# DEVELOPMENT OF A SUPPORT MODEL FOR THE IMPLEMENTATION OF THE NEW NURSING QUALIFICATIONS IN SOUTH AFRICA

by

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submitted in accordance with the requirements for

the degree of

**DOCTOR OF LITERATURE AND PHILOSOPHY**

in the subject

**HEALTH STUDIES**

at the

**UNIVERSITY OF SOUTH AFRICA**

**SUPERVISOR: PROFESSOR TE MASANGO**

NOVEMBER 2021

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15 November 2021

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## ABSTRACT

The purpose of the study was to explore the preparedness of Public Nursing Colleges (PNCs) in the implementation of the new nursing qualifications framework and development of a support model to provide a blueprint for the implementation of R174 programme at PNCs in South Africa. The study was undertaken at thirteen (13) selected PNCs in Gauteng, North-West, Free State and Limpopo provinces that are involved in the implementation of the new qualification.

A multi-phase explanatory sequential mixed-methods research design was adopted. In the first phase, the researcher collected qualitative data with the selected principals and vice-principals, through a face-to-face semi-structured interview guide. In the second phase, quantitative data was collected from 209 educators through a self-administered and close-ended structured questionnaire based on a 5-point Likert scale. Sequential data analysis was performed for the qualitative interview-based data by means of Tesch's eight-step method, while the Statistical Package for Social Sciences (SPSS) Version 26 computer programme was used to analyse the quantitative data. The results revealed that the participants found the support inadequate and reported various challenges, despite constant involvement and support from different stakeholders. The challenges for implementation of new nursing qualifications included: budget constraints for procurement of resource materials; creation of posts and hiring staff for facilitation, teaching and clinical support; lack of support from different bodies responsible for programme accreditation; uncooperative and limited commitment by key role players; lack of communication between clinical and academic settings; weak leadership and governance in planning and oversight of the preparation process; ineffective implementation of staff development programmes; inadequate funding and limiting

capacity for admission of students; inconsistent Management of Information System (MIS) practices, as well as infrastructure and technology-related problems such as poor Information and Communication Technology (ICT) facilities to realise the Fourth Industrial Revolution (4IR).

The findings indicated the need for various support systems to enhance the implementation of the new programmes in Public Nursing Colleges. Both phases indicated the need for consistent involvement or strengthening collaboration of external stakeholders in a formal quality assurance processes and upgrading of Information and Communication Technology infrastructure. Phase I indicated the need for an improved Management Information System and upgraded storage and logistics for handling teaching and learning activities. Phase II indicated a need for common standards for lecturers to support the implementation of the new qualifications, and for leadership and governance weaknesses to be addressed to support the implementation process. Based on the qualitative and quantitative findings, the researcher then developed a support model for the implementation of the R174 programme at PNCs in South Africa. The support model was examined and refined for content relevance, and accepted on the basis of consensus expert nurse educators. The model was deemed important to assist the PNCs to implement the new nursing qualification as informed by the reviewed literature and participants' recommendations.

**Key concepts**

Model development; support; implementation; accreditation; new nursing qualifications; Higher Education Institution; Nursing Education Institution (NEI); Public Nursing Colleges (PNCs).

## ACKNOWLEDGEMENTS

My infinite praises and eternal gratitude to God, my Father and Creator, whose blessings, providence and guidance enabled this study's conception and ultimate completion. My deepest appreciation and gratitude to the following people for their contribution and dedication during my journey of many destinations:

- My supervisor, Professor TE Masango, for her support, guidance, belief in me, and everything she has taught me.
- The University of South Africa's Department of Health Studies and the Health and Research Ethics Committee (HSREC), for permission and ethical clearance to conduct the study.
- The National Department of Health, the Gauteng, Free State, North-West and Limpopo Departments of Health, and the Principals of the selected Public Nursing Colleges, for permission to undertake the study at their colleges.
- The Principals, Vice-Principals and educators at the colleges, for their willing participation, interest and support.
- My husband, Ledile, for his love, support, patience and assistance in keeping our family home together during the endless solitary moments of my studies.
- Our sons, Mabetha, Hlogi and Thabang, for their understanding, prayers, and irrepressible sense of humour.
- My sister, Refiloe, for her comforting laughter and hospitality during my demanding data collection trips.
- My nieces, Mmakoma and Thuto, for their constant support, smiles and treats, and keeping me on my toes about progress and completion.
- My family and friends, for their love, support, understanding and prayers.
- My colleague, Thabiso, for constantly checking on my progress and believing in me.
- Dr N Ntshana, for always checking on my physical and mental health, and regularly reminding me to make time for my hobbies, especially when I felt tired and lost focus.
- The research coordinators and colleagues, for their enthusiasm, sense of humour, and relentless assistance.
- Professor S Maputle, for her availability to assist me with the theme analysis.
- Professors S Maputle, N Mtshali and N Sibiya, for their invaluable and expert input in model validation.

- Elvis Ganyaupfu, for his assistance in the questionnaire development and subsequent statistical data analysis.
- All the participants, for sharing their time, knowledge and perceptions. It is my hope that the support model will help public nursing colleges to implement the new nursing qualifications framework. My thanks and appreciation for their contribution to this study.
- Rina Coetzer, for her patience, friendliness, and professional formatting and finalisation of the manuscript.
- Iauma Cooper, for her professional and critical editing and ‘love letters’.
- Dr Themba J Mkhonto, for his involvement in the final draft of the manuscript.

## DEDICATION

*It has been said that education is for improving the lives of others and for leaving one's community and world better than one found it; and that accomplishments will prove to be a journey, not a destination. For that journey, I posthumously dedicate this dissertation in appreciation to:*

- *My late mother, Martha Mapalane Poto for her exemplary life and inspiration to study.*

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| | |
|---|---|
| AARP | American Association of Retired Persons |
| BCur | Baccalaureas Curationis |
| BNA | British Nursing Association |
| BSN | Bachelor of Science Nursing |
| CFA | Confirmatory Factor Analysis |
| CHE | Council on Higher Education |
| CNO | Chief Nursing Officer at Department of Health |
| Deff | Design Effect |
| DHET | Department of Higher Education and Training |
| DoE | Department of Education |
| DoH | Department of Health |
| EFA | Exploratory Factor Analysis |
| ETQA | Education and Training Quality Assurance Body |
| FETSF | Further Education and Training Sub-framework |
| 4IR | Fourth Industrial Revolution |
| FSSoN | Free State School of Nursing |
| GCoN | Gauteng College of Nursing |
| HE | Higher Education |
| HEIs | Higher Education Institutions |
| HEQF | Higher Education Qualifications Framework |
| HEQSF | Higher Education Qualifications Sub-Framework |
| HET | Higher Education and Training |
| HSREC | Health and research Ethics Committee |
| ICC | Cluster Correlation Coefficient |
| ICT | Information Communication Technology |
| IOM | Institute of Medicine |
| JCAHO | Joint Commission on the Accreditation of Healthcare Organisations |
| KMO | Keiser-Meyer-Olkin |
| LIMCoN | Limpopo College of Nursing |
| MIS | Management of Information System |
| MOU | Memorandums of understanding |
| MSA | Measure of Sampling Adequacy |
| NACNEP | National Advisory Council on Nursing Education and Practice |
| NDoH | National Department of Health |
| NE | Nursing Education |
| NEIs | Nursing Education Institutions |
| NEPI | Nursing Education Partnership Initiative |
| NET | Nursing Education transformation |
| NHS | National Health Service |
| NNQ | National Nurse Qualification Examination |
| NQF | National Qualifications Framework |
| OSD | Occupational Specific Dispensation |
| PNCs | Public Nursing Colleges |
| QMS | Quality Management Systems |
| RMSEA | Root mean squared error of approximation |
| RN | Registered Nurse |
| RPL | Recognition of Prior Learning |

| | |
|---|---|
| RWJF | Robert Wood Johnson Foundation |
| SA | South Africa |
| SANC | South African Nursing Council |
| SAQA | South African Qualifications Authority |
| SDG | Sustainable Development Goals |
| SIS | Student Information System |
| SPSS | Statistical Package for Social Sciences |
| SRS | Simple Random Sample |
| STTI | Sigma Theta Tau International |
| UK | United Kingdom |
| UNISA | University of South Africa |
| USA | United States of America |
| WHA | World Health Agenda |
| WIL | Work Integrated Learning |
| WHO | World Health Organization |

# CHAPTER 1

# ORIENTATION TO THE STUDY

## 1.1 INTRODUCTION AND BACKGROUND

The main aim of nursing education (NE) throughout the world is to provide sufficient skilled health workers able to provide efficient care to those in need. The dynamics that impact on health care delivery systems inform the necessary NE transformation to meet that aim. Nursing education transformation requires nursing education institutions (NEIs) to be resourced adequately in their mission to educate responsive, ethical, accountable and knowledge-guided nurses (Coetzee 2019:1). Nursing education programmes have been criticised for not sufficiently preparing nursing students to take on their role in society (Armstrong & Rispel 2015:14; Blaauw, Ditlopo & Rispel 2014:9; Tsimane & Downing 2020:92). Currently, the predominant trend in NE transformation is geared towards greater professionalisation as a strategy to provide universal health coverage (Armstrong & Rispel 2015:9; Blaauw et al 2014:9). To attain professionalism, NE programmes need to be scaled up, adapted accordingly and socially be on par to address health, education and the qualifications obtained should be commensurate with scope of practice (Tsimane & Downing 2020:92).

