee:

- The independent marker should be a specialist in his/her subject and not on the establishment of the Western Cape College of Nursing or of the moderating university for that subject;
- The name of the independent marker may be announced after the final results are published only with the consent of the independent marker.

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10.5 The Departmental Head, in conjunction with the relevant lecturer, takes note of the findings and report of the independent marker prior to the submission of the marks to the Examination Committee for ratification.

10.6 Calculation of marks:

- The independent marker's mark is binding;
- The relevant examination protocol will be applied for a recalculation of the mark to obtain a final examination mark;
- The recalculated mark is presented to an Examination Committee for ratification

10.7 If, after the re-mark, a student passes the examination there will be a 100% refund of the fee charged for each examination script that was positively affected.

10.8 If, after the re-mark, a student still does not pass the examination, irrespective of more marks having been found, there will be no refund.

10.9 On ratification of a re-marked examination at an examination committee, the final examination marks will be published as applicable for all other examinations i.e. percentages given in the case of 1st Opportunity examinations and pass/fail in the case of 2nd Opportunity examinations.

11 RULES FOR PROGRESSION

11.1 In every year all subjects have to be passed and all theory and practical requirements must be met before a student may progress to the next year of study, i.e. from first to second, second to third and third to fourth year, as set out in the curriculum.

11.2 A student who has failed and must repeat theory and/or practica, must repeat all the continuous assessments and examinations related to the theory and/or practica for that subject as planned for the semester and/or year, whichever is appropriate.

11.3 A student retains credit for those subjects passed in each semester/year of study.

11.4 A student may only repeat a subject (theory or practica) if he/she has proof of 100% compliance with clinical hours by the relevant due date, and subject to the College policy regarding time allowed for completion of programmes.

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11.5 Clinical placement requirements for students repeating a component:

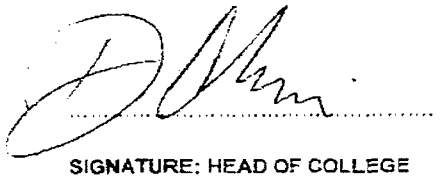
11.5.1 Students repeating theory or practica in the first year must undergo 200 hours clinical placement

11.5.2 Only students repeating the practica component of the second, third or fourth year must undergo 200 hours clinical placement appropriate to subject being repeated.

11.6 A student awaiting the result of a second opportunity examination may provisionally commence a following year. This is subject to:

11.6.1 passing the examination.

11.6.2 the year program being able to accommodate such a student.
If said student does not pass that examination, he/she will be withdrawn.



SIGNATURE: HEAD OF COLLEGE

14/11/2007

DATE

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