A critical global advancement in the transformation of the NE profession has premised on the requirement for a Baccalaureate degree as the foremost minimum for admission. Many consider a degree as mandatory for coping with the intricacy of current nursing practice as a result of the dynamics in disease and patient profiles, the obligation for lifelong professional development, the move towards evidence-based practice, the challenge of operating within health care teams; as well as the requirements of continuing reforms of health systems, among other considerations. The transitioning to a Baccalaureate qualification as an admission requirement to nursing practice is also motivated by the aspiration to improve nurses' professional status, escape medical domination, recruit quality students, and permit for more independent nursing practice (Armstrong & Rispel 2015:14; Blaauw et al 2014:9). Moreover, factors such as demographic diversity, change to population-based care, the rising complexities of patient care, advanced technology, alternative therapies, palliative care, genomics, costs linked to health care, the difficulties of managed care, and the contribution of health policy and regulation have directly impacted NE (Awalkhan & Ghani 2018:6). Meanwhile, Posey and

Pintz (2017:126) have indicated that that the use of the Learning Management System in colleges may enhance scholarly developments for both students and educators.

The transformation of South African nursing education stems from the increased priority for professionalism and a shift of training to the higher education (HE) setting, the present status quo of nursing education, and demands of the education sector in the country (Blaauw et al 2014:9). In South Africa, political leadership directs how the nursing profession should be managed and political change resulted in the positioning of PNCs within HE, and the transformation led to quality college-based education programmes through a unified nursing education system (Blaauw et al 2014:9; Zwane & Mtshali 2019:6). The democratisation of South Africa in 1994 led to the post-apartheid nursing education transformation to meet the ever-growing demand for health care service provision (Seekoe 2014:E1). Public nursing colleges need to produce a great many nurses and midwives to meet the health service delivery needs, offer more access to hospitals for theory-practice integration and promote scholarship in nursing and nursing science (Bruce & Klopper 2017:71).

The implementation of nursing qualifications requires NEIs to align their qualifications with the Higher Education Qualifications Sub-framework (HEQSF) which included the development of their programmes through the Council on Higher Education (CHE) for accreditation, and for approval and registration by the South African Qualifications Authority (SAQA) (SANC 2016). Consequently, NEIs are expected to submit their reviewed curriculum to the SANC and CHE simultaneously (Zwane & Mtshali 2019:6). The aim was a unified nursing education system, progression in terms of access to postgraduate studies, enhanced career movement and full student status with more time for accompaniment. Matlakala (2016:3) maintains that the driving force for this transformation in South Africa is related to nursing workforce shortages due to increased numbers of ageing nurses and migration of nurses to developed countries.

South Africa's nursing education system evolved greatly as a result of Sister Henrietta Stockdale's work. She was an Anglican nurse and nun whose religious order was asked to render nursing services in the diamond fields of Kimberley in 1877. In 1879, Henrietta Stockdale was appointed to manage Carnarvon Hospital in Kimberley, established a nursing school and initiated professional training of nurses in South Africa. Initially, nurses received two years of training, but by 1889 the nursing school had progressed to become one of the forerunners to advocate for establishing the British Nursing Association's

(BNA's) programme of three years of training in nursing. The BNA was established in 1887 with the main objective of accomplishing recognition of the nursing profession in law. During review of the Legislation for medical practitioners, Henrietta Stockdale campaigned for nurses and midwives included in this law. The Act that was passed in 1891 legislated for medical practitioners, chemists and druggists, apothecaries, midwives, dentists, and nurses to be licensed and registered. Consequently, South Africa then became the only country globally to legislate for registration of midwives and nurses. Paton (2017) further intimates that such an orientation legally provided for the nurses' and midwives' curriculum, as well as accreditation of training schools and standardised examinations for entry into the register.

The repealed Nursing Act, 50 of 1978, chapter 2 provided for the 'legacy' qualifications, in terms of which the entrance level to professionalism could be acquired through either of the following undergraduate nursing programmes, namely, a Baccalaureas Curationis (BCur) obtained as a four-year university degree, or a four-year diploma at colleges, and a two-year bridging course diploma at universities, colleges or nursing schools. Both the BCur, and four-year diploma were registered consistent with regulations for approving the nurses' minimum education and training requirements (general, psychiatric, community and midwifery) that effectively lead to registration and R425 of 14 April 1985; whilst the bridging course diploma was registered under the regulations concerning the minimum bridging course requirements for enrolled nurses' registration as either general or psychiatric nurses (SANC R683 of 14 April 1989).

The comprehensive four-year legacy curriculum was introduced subject to the approval of nurses' minimum education and training requirements (general, psychiatric and community, and midwifery) that effectively leading to registration (SANC R425 of 22 February 1985). The training of registered nurses could be completed by means of a diploma at a nursing college, or a degree at a university as part of higher education (SANC 1985). In 1986, nursing colleges became part of the university-based departments of nursing, which officially placed them within the system of higher education (SANC 2016). The pre-1994 reform in South Africa was intended to professionalise the system of nursing education, but flaws in the application of recognition of prior learning (RPL) prevented the professionalisation trajectory as intended (Mekwa 2000:271).

In 1989, Regulation 683 recognised prior learning by introducing an enrolled nurses' bridging course to advance registration as either a general or psychiatric nurse. Several factors, such as a lack of Public Nursing Colleges provision of part-time studies for full-

time employees; absence of clear guidelines on the application of accreditation standards; changes in disease profiles and health system needs, and the shortage of nursing workforce due to increased numbers of ageing nurses and migration of nurses to developed countries also necessitate nursing education transformation (Armstrong & Rispel 2015:8; Bezuidenhout, Human & Lekhuleni 2013:1; Blaauw et al 2014:9; Matlakala 2016:3).

The Constitution of the Republic of South Africa (Act No. 108 of 1996) provided for the Minister of Education to take charge of all post-matric education under a single coordinated higher education system (South Africa 1996). Accordingly, the Minister of Higher Education has the responsibility of accrediting any institution of nursing education as a higher education institutions, as well as registering private higher education institutions of nursing with the Department of Education (DoE) (South Africa 1996; South Africa 2008). Meanwhile, the Higher Education Act (No 101 of 1997 as amended), governs all HEIs and their offered programmes (South Africa 1997). Therefore, all NEIs were then expected to align their programmes and qualifications with the Higher Education Sub-Framework (HEQSF). Additionally, programmes had to be submitted to the Council on Higher Education (CHE) for required accreditation, approval and registration by the South African Qualifications Authority (SAQA). Moreover, these learning programmes ought to fulfil the stipulated requirements by the Higher Education Qualifications Framework (HEQF) (South Africa 2014). Access to public health education could be realised through career progression in terms of recognised prior learning, movement between qualifications and upward progression within the National Qualifications Framework (NQF).

The National Department of Health (NDoH) in South Africa regulates nursing education in collaboration with the South African Nursing Council (SANC). The DoH ensures that education and training in nursing is aligned with health care delivery priorities and that the qualifications obtained are proportionate with scope of practice, and promulgates the required regulations for nursing education and training (Makhanya 2018:5). Public Nursing Colleges (PNCs) belong to the DoH, who administers funding, which covers student posts and provision of resources including equipment, buildings, and human resources.

In 2008, the Department of Health (DoH) published South African nursing strategies to provide guidance on how to provide adequate training to meet the needs of the country (Bruce, Klopper & Mellish 2011:69). In 2013, the DoH published qualification regulations

regarding the transformation of legacy programmes in preparation for new programmes to be submitted by 2015. The SANC and CHE were involved in process map development, programme uploading, training to be presented, and a five-year cost enrolment plan to be tabled and the declaration of colleges.

Further developments took place, which brought about the process of phasing away of legacy qualifications and in-phasing of nursing qualifications that are HEQSF-aligned. In that regard, public nursing colleges were requested to identify programmes relevant to address national priorities, and indicated the need to regulate the approval of the required minimum stipulations in learner's education and training in pursuit of registration linked to the general nurse category (R171 of 8 March 2013) (SANC 2013a). A previously non-existent four-year Bachelor's programme was identified and subjected to regulations regarding approval of the learner's minimum education and training requirements in respect of registering in the professional midwifery nursing categories (R174) (SANC 2013b). Consequently, the CHE and the SANC accredited several universities to offer the programme. Regulations relating to auxiliary nurse, general nurse, midwife, professional nurse and midwife, and competencies and regulations for postgraduate programmes were also developed (SANC 2020).

The changes in categories directed all NEIs to align the nursing qualifications as required in order to provide NE and training. Colleges were obligated to comply with the accreditation standards as stipulated by the SANC and CHE. All NEIs were informed about their responsibilities of aligning the qualifications with HEQSF which included the development of their programmes through the CHE for accreditation, and for approval and registration by the South Africa Qualifications Authority (SAQA) (SANC 2016).

Revision and formulation of the policies informing nursing education transformation are obligated by some nurse competencies and legislative changes concerning a revamped education and training scope of practice programmes. This has led to the development of regulations and a programme for regulating the approval of the required minimum education and training requirements for a learner to qualify for registration as either professional nurse or midwife (SANC 2013b). Public Nursing Colleges produce more graduates than universities, and the proposed R174 programme is not a priority for many PNCs. It was in that regard that public nursing colleges rather opted to commence offering the R171 education and training programme for learners desirous of registering in the general nurse category as the preferred level for professionalising nursing (SANC 2013a).

The South African Nursing Council is accredited by the South African Qualification Authority to function as an education and training quality assurance (ETQA) body for nursing qualifications (SAQA Act, 58 of 1995, section 5). Accordingly, the SANC regulates, directs and endorses new nursing programmes/ qualifications and curricula (SANC 2013b). Additionally, the SANC sets and maintains nursing education standards and reviews nursing education and training in the context of the country's needs. Moreover, in its mission of transforming nursing education, the SANC is obliged to consider the legislative provisions and requirements pertinent to accreditation, certification and sustaining education and training national standards; as well as providing nursing guidance and counselling with regard to the execution of policies for nursing education and training.

Notwithstanding these transformation-oriented approaches and developments, there appears to be little CHE and SANC support regarding the implementation of the R174 programme at Public Nursing Colleges. South Africa faces challenges in the transformation of nursing education regardless of the provided blueprint (Blaauw et al 2014:9). The transition process is challenged by fundamental and long-standing accreditation concerning the leadership and governance of the country's nursing sector institutions. Success of nursing education transformation is grounded in defining national professional education standards, clear guidelines on application of accreditation standards and increasing capacity of nurse educators whilst maintaining quality (Gorski, Gerardi, Giddens, Meyer & Peters-Lewis 2015:53).

In response to the global health workforce crisis, the World Health Organization (WHO) (2006:39) published proposals to tackle it by preparing the health workforce by means of adequate training; maximising potential of existing health workers; restructuring services; regulating exits from the workforce, and developing national health workforce strategies. The global standards for nursing and midwifery are intended to shape and guide competency-based nursing education and practice (WHO 2009:39). In 2010, the World Health Organization published a framework to propose strategies and ideas to assist policymakers in applying elements of interprofessional education and collaborative practices to improve healthcare provision in their countries (WHO 2010:4).

The National Advisory Council on Nursing Education and Practice (NACNEP) (2010:26) recommends that nurse educators ought to frequently assess and revise education curriculum approaches and programmes applied in educating new and practising nurses.

The Council further recommends that both educational institutions and hospitals ought to adhere to the standards of accreditation determined by the Joint Commission on the Accreditation of Healthcare Organisations (JCAHO), increase the total of nurses and clinical instructors in nursing schools and hospitals, and support funding models and development while testing innovative models to facilitate entry and progression of nursing degrees (Bruce & Klopper 2017:72).

The United States of America (USA), Australia, China and other countries also faced the need for transformation in nursing education in order to provide quality healthcare (Gorski et al 2015:53; Ralph, Birks, Chapman & Francis 2014:9; Wang, Whitehead & Bayes 2016:132). The USA subsequently recommended that the majority of practising registered nurses be prepared with a Bachelor of Science degree; Australia implemented an evidence-based framework to facilitate undergraduate pre-registration curriculum design and a new national accreditation system for a nursing-oriented model, and China restructured nursing education to generate and sustain effective and safe nursing workforce.

Establishing the preparedness of selected PNCs for implementation of the new qualification towards professionalisation of nursing was important. The CHE support for the process of accreditation, which comprised training of evaluators and cluster evaluations, was essential but there was little progress with the implementation of R174 programmes. The improvement of regulations and policy, close monitoring and evaluation on the implementation of new nursing qualifications and other measures were recommended (Bezuidenhout et al 2013:12; Blaauw et al 2014:24).

## 1.2 RESEARCH PROBLEM

In South Africa, tertiary education falls within the political fiat of the Minister of Education under a unitary and coordinated system of higher education, aimed at increasing its accessibility. The positioning of nursing education (NE) within higher education (HE) requires Public Nursing Colleges (PNCs) to be equipped with resources as stipulated by the SANC and CHE to enable implementation of the R174 programme as a new level of qualification leading to professionalism. The required resources include established policy frameworks, staffing norms, clear development programmes to capacitate personnel, establishment and revision of clinical training teams, adequate infrastructure, teaching facilities, student support and technological systems (DoH 2013:16). This will

ensure greater output of professional nurses able to deliver healthcare service in a responsive, ethical, intelligent and knowledgeable manner. However, most PNCs are not yet accredited to offer the R174 programme. The lack in direction therefore necessitates a support model to provide a blueprint for the implementation of a R174 programme at PNCs in South Africa.

Current complexities regarding the new qualifications in nursing have engendered both challenges and opportunities within the profession (Matlakala 2016:10). Direko and Davhana-Maselesele (2017:2223) recommend improved regulation and policy to facilitate the implementation of the programme. Bezuidenhout et al (2013:12) maintain that close monitoring and evaluation of the new nursing qualifications framework will enhance the implementation of the qualifications by PNCs. Blaauw et al (2014:10) stress that the implementation of the R174 programme is a priority in professionalising nursing.

Furthermore, the slow implementation by PNCs causes uncertainty and poses a significant risk to enhanced health workforce performance, strengthening health system functioning, and uplifting nurses' professional status. This motivated the researcher to explore the preparedness of Public Nursing Colleges for the implementation of the new qualification and to develop a support model that could provide a blueprint for the implementation of the R174 programme at South African PNCs.

## 1.3 PURPOSE OF THE STUDY

The study's purpose was to explore the public nursing colleges' preparedness in implementing the new nursing qualification and develop a support model to provide a blueprint for the implementation of a R174 programme at PNCs in South Africa.

### 1.3.1 Research objectives

The below-listed research objectives were articulated in order to achieve the afore-cited purpose, namely to:

- Identify principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications.
- Explore the strategies and activities utilised by the principals and vice-principals for the implementation of the new qualifications.

- Describe and explore nurse educators' perspectives on the preparedness of PNCs for implementation of the new qualifications.
- Determine the strategies and activities utilised by the nurse educators for the implementation of the new qualifications.
- Develop a support model for the implementation of R174 programme at PNCs.

The study was undertaken in three phases in pursuance of resolving the research problem and achieving the objectives above.

#### *1.3.1.1 Phase 1: Qualitative*

- The researcher collected qualitative data to identify principals' and vice-principals' perspectives on the preparedness of PNCs for implementing the new qualifications.
- Explore the strategies and activities utilised by the principals and vice-principals for implementing the new qualifications.

#### *1.3.1.2 Phase 2: Quantitative*

- The researcher collected quantitative data to describe and explore nurse educators' perspectives on the preparedness of PNCs to implement the new qualifications.
- Determine the strategies and activities utilised by the nurse educators for implementing the new qualifications.

#### *1.3.1.3 Phase 3: Development of a support model*

The qualitative and quantitative findings provided a basis for the developed support model for the implementation of a R174 programme at PNCs in South Africa. The support model was examined and refined for content relevance, and accepted on the basis of consensus expert nurse educators.

### 1.3.2 Research questions

In tandem with its stated objectives, the following questions were then articulated:

- What are principals' and vice-principals' views and perceptions with regards to PNCs' level of preparedness for the implementation of the new qualification?

- What strategies and activities did the principals and vice-principals utilise for the implementation of the new qualification?
- What are nurse educators' views on PNCs' preparedness the implementation of the new qualification?
- What strategies and activities did the nurse educators utilise for the implementation of the new qualification?
- What support model can be developed to provide support to PNCs for the implementation of the new qualification in South Africa?

## 1.4 SIGNIFICANCE OF THE STUDY

This study's significance is reflective of the extent of its contribution to the corpus of knowledge in the nursing profession (Brink, Van der Walt & Van Rensburg 2018:52). The study was the first assessment of public nursing colleges' preparedness for offering new R174 qualification in South Africa. The qualitative and quantitative findings produced a base for developing a support model for PNCs' implementation of the new qualifications to assist in addressing issues arising during the transition process. The model will provide a much-needed guide for PNCs intending to implement new nursing qualifications at higher education level namely R174 programme. This study will augment to the body of knowledge on reforming nursing education in South Africa, especially because PNCs are preparing to migrate to higher education to offer National Qualifications Framework (NQF) compliant qualifications. The outcome of this research in the current context and the recommendations would be relevant to public colleges nationally and other nursing education institutions in countries where nursing education is undergoing reforms.

## 1.5 DEFINITIONS OF KEY TERMS

The below-cited key terms are defined on account of their thematic relevance, and for obviating any contextual, disciplinary, and practice-related ambiguities concerning their meaning and application. These (alphabetically sequenced) key terms are: accreditation; higher education institution; implementation; model development; support; new nursing qualifications; nursing education institution; public nursing colleges; support.

### 1.5.1 Accreditation

The South African Nursing Council's R173 (2013) refers to "accreditation" as the certification and recognition of an institution's capacity to offer prescribed nursing

education programmes over a pre-determined period, and after complying with the SANC's system of accreditation stipulations, criteria, standards and considerations for education and training in nursing. In this study, "accreditation" refers directly to certification of public nursing colleges by the SANC and CHE. Furthermore, Section 42(3) of the Nursing Act (No. 33 of 2005) (South Africa 2005:92) makes provision for the SANC and CHE (2004:2).

### 1.5.2 Higher Education Institution (HEI)

Chapter 1(xiv) of the Higher Education Act (No. 101 of 1997) defines a higher education institution as an institution of any type, but provides a higher education curriculum through either a full-time, part-time or distance learning basis, and is:

(a) established and declared as a public higher education institution
(c) registered conditionally or wholly as a private institution of higher education as provided in the Act (South Africa 1997:8)

In the context of this research study, "higher education institutions" refers directly to the selected PNCs.

### 1.5.3 Implementation

The *Oxford Advanced Learner's Dictionary* (2012:753) alludes that "implementation" premises on executing something (e.g., plan or strategy) in order to render an initial intention as beneficial to relevant users or stakeholders.

In this study, "implementation" refers to introducing or putting into practice the new nursing qualifications with assistance of a support model.

### 1.5.4 Model development

A model is a symbolic depiction of empirically derived experiences represented as concepts or variables and interrelationships amongst them (Chinn & Kramer 2018:18; Polit & Beck 2017:735). Additionally, the *Oxford Advanced Learner's Dictionary* (2012:400) cites "development" as the creation or production of something novel or advancing it existing variant. Therefore, model development is process of generating concepts that are related to each other which depicts empirical experiences.

Consonant with this study's aim, "model development" referred to a process of construction of a symbolic representation which depicts empirical experiences to provide assistance for the public nursing colleges in the implementation of the new qualifications namely R174 programme.

### 1.5.5 New nursing qualifications

Circular 7 of the SANC (2016) critically addresses the new nursing qualifications in the context of eliminating legacy nursing qualifications and implementing them in tandem with the Higher Education Qualifications Sub-framework's intended alignment. In this regard, Section 3(1) of the Nursing Act (No. 33 of 2005) allocates professional, general and auxiliary nurse categories, as well as midwifery and auxiliary midwifery categories. They may all work as practitioners provided that they are registered as such by the SANC following their completion of the prescribed wherewithal in nursing instruction. The study construes the new nursing qualifications referred to one of the categories of the nurses as stipulated in the Nursing Act (No. 33 of 2005).

### 1.5.6 Nursing Education Institution (NEI)

The Nursing Act (No. 33 of 2005) defines a nursing education institution as "any nursing education institution accredited by the South African Nursing Council for education and training of students (learners)" (South Africa 2005:6). On the other hand, the SANC R173 of 2013 stipulates that an accredited NEI ought to have a person registered with the Nursing Council as a professional nurse to head such an institution, who should also have acquired a nursing education and management qualification that is equal to, or higher than the highest qualification obtainable from the institution (SANC 2013c). Furthermore, a private NEI must be registered with the Department of Higher Education and Training (DHET) as stipulated in the applicable legislation. Meanwhile, the Minister of Education must declare or establish a public nursing education institution as such, and it must offer programmes that are accredited by the Council on Higher Education on the caveat that these programmes adhere to the accreditation requirements.

The criteria and any standards relating to nursing education and training standards determined periodically by the SANC should reach formal clinical learning agreements with the concerned authorities regarding clinical facilities for clinical learning, supervision and accompaniment needs of learners; as well as access to adequate clinical facilities

that are conducive for accomplishment of the preferred outcomes. Mechanisms for control over clinical education and training quality should address adequate infrastructure and resources for the achievement of the outcomes of the programmes.

Nursing education institutions in this study were the selected thirteen public nursing colleges for the empirical data used. The thirteen sites were selected because the sites provided a good spread of rural and urban colleges and also considered past associations, whether deliberately or not, with a variety of universities.

### 1.5.7 Public Nursing Colleges (PNCs)

The Government Notice (No. 1349 of 16 October 2019) acknowledges public nursing colleges in respect of the transitional propositions concerning the offering of approved qualifications in nursing that are registered on the national HEQF's sub-framework by public NEIs (known commonly as nursing colleges) as follows:

"This notice on transitional arrangements is issued in terms of paragraph 4.3 of the Protocol Agreement entered into between the Department of Higher Education and Training and the National Department of Health. The Department of Higher Education and Training and the National Department of Health have entered into an agreement in terms of section 35(1) of the Intergovernmental Relations Act, 13 of 2005, to collaborate in addressing educational shared responsibilities and working towards declaring public nursing colleges as one of the institutional types contemplated in the Higher Education Act, 101 of 1997. In order to achieve the above objectives, as a transitional arrangement, the 10 recognised public nursing colleges, listed in the Schedule below, are hereby designated to offer Certificates, Diplomas and Bachelor Degrees in Nursing, which are accredited and registered on the Higher Education Qualifications Sub-Framework, from January 2020 until such time as they are declared as one of the institutional types contemplated in the Higher Education Act, 1997".

Consonant with the agreement above, the study selected four of the 10 recognised public nursing colleges. These public nursing colleges are: the Limpopo College of Nursing, the Gauteng College of Nursing, the North-West College of Nursing, and the Free State School of Nursing at their campuses and sub-campuses.

### 1.5.8 Support

The *Collins English Dictionary* (1991:1549) alludes that “support” is linked to provision of pecuniary or non-pecuniary assistance and/ or guidance. In this study, “support” referred to the model developed to provide guidance or assistance thus support on the implementation of the new qualifications.

## 1.6 CONCEPTUAL FOUNDATION OF THE STUDY

The conceptual basis of the study is described next, and positions the research paradigm with the theoretical framework.

### 1.6.1 Research paradigm

Creswell (2014:18) refers to a paradigm as an approach based on a belief system according to which actions, set of practices, and patterns of thoughts are introduced and guided. Additionally, a paradigm depicts a view at natural phenomena that embraces a variety of philosophical assumptions which guide inquiry approaches (Polit & Beck 2017:9). Moreover, paradigms are analogous with lenses that help to sharpen the focus of the researcher concerning a researched phenomenon (Polit & Beck 2012:15).

Therefore, a research paradigm allocates a reference frame to the researcher regarding the research questions and their answers. Assumptions are themselves “principles that are accepted as true based on logic or reason, without proof” (Polit & Beck 2017:720). In this study, the researcher adopted pragmatism as the research paradigm with the inclusion of the post-positivist, interpretivist, and transformative worldviews. This allowed the researcher to use a sequential exploratory mixed-methods design to collect qualitative and quantitative data and finally develop a support programme for implementation of the R174 programme. The pragmatic, post-positivist, interpretive and transformative paradigms are grounded on ontological, epistemological, methodological and axiological assumptions.

#### *1.6.1.1 Ontological assumptions*

*Ontology* is the study of the nature of reality. Botma, Greeff, Mulaudzi and Wright (2010:40) further describe ontology as reflecting the way individuals perceive life. Furthermore, Botma et al (2010:40) acknowledge the prevalence of multiple realities in

form and content that is dependent on individuals' interpretation. Accordingly, ontological assumptions are concerned with the explored (i.e., not imaginary) version of reality. In this study, the researcher explored the preparedness of PNCs to encounter the reality of implementation the new qualifications framework in nursing.

#### *1.6.1.2 Epistemological assumptions*

*Epistemology* is premised on the character of knowledge with regard to its scope, possibility and general basis. Epistemology also entails the individual's understanding of known and observed reality from interacting with the environment (Botma et al 2010:40). In research, the interaction between researchers and participants generates knowledge and insight into the phenomenon under study (Polit & Beck 2012:13). For Streubert and Carpenter (2011:153), epistemology is focused on individuals' understanding of truth.

The study explored how the participant principals, vice-principals and nurse educators regarded the selected PNCs' level of preparedness for implementation of the new qualifications.

#### *1.6.1.3 Methodological assumptions*

*Methodology* is an approach or action plan for linking methods and outcomes that govern researchers' choice and application of methods and the process of the research (Creswell 2014:17). Methodological assumptions refer to how the researcher will gain knowledge from the participants' input (Polit & Beck 2017:10). The researcher carefully chose a research design to explore the participants' views, perspectives and perceptions and portray the phenomenon under study (Polit & Beck 2012:725). For the qualitative phase, the researcher collected data to identify principals' and vice-principals' perspectives concerning the preparedness of their PNCs to implement the new qualifications; as well as the concomitant strategies and activities utilised by the principals and vice-principals in implementing the new qualifications.

The researcher collected quantitative data to describe and explore nurse educators' perspectives on the preparedness of PNCs to implement the new qualifications and concomitant strategies and activities utilised by the nurse educators in implementing the new qualifications. Based on the qualitative and quantitative findings, the researcher subsequently developed a support model for implementing a R174 programme at PNCs

in South Africa. The support model was examined and refined for content relevance, and accepted on the basis of consensus expert nurse educators.

#### *1.6.1.4 Axiological assumptions*

Axiological assumptions are ascribed to the role of ethical values in an inquiry (Polit & Beck 2017:10). It embraces the researcher and the participant's views. The assumptions, prejudices, and values of the researcher were bracketed through the self-monitoring or application of reflexivity, and the interview questions were asked in such a way that they did not influence the participant's response, and the guide provided direction. The study is conducted in a social world and the site is not a value free environment. During the quantitative phase the researcher fully and objectively described the adopted methodological processes in the study and other aspects such as determination of the sample size, triangulation of data analysis, and testing of the instrument's reliability and validity.

### 1.6.2 Theoretical framework

A framework is "an abstract, logical structure of meaning" (Grove, Gray & Burns 2015:198). Therefore, study's theoretical framework links the critical concepts in the development of processes and strategies that guided and directed the study's preferred data collection and analysis procedures. This study was grounded in Rogers' (1989) perspective transformation drawn from Mezirow's transformative or transformational learning theory (Alligood 2014:429). Perspective transformation is a result of individuals' self-examination and critical review of their values, assumptions, beliefs and realisation that their perspective may not necessarily be dominant or hegemonic. Such transformation involves steadily embracing a new perspective which leads to fundamental changes in individual's conceptualisation of themselves (personal) and relationships with others (social) (Rogers 1989 cited in Alligold 2014:429). Through perspective transformation, individuals are able to plan a course of action and a learning strategy for new things and perspectives, which enables their choices based on new understanding (Cabaniss 2014:223).

Furthermore, perspective transformation entails modification from one perspective to another, from one way "of viewing and being" to another (Rogers 1989 cited in Alligold 2014:429). According to Alligold (2014:429), perspective transformation is premised on

nine phases, namely: dwelling with uncertainty, stability, reconceptualisation, dissonance, saturation, confusion, synthesis, resolution, and return to stability.

## 1.7 RESEARCH DESIGN

A research design is “the overall plan for addressing a research question, including the specifications for enhancing the integrity of the study” (Polit & Beck 2012:741). Meanwhile, Grove, Burns and Gray (2013:214) describe a research design as the researcher’s blueprint for conducting a study and controlling factors that could interfere with the validity of the findings. The researcher selected an exploratory sequential mixed methods research design for the study. This design informed the researcher’s merging of the collected qualitative and quantitative data and also guided development of a support model for the implementation of a R174 programme at PNCs in South Africa.

An exploratory sequential mixed methods research design is a combined qualitative-quantitative three-phased strategy in terms of which the qualitative data was first collected by the researcher with exploration and subsequent analysis of the views of the participants, and then designed a quantitative data collection instrument emanating from the qualitative results (Creswell 2014:16). Qualitative research premises on investigating phenomena in mostly an in-depth and holistic manner through the collection of richly narrated materials with flexible research design approaches (Polit & Beck 2012:739). For Grove et al (2015:32), quantitative studies are inspired by their formality, objectivity, rigour, and systematic processes in which statistical or numerical data is obtained as evidence to understand and interpret the world. The results from both phases were integrated and assisted in the development of a supportive model for the implementation of the new qualifications (Polit & Beck 2017:585).

## 1.8 RESEARCH METHODOLOGY

On the one hand, research methods are the specific research instrumentation utilised for the gathering, processing and analysis of the information and data relevant for resolving the research problem and study questions (Polit & Beck 2012:741). On the other, the research methodology integrates the plan, approach, and strategies for conducting and managing the various steps and procedures of a study in respect of its setting, population, sampling, data collection and analysis, and trustworthiness (Burns & Grove 2005:129).

### 1.8.1 Setting

A research setting refers to a particular geographic location or physical place/s at which the study is undertaken (Brink et al 2018:47). The setting in this study consisted of multiple sites. The researcher collected data from thirteen (13) selected sites, which are the PNCs in Free State, Gauteng, North-West, and Limpopo; all of which are provinces involved in the implementation of the new qualification. The study sites provided a good spread of rural and urban colleges and also considered past associations, whether deliberately or not, with a variety of universities. The collection of data at different sites enhanced the study's quality on a greater scale, and minimised errors/ distortion significantly.

### 1.8.2 Population

Babbie (2013:134) and Polit and Beck (2017:249) describe the population of a study as the entirety of cases that interest the researcher because of its particular elements or characteristics that are amenable to the selection of a representative sub-group in a particular locality. In the case of this study, the researcher selected one representative population (sample) for the qualitative data gathering, and another representative population group for the gathering of quantitative data. The population targeted for the qualitative phase consisted of the principals and their vice-principals at the selected PNCs where the implementation of the new qualifications was taking place. The population for the quantitative phase consisted of all the educators from the selected PNCs where the implementation of the new qualifications was taking place.

### 1.8.3 Sampling and sampling criteria

#### *1.8.3.1 Sampling*

Sampling is the systematic process of choosing a segment of a population to represent the larger population group or universe (Burns & Grove 2009:35; De Vos, Strydom, Fouché & Delport 2011:223; Polit & Beck 2017:250). Additionally, LoBiondo-Wood and Haber (2006:261) view sampling as the systematic selection of a smaller portion from a designated group in order to elicit specific attributes that are homogenous with those of the larger population. In this study, probability and non-probability strategies of sampling were utilised respectively for the two population groups. The chosen participants should

largely be able to contribute useful information suitable for advancing the study objectives (Saunders, Lewis & Thornhill 2012:183). The sampling of the two phases unfolded as follows:

#### *1.8.3.1.1 Sampling for the qualitative phase*

For the qualitative phase, the researcher applied the non-probability purposive sampling method. Grove et al (2015:263) and Moule and Goodman (2014:298) inform that non-probability sampling exists when the researcher is unable to state the chances of every prospective participant having the certainty or guaranteed opportunity for being selected for involvement in the study's empirical (interview-based) data collection.

#### *1.8.3.1.2 Sampling for the quantitative phase*

Polit and Beck (2017:255) and Gray, Grove and Sutherland (2017:688) aver that probability sampling premises on the researcher's certainty or probability that guarantees each participant's equal opportunity of involvement or inclusion in a study. Such a sampling technique is advantageous for estimating the sampling error and keeping it as low as possible. The application of the probability sampling approach also maximises the findings' generalisation potential (Brink et al 2018:119). For larger populations, cluster sampling is utilised by categorising these groups into "clusters" rather than individuals.

In the quantitative phase, the probability cluster sampling method was used, with clusters selected nominally first with successive sub-sampling of smaller units in a multistage approach (Polit & Beck 2017:722). For the cluster sampling, the researcher was assisted by the statistician to develop a sampling frame that included a list of all the nine South African provinces with which elements of the identified population could be linked. From these provinces, four were randomly selected in order to achieve a probability degree. The four provinces selected were: Gauteng, North-West, Free State and Limpopo; all of which formed the primary cluster. Simple Random Sampling (SRS) was applied within each cluster to ensure that elements in each cluster were accorded equal chances for being selected. From the primary clusters the PNC were identified as secondary clusters. The PNC that were identified as suitable for the implementation of the new qualification and fit the criteria and granted permission were identified. Thirteen (13) PNCs formed the secondary clusters. From the secondary cluster, elements of interest were identified. The units comprised of educators who were the elements of interest. Each and every educator

available and willing to participate were randomly selected thud providing them an equal inclusion opportunity in the study.

#### *1.8.3.2 Sampling criteria*

A sample consists of composite elements that form the population, or units of individuals from the population whose homogenous attributes qualify them for inclusion in a study (De Vos et al 2011:223). Accordingly, sample criteria is a process used in selecting elements to be analysed in the study. In this study the inclusion and exclusion criteria were applied to choose the eligible population. The inclusion sampling criteria is described as the required profile of attributes that a subject or element ought to possess for consideration as part of the representative population (Burns & Grove 2009:345). Meanwhile, Portney and Watkins (2014:157) describe an exclusion criterion as those factors that might disqualify an individual from being a respondent or participant in a study. The sample criteria and the sample size of each phase unfolded as follows:

##### *1.8.3.2.1 Sample for the qualitative phase*

For inclusion in the study's qualitative phase, participants had to be principals or vice-principals employed by the selected PNCs during the development of the curriculum for the new nursing qualification, and willing to participate.

###### *1.8.3.2.1.1 Sample size in the qualitative phase*

The sample size in the qualitative phase was informed by data saturation and the study's information needs. Data saturation is described by as the stage where the researcher collected qualitative data to a point where closure is reached because no new information could be obtained due to the redundancy of information (Polit & Beck 2017:744).

##### *1.8.3.2.2 Sample for the quantitative phase*

In this study, to be included in the quantitative phase, the participants had to be educators employed by the selected PNCs during the development of the curriculum for the new nursing qualification, and willing to participate.

*1.8.3.2.3 Sample size in the quantitative phase*

The sample size for the quantitative phase was determined through probability cluster sampling. Accordingly, the sample elements were segmented into individual clusters (Polit & Beck 2018:257). The multistage approach guided the researcher for sample determination appropriate in overcoming the heterogeneity difficulty within clusters, consequent to which homogeneous cluster groupings then constituted the sample subjects (Alvi 2016:26). From the population of 584, the minimum required size of the sample 209 calculated through the Minitab statistical software. The sample size was determined following the simple random sampling (SRS) assumption. Chapter 4 outline a full discussion of the approach.

### 1.8.4 Data collection

Data collection is the systematic collection of data or information in response to the research purpose, specific objectives, questions, or hypotheses of a study (Gray et al 2017:502). The researcher collected the data sequentially following the exploratory sequential method design. In phase 1, the researcher gathered data through a semi-structured interview guide for face-to-face interviews. In phase 2, data was gathered through a structured questionnaire with close-ended questions based on the 5-point Likert scale. The questionnaire consisted of six sections.

The instrument's validity and reliability was determined by means of Cronbach's alpha and exploratory factor analysis (Chan & Idris 2017:400) (see Chapter 4 for full discussion). The researcher conducted a questionnaire pre-test with participants who were not included in the main study (see Chapter 4 for discussion).

### 1.8.5 Data analysis

Brink (2006:170) illuminates that data analysis encompasses categorising, manipulating, ordering, describing and summarising the data for its meaningful usage. Data analysis is the systematic organisation and synthesis of research data (Gray et al 2017:675; Polit & Beck 2012:725). The researcher singularly analysed the interview-based qualitative data, while the statistician analysed the quantitative data with the use of the Statistical Package for Social Sciences (SPSS) Version 26 programme (see Chapter 5 for full discussion). In

phase 3, the qualitative and quantitative findings were merged to develop a support model for the implementation of the new qualifications.

## 1.9 ETHICAL CONSIDERATIONS

Ethics determines the rightfulness or wrongfulness in professional practice (Brink et al 2018:29; Polit & Beck 2012:748). When people have become study participants, care ought to be exercised to ensure protection of their rights (Polit & Beck 2012:748). Babbie (2013:62) highlights that researchers ought to act according to predetermined standards, conduct, and rules of ethical behaviour that ensure their safety as well. As a result, the researcher was allowed to undertake the study through a written ethical clearance from the University of South Africa's Health and Research Ethics Committee (HSREC) in the Department of Health Studies (see Annexure A). The respective Departments of Health in each of the selected provinces granted permission for the study to be undertaken at the chosen public nursing colleges (see Annexure B2). Permission was also obtained from the principals and vice-principals of the selected public nursing colleges to conduct the study at their colleges (see Annexure B4).

Subsequent to obtaining informed consent of the participants, the researcher applied the principles of respect for their human dignity, beneficence, and justice throughout the data gathering stages (see Chapter 4 for discussion) (Brink et al 2018:29; Polit & Beck 2012:748).

## 1.10 SCOPE

The researcher collected data from four South African provinces, namely: Gauteng, North-West, Limpopo and Free State. The scope covered these areas as they were in the process of implementing the new qualifications and were considered suitable for the collection of rich data to develop a supportive model for implementing the new qualifications in nursing. The collection of data at different sites enhanced the quality of the study taking place at a wider scale and minimised distortion/errors.

## 1.11 LAYOUT OF THE STUDY

The study is structured according to the following nine chapters:

- Chapter 1 outlines the entirety of the study, encompassing the purpose, research design and methodology, and definition of key terms.
- Chapter 2 outlines the salient aspects of the reviewed literature.
- Chapter 3 describes the theoretical framework used in the study.
- Chapter 4 discusses the research design and methodology.
- Chapter 5 presents the analysed and interpreted data as findings of phases 1 and 2.
- Chapter 6 presents the integration and interpretation of results.
- Chapter 7 outlines the developed support model for the implementation of the new qualifications.
- Chapter 8 briefly discusses the validation of the support model.
- Chapter 9 briefly discusses the findings and limitations of the study and make recommendations for practice and further research.

## 1.12 CONCLUSION

The chapter discussed the research problem, purpose, research design and methodology of the study, and defined key terms. The ensuing chapter presents the review of literature consulted in the study.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 INTRODUCTION

The researcher has discussed the background and purpose of the study. Chapter 2 however, is focused on the literature review conducted for the study. Burns and Grove (2015:67) allude to literature review as a well organised investigation of published documentation on a topic. The foundation for the research is important to outline and represent the known and unknown about the research problem. Furthermore, it assists researchers in conveying the current topic of interest and to comprehend the extension of knowledge of the studied phenomenon (Polit & Beck 2017:99). The researcher consulted journal articles, dissertations, books, and reports on nursing education transformation nationally and internationally.

## 2.2 NURSING EDUCATION TRANSFORMATION

Nursing is an incorporation of autonomous and collaborative caring for patients of all ages, group families and communities, sick or well, and in all settings. It comprises of the prevention of illness and the care of ill, disabled and dying people (World Health Organization (WHO) 2006). The goal of nursing education (NE) throughout the world is to produce sufficient skilled nurses to provide efficient and effective care to patients. Many factors affect nursing and nursing education, such as emerging health care challenges and changing disease patterns which impact on health care systems. In 2006, the crisis in the health workforce worldwide was identified by WHO and recommendations were made for the next ten years. The recommendations suggested a swift response to urgent health needs, preparing the health workforce, and formulating national health workforce strategies. Factors that affect health and health care provision affect nursing and nursing education. Changes and developments that have an impact on healthcare delivery systems inform the necessary NE transformation.

Nursing education transformation refers to reforms developed and introduced in the education structure of nurses. This transformation is necessary to strengthen health systems, provide sufficient skilled health care providers required to render effective and efficient care to patients, and enhance the professional status of nurses. Mogano

(2016:40) stated that transition from the old to the new programmes and accreditation were crucial to address the critical nursing shortages. Macro-level (global), meso-level (national) and micro-level (operational) settings within legislative educational frameworks, influence the transformation of nursing education (Tsimane 2018:113). When preparing student nurses for trans-national careers, they should have concomitant global competencies and multicultural skills for coping with extant changes (Tsimane 2018:113). The WHO (2006:41) emphasised that preparation and tutoring the correct people with the correct tuition to create an effective and better workforce of health care depends on facilitating the entry of health workers into the workforce and on the health training institutions – schools, universities and training colleges – which provide them with the knowledge and competencies for the work they will be required to do. In response to global shortage of health workers, the WHO (2009) global standards for the initial education of professional nurses and midwives were published and the transformation of health profession education to help policy makers develop policies and programmes to bolster the global health workforce.

A recent global development in the professionalization of NE has been the call for a baccalaureate degree as the minimum requirement for entry to the profession in order to cope with the increasing complexity of contemporary nursing practice due to various factors (Armstrong & Rispel 2015:1). Professionalization requires a Bachelor's degree for registration of nurses because the level of knowledge, ability to reflect, challenge and appreciate the need for nursing practice should be evidence based. The Institute of Medicine (IOM 2011:171) reports that in the USA, the response to the demands of an evolving healthcare system and changing needs of patients, nurses must attain higher levels of education and training therefore the entry requirement should be a baccalaureate degree in order to acquire the knowledge of community-based interventions, competencies and skills that are needed in these settings. Furthermore, NE should be a life-changing platform for continuous (on-going) learning and have opportunities for durable transition to higher degree programmes.

## 2.3 GLOBAL INDICATIONS FOR NURSING EDUCATION TRANSFORMATION

There is world-wide significance on changing health workforce education in support of universal health coverage. Nurses are the largest component of healthcare systems, spend the most time with patients, and poses capabilities to close the space amongst communities and the healthcare system, integrate patient care in composite disease

profiles, and promote the achievement of universal health coverage (Armstrong & Rispel 2015:8). This section briefly discusses nursing education transformation (NET) in the United States of America (USA), Australia, the United Kingdom (UK), Lebanon, Pakistan, China, Nigeria, Malawi, Lesotho and Botswana.

### 2.3.1 The United States of America (USA)

Nursing in the 21st century faces numerous challenges, such as an increase in the number of hospitalised patients who are elderly and more severely ill. In addition, there is increasing healthcare costs, and the need to abreast of current rapid advances in medical knowledge and technology (NACNEP 2010:8). In the United States of America (USA), there is currently a scarcity of nurses, an aging nursing workforce full of aged staff about to retire, and lack of nursing faculty members. The possibility of a worsening shortage of nurses complicates these challenges. Moreover, new models of overall healthcare delivery impacted the workforce and care delivery (NACNEP 2010:11).

Nursing education also experienced challenges relating to the imbalance between the increased enrolment in nursing institutions and the supply of nursing personnel in the hospitals, inadequate educators for clinical placement, scarcity of faculty members to educate nurses at all levels, lack of compensation for nurses to try and further their studies, and inferior education levels of nurses (IOM 2011:1; NACNEP 2010:8). These challenges indicated the need to transform nursing education as well as keep up with rapidly changing health needs and disease profiles, and to meet the upcoming need for qualified nurses who studied further and have specialities and became competent in those fields such as community care, public health, health policy, evidence-based practice, research, and leadership.

The National Advisory Council on Nursing Education and Practice (NACNEP 2010:26) recommended that nursing educators should continuously assess and revise education curricula, approaches, and programmes used to teach new and practising nurses. In 2011, the IOM (2011:56) released a report on the future of nursing and recommended regularly updating skills, competencies, and professional development to be on point with the demands of health care that change all the time; the introduction of innovative new programmes at nursing faculties to offer a broader range of clinical education placements; accreditation and certification of institutions to meet clinical expertise, managerial competencies, and professional expansion at all levels; diversifying the nursing workforce

through continuous lifelong learning and graduate-level nurses developing deeper comprehension of care coordination, quality improvement, systems thinking, and policies.

The IOM (2011:57) further recommended that the number of Bachelor of Science Nursing (BSN) prepared nurses must increase to 80% and the number of nurses with a doctorate must portray a dual increase by 2020, scope-of-practice barriers be removed, and an infrastructure be built for the accumulation and interpretation of interprofessional health care workforce data. Shortly after the issuing of the review, the Future of Nursing: Campaign for Action was developed as an implementation strategy for the recommendations by targeting six (6) major areas or “pillars”, namely: leveraging nursing leadership; advancing education transformation; fostering interprofessional collaboration; leveraging nursing leadership; removing barriers to practice and care; promoting diversity in the workforce; and bolstering workforce data (Bleich 2011:169).

In 2015, Gorski et al (2015:53) examined nursing education transformation in response to the IOM report and stated that the Robert Wood Johnson Foundation (RWJF) and the American Association of Retired Persons (AARP) had generated projects in advancing progress in nursing education transformation; community colleges and universities had to strengthen strategic partnerships and develop tools to address challenges and potentially accelerate progress. Many nurses enrolled for higher education and many institutions and communities, and a few states had reached or would have achieved the 80% goal by 2020. Some physicians continued to pose barriers to modernising scope of practice legislation, and there was a need to work on collaborative practice. The move to a value-based health care system with an emphasis on teams would solve many of these issues. Executing the changes would fast-track the results to 83.9% of RNs in the health workforce with a BSN or higher preparation by 2025. However, support targeting extended educational capacity at community colleges and universities, faculty shortages, greater number of student and faculty diversity, and economic drivers were essential to succeed (Gorski et al 2015:57).

In 2016, a committee assessed the improvement in implementing the recommendations of the IOM report (Altman, Butler & Shern 2016). The Committee discovered that the Campaign had made noteworthy progress and many nurses were returning to further their studies. For example, the Campaign developed five educational levels to permit registered nurses (RNs) to achieve a Bachelor of Science (BSc) in Nursing through an outcomes-based curriculum; curriculum adaptation to ensure continuation of education through standardised outcomes; progression from RN to Masters in Nursing Science in a

shorter time through shared state-wide or regional curriculum; opportunity to transit from an associate degree to a BSc in nursing programme, and collaboration amongst colleges and universities that allowed a student to attend tuition at both the community college and the university to attain professional nursing licence following completion of degree.

Moreover, new health care consignment models emphasised teamwork, care coordination for speciality care and chronic disease management, prevention, and greater focus population health and community-based care. The great emphasis on preparing the personnel to meet growing and dynamic needs led to more emphasis on interprofessional education, teamwork training, and a better understanding of the roles of all health professionals in creating an optimal health care delivery system (Altman et al 2016). Based on the progress found, the committee made 10 recommendations to serve as a layout to advance in implementing the IOM recommendations. Recommendations by the Committee included: building commonalities around scope of practice and any additional concerns in policy and practice; the Campaign, nursing education community, and state systems of higher education consolidating academic pathways for nurses toward the nursing degree programmes; generating and funding transition-to-practice residency programmes; promoting nurses' pursuit of doctoral degrees as well as interprofessional and lifelong learning; encouraging diversity in the nursing workforce, particularly African-Americans, Hispanics/Latinos and men, to currently meet forthcoming health care needs and provide more culturally relevant care; making diversity a priority in recruiting and retaining a diverse nursing workforce; expand efforts and opportunities for interprofessional alliance and leadership development for nurses; promoting the involvement of nurses in the design of care delivery and payment systems; expanding strategies on how to communicate to connect with a broader, more diverse, consumer-oriented audience and galvanise grassroots' support level to focus and improve health as well as consumers' health care and their families, and improve workforce data collection to integrate data and identify gaps in usable data on the entire health care workforce.

The committee concluded that there was a need to continue working to remove scope-of-practice barriers and for nurses to practise collaboratively, continue to develop skills and competencies, and work with other professionals to meet the complex needs of the future of health care. The recommendations were intended to be helpful as organisations worked in improving access to quality health care for all (Altman et al 2016:220).

### 2.3.2 Australia

In Australia, an aging pool of nurses that needed to be replaced and community demands of health service delivery, politically driven, economy, social, technology, environment and judicial factors, called for nursing education transformation (Ralph et al 2014:1). Moreover, Australian nursing education needed transformation that focused on designing a proactive curriculum rather than reactive to future health care needs (Ralph et al 2014:3). In the face of a nursing workforce shortage and rising healthcare expenditure, Australia decided to implement an evidence-based framework to facilitate undergraduate pre-registration nursing education curriculum design, modify current nursing education, and implement a new national accreditation system (Ralph et al 2014:9).

The four-year nursing degree was as a result of challenges and priorities which led to nurses who were not coping with increasingly complex, dynamic and diverse health care settings (Christiansen, Jacob & Twigg 2018:567). Nurses should work in an effective manner across organisational and geographical boundaries, familiarise themselves with the constantly changing, and advance technology, and work autonomously and collaboratively as equals in interprofessional teams (Christiansen et al 2018:567). Another scholar affirm that curriculum committee championed the development of nursing education curriculum and contributed much in coordination of activities of the new programme (Spector & Odom 2012:40).

### 2.3.3 The United Kingdom (UK)

Several countries embraced nursing education and placed it in line with higher education sector and there were the consequences on that partnership providers. In the UK, Gillett (2010:197) examined how the change affected the education providers of nursing and the UK National Health Service (NHS). The change was first influenced by the introduction of internal markets to the NHS which fragmented public services, and later by a policy of ‘partnership working’.

The Department for Health remained the government department responsible for healthcare and funding, and the NHS provides healthcare for all UK citizens based on their need rather than their capacity to afford it. Working in partnership helped to reduce service gaps, and share resources, information, skills and knowledge. ‘Partnership

working' led to education providers of nursing and the NHS being in collaboration to offer clinical practice placements for nursing students (Gillett 2010:205).

### 2.3.4 Lebanon

In the 21st century, the practice for nurses in Beirut, Lebanon is going through a number of problems, comprising of increasing numbers of older sick people and those who are critically ill; excessive health care expenses; growing shortages in nursing staff and nurse educators, and a shift in the age of the nursing workforce. Consequently, to adapt to the rapidly varying and advancing healthcare settings, nurse educators are obliged from time to time to assess and review education curricula, teaching-learning strategies and programmes prepared for new nurses, to maintain professionally qualified nursing graduates and care as well as safeguard patient safety (Fawaz et al 2018:109).

### 2.3.5 Pakistan

Nursing is the pillar of the health care system and better patient outcomes depend mostly on the quality of nursing care rendered. In Pakistan, many factors, such as demographic diversity, a shifting to population-based care, advanced technology, the increase in complexity of diseases, patient care, the rising tariffs of health care, and changing health policy and regulation, directly affected nursing education (Awalkhan & Ghani 2018:6). As a developing country facing increasing healthcare service needs from chronic diseases and rising numbers of ageing and aged patients, Pakistan needed to transform nursing education to provide for the growing current and future health care demands. Khan, Ghani and Badsha (2015:5) found that nursing education needed to advance to baccalaureate and doctorate degree level to empower nurses to become partners in the healthcare system. Consequently, educational transformation is moving from diploma nursing to a baccalaureate programme and further to meet future challenges in patient care (Khan et al 2015:6).

### 2.3.6 China

In China, the challenge stems from the provision of quality health care coupled with the need to produce nurses trained to a level to support advanced nursing practice and a healthcare system that enhances the growth and retention of nurses (Wang et al 2016:131). China nursing education standard address preparation of graduates to meet

the health demands of the country's growing population. The nursing education standard also focus on the country's future role in the global advancement of nursing. China has an increasing elderly population and faces challenges in nursing shortage. To accommodate the rising demands for quality and accessible health care, China embarked on important healthcare reforms.

The positive outcome of these reforms is influenced by China's social, economic, political and other factors. The capacity of China's nurses to meet rising healthcare needs and the retention of nurses are also essential to healthcare and future development. Nurses' education and scope of practice require development to meet the demands, and a rising number of nurses are pursuing overseas employment (Wang et al 2016:132). Nursing education in China constitutes of three levels: Diploma, Advanced Diploma, and Baccalaureate degree. The diploma level is a three-year nursing programme to develop technical skills. The advanced diploma level is a three-year associate nursing programme that offers general training together with theory and skills for nurses.

The 5-year Bachelor of Nursing programme provides a broad nursing foundation with associated sciences, and prepares graduates to seek employment at advanced levels of nursing in higher ranking hospitals or in management positions. From 1992, nurses were encouraged to achieve degree level qualifications for career progression and the diploma level training is gradually being phased out. Every nursing graduate is expected to pass the National Nurse Qualification Examination (NNQE) to be registered to practise as a nurse (Wang et al 2016:132). Nursing education in China adopted a bio-medical model but is shortly moving to a nursing process-oriented model, which also examines the process of solving the problem, and role play centred learning to facilitate the application of theoretical knowledge to clinical nursing practice. Doctoral nursing programmes were instituted in 2003 to develop nurses in management, education and research. Two doctoral programmes are available, namely a PhD by research and a clinical doctorate.

Doctoral nursing programmes were instituted in 2003 to develop nurses in management, education and research. Two doctoral programmes are available, namely a PhD by research and a clinical doctorate. Doctoral programmes face two challenges: a lack of current nursing-oriented learning resources and of qualified nursing professionals to oversee postgraduate students. China's nursing education still requires comprehensive transformation to improve the quality of healthcare services; an evidence-based approach to nursing education; a standardised curriculum; up-to-date nursing resources;

adequately resourced research opportunities, and focuses on improving outdated public perceptions of nursing to motivate nursing students and boost nurse retention rates (Wang et al 2016:136).

### 2.3.7 Nigeria

Nursing education in Nigeria has experienced upheaval in its history and development. In Nigeria, nursing education faces many challenges including multi-ethnicity problems; lack of schools of nursing affiliation with universities; poor structure and mechanisms for professional development and advancement; lack of mentorship; the need for nursing curricula to be reviewed and updated in line with international standards; lack of government research grants and scholarships for nurse tutors to update their knowledge, and gender-related issues, such as a general perception of nursing as a feminine profession (Abdullahi, Ghiyasvandian, Shahsavari & Imanipour 2019:416; Olabisi 2015:416).

### 2.3.8 Malawi

Malawi has one of the worst performing health systems in sub-Saharan Africa with a high volume of disease, including tuberculosis, malaria, HIV/AIDs and several tropical diseases (Bvumbwe & Mtshali 2018:1). Nursing education in Malawi and other sub-Saharan African countries is challenged by a lack of tuition and resources, unresponsive curricula, and poor collaboration between academic and practical settings. A huge scarcity of health professionals contributed to the impoverished health outcomes, and producing a competent and effective nursing workforce was key to transforming the nursing and health landscape. Bvumbwe and Mtshali (2018:9) developed a model to guide and assist in improving the quality, quantity and relevance of nursing education in Malawi to healthcare service users, especially at primary health care level.

### 2.3.9 Lesotho

Lesotho is a small poorly resourced country enclosed by land with a shortage of health care workers, high maternal and neonatal mortality, and a high communicable disease burden (Botma 2014:23). The system of nursing education in Lesotho has been passive towards change in health needs and health care delivery systems. Radical change was motivated by very high diseases and unreasonable shortage of nurses in the country.

Nurse education was hospital based and not primary healthcare facility based and there was a need to broaden the scope of training of nurses, primary health care nurses, midwives, community health care workers in order to strengthen the quality and capacity of nursing and midwifery education institutions (Botma 2014:24). Nurse educators identified the necessity to overhaul the curriculum to produce professional nurses who can render the most favourable care to the people in primary health care facilities. This required eight (8) competencies of competency for nurse educators-based curriculum. Botma (2014:28) found that despite the challenges, the nursing educators were dedicated to their objectives in improving the Basotho's health through nursing education's transformation.

In 2016, health improvement and survival of mothers and new-borns, competency-based curriculum was introduced as one-year post-basic midwifery programme in Lesotho (Nyoni & Botma 2018:96). Inconsistency on the programme were noted two (2) years after nationwide implementation, which were due to lack of a framework in implementing the new curriculum. Nyoni and Botma (2018:98) developed implementation strategy to sustaining the innovation of curriculum in higher education's midwifery programme. Nyoni and Botma (2018:100) emphasise that strategy development for tertiary to implement and sustain innovations of curriculum should be evidence-based and on contextual realities. Higher education institutions should identify challenges to curriculum implementation, and recommend tailor-made approaches based on evidence.

### 2.3.10 Botswana

In Botswana, nurses and midwives practise at different levels of the health care system and in both acute and primary care settings, and beyond their scope of practice in many instances. The HIV/AIDs and other disease burden, shortage of nursing staff and of nurse educators, increasing diversity of health human resources, and the proposed merger of the health professionals' regional councils challenged nursing education to change in order to remain relevant (Sabone, Tshiamo & Rapinyana 2018:99). Sabone et al (2018:101) found that working in silos was no longer a viable strategy for health professionals in the light of changing demands of health care, and collaboration should start right from education and training because teaching prepares students for practice.

## 2.4 NURSING EDUCATION TRANSFORMATION IN SOUTH AFRICA

South Africa's nursing education system evolved greatly because of the work of Sister Henrietta Stockdale, an Anglican nun and nurse whose religious approach was the provision of nursing services in the diamond fields of Kimberley in 1877. In 1879 Henrietta Stockdale became the head of Carnarvon Hospital in Kimberley, she formed nursing school and introduced the first professional training of nurses in South Africa. Initially, nurses received two years of training, but by 1889 the nursing school became one of the forerunners in establishing three years of training as advocated by the British Nursing Association (BNA). The BNA was established in 1887 with the primary objective of achieving recognition of the nursing profession in law. Legislation for medical practitioners was under review and Henrietta Stockdale campaigned to have nurses and midwives included in this law.

The Act was passed in 1891 for the Licensing and Registration of Medical Practitioners, Apothecaries, Dentists, Chemists and Druggists, and Midwives and Nurses, and South Africa became the first country in the world to pass legislation for the registration of nurses and midwives thereby making legal provision for the curriculum for nurses and midwives, approval of training schools as well as standardized examinations for entry into the register (Brookes 2010:28; Paton 2017). The regulation of medicine and allied professions in South Africa began with the establishment of the Colonial Medical Council in the Cape Province in 1891 followed by the Natal Medical Council in 1896, the Medical and Pharmacy Council of the Orange River Colony in 1905, and the Transvaal Medical Council in 1905.

Nursing education transformation is necessary to strengthen health systems, provide sufficient skilled health care providers required to provide effective and efficient care to patients, and enhancing the professional status of nurses. Transforming the education for nurses is shaped by worldwide (macro-level), national/ local (meso-level) and operational (micro-level) settings espoused through educational legislative frameworks. When preparing student nurses for trans-national careers, they should be furnished with equally concomitant competencies and multicultural skills to cope with increasing and ever-changing needs (Tsimane 2018:113).

In South Africa, restructuring the features of nursing education by moving the nursing profession which was in demand to university education (Searle 1983). The South African

Nursing Council was formed in 1944 as a body that controlled the professionalism of nursing education (Marks 1994). However, a three-year diploma at a hospital-based nursing college remained the only pathway to qualifying as a registered nurse (Uys 1989). In 1956, the first university degree programmes were introduced in the country (Ehlers 2002). By the year, 1986 nursing colleges were forced to affiliate with university-based nursing departments, which placed them officially within the higher education system. At the same time, a new comprehensive four-year curriculum (including general nursing, midwifery, community nursing and psychiatric nursing) was introduced for the training of professional nurses, which could be completed through a nursing college diploma or a university degree (Blaauw et al 2014:2; Breier, Wildeschut & Mgqolozana 2009).

South Africa's democratisation in 1994 brought about a renewed focus on nursing education as part of the post-apartheid transformation of both the health and higher education sectors (Blaauw et al 2014:4; Seekoe 2014:E1). The promulgation of the Higher Education Act, 101 of 1997, instructed all NEIs to align the qualifications with the Higher Education Sub-Framework (HEQSF) which included the development of their programmes through the CHE for accreditation, and for approval and registration by the South African Qualifications Authority (SAQA) (South Africa 1995, 1997).

Accordingly, NEIs were expected to submit their reviewed curriculum to the SANC and CHE simultaneously (Blaauw et al 2014:5). The transformation was meant to increase professionalism and shift training from hospital and college base to the HE setting (Blaauw et al 2014:5). Zwane and Mtshali (2019:6) state that the transformation will bring about advantages, such as a unified nursing education system, progression in terms of access to post-graduate studies and enhanced career movement, and enable students to acquire full student status with more time for accompaniment. The serious nursing shortage due to an increased aging workforce and the migration of nurses to developed countries also necessitated the transformation (Matlakala 2016:3).

Nursing education transformation regarding the formation of the new qualifications is guided by SANC Circular 7/2016 (SANC 2016). Circular 7/2016 indicates that the repealed Nursing Act, 50 of 1978, made provision for the legacy nursing qualifications which applied to all nursing categories, such as registered nurse, midwife, enrolled nurse, and enrolled nursing auxiliary, who are expected to execute tasks based on their different scopes of practice within the nursing profession (SANC 2016; South Africa 1978). Furthermore, the Act explicates that additional qualifications can be obtained only when

the following post-basic courses/ programmes are completed: the Diploma in Clinical Nursing Science, Health Assessment, Treatment and Care (R48 of 22 January 1982, as amended) and clinical nursing science for acquiring additional qualifications (R212 of 19 February 1993, as amended) that includes child, community, gerontological, medical and surgical nursing science; as well as midwifery (neonatal), occupational health, and psychiatric nursing science (SANC 1982; 1993).

A policy shift that came into effect in the year 1986 directed every nursing colleges to become affiliated with university-based nursing departments (SANC 2016). This move was aimed at placing them officially within the higher education system towards professionalisation. Subsequently the current comprehensive four-year curriculum permissible to regulate through the approval of and the minimum requirements for the education and training of a nurse (general, psychiatric and community and midwife leading to registration (R425 of 22 February 1985) was introduced for the training of professional nurses in South Africa, which could be completed through a nursing college diploma or a university degree is part of HE (SANC 1985). The pre-1994 reform in South Africa was aimed at professionalising the NE system.

The entrance level towards professionalism according to the legacy qualifications is acquired through either of the following undergraduate nursing programmes: Baccalaureas Curationis (BCur), obtained as a four-year degree at the universities, or a four-year diploma at the colleges. Both of these were registered according to Regulations relating to the approval of and the minimum requirements for the education and training of a nurse (general, psychiatric and community and midwife leading to registration (R425 of 14 April 1989) and to the minimum requirements for a bridging course for enrolled nurses leading to registration as a general nurse or a psychiatric nurse (R683 of 14 April 1989) (SANC 1989).

Although the pre-1994 reform was aimed at professionalising the nursing education system, flaws were identified that had an impact on the professionalisation of nursing. Mekwa (2000:271) pointed out that the application of recognition of prior learning (RPL) whereby previously acquired competencies were not taken into consideration for career progression basically affected the subcategories of nursing. For example, R683 recognised the RPL process to some extent by permitting an enrolled nurse to bridge into the professional world at a period of two years instead of three, and R425 integrated the process of RPL to some degree. However, educators' lack of skills in the application of

the process deterred progress in professionalising the NE system. The dual role of a student serving as an employee who is paid by the DoH had a negative impact on the effectiveness of the nursing programmes.

The gap in nursing education institutions' provision of part-time studies to enable full-time employees who could not afford full-time studies at basic level contributed to a lack in career movement (Mekwa 2000:272). South African nursing education transformation experienced other challenges from staffing and regulation, lack of clear guidelines on the application of accreditation standards and matters revolving around NEIs' progress in adjusting the programmes to suit the needs of students to enable them to adapt to the changing demands and become the future generation to render quality safe patient-centred care across all settings (Armstrong & Rispel 2015:2016:3; Bezuidenhout et al 2013:1; Blaauw et al 2014:2).

Further reasons for phasing out the legacy qualifications included dissatisfaction over the scope of practice regulations and qualifications from the Nursing Act, 50 of 1978; a lack of distinct role differentiation of nursing categories; change in disease patterns and health system priorities, high maternal and child mortality, and the need to reflect the more independent practice of contemporary nurses (Blaauw et al 2014:3). Consequently, Nursing Act, 50 of 1978, was replaced by Nursing Act, 33 of 2005, and the programmes declared legacy qualifications are in the process of being phased out. Nursing education transformation was further mandated by the Constitution of the Republic of South Africa Act, 108 of 1996, and the Higher Education Act, 101 of 1997, which assigned all tertiary education to the jurisdiction of the Minister of Education under a single coordinated higher education system.

Nursing education was thus integrated with the Ministry of Higher Education in order to increase accessibility. The Minister of Higher Education is then tasked with accrediting all NEIs as higher education institutions (HEIs) and registering private NEIs with the Department of Education (DOE) (South Africa 1997; 2008). The Higher Education Act, 101 of 1997, and the Higher Education Amendment Act, 39 of 2008, govern HEIs and programmes (South Africa 1997 2008). Accordingly, all NEIs were to align the qualifications with the Higher Education Qualifications Sub-Framework (HEQSF). Therefore, programmes were to be submitted to the Council on Higher Education (CHE) for accreditation and for approval and registration by the South African Qualifications

Authority (SAQA) and must meet the requirements of the Higher Education Qualifications Framework (HEQF) (CHE 2008a).

## 2.5 ROLES OF THE NDOH, SANC AND CHE, AND LEGISLATION IN NURSING EDUCATION TRANSFORMATION

The process of NE transformation has been managed cautiously in South Africa because of lessons learned from the challenges other countries experienced, such as a lack of policy framework application in countries where it was abruptly introduced with unclear transitional arrangements; lack of collaborative planning and inadequate preparation for nurses and midwives to become academics as well as clinicians; inadequate specific and clear support for educational institutions to transform nursing education during the accreditation process (Ralph et al 2014; Wang et al 2016; Zwane & Mtshali 2019). The global NE transformation process displays the interconnectedness of nursing education across countries.

The transformation of education in nursing nationally (meso-level), in the context of the implementation of the new qualifications, has been framed by political and professional antecedents. These include the National Department of Health, South African Qualifications Authority (SAQA), the Council on Higher Education (CHE) and the South African Nursing Council (SANC), and legislation including the Higher Education Act of 1997, the Higher Education Amendment Act of 2016, and the National Qualifications Framework (NQF) Act of 2008, which replaced the South African Qualifications Authority Act of 1995.

### 2.5.1 Role of the National Department of Health (NDOH) in regulating nursing education

Tertiary education falls within the jurisdiction of the Minister of Education under a single coordinated higher education (HE) system, aimed at increasing its accessibility. The NDOH has a mandate to regulate nursing education in collaboration with the SANC. The NDOH ensures that nursing education and training are aligned with requirements of the qualifications obtained are commensurate with scope of practice. Furthermore, through the Minister's office, the department has to promulgate the required regulations for nursing education and training (Makhanya 2018:5).

The positioning of nursing education (NE) within higher education (HE) requires Public Nursing Colleges (PNCs) to be equipped with resources as stipulated by the SANC and CHE to enable implementation of the R174 programme as a new level of qualification leading to professionalism. Although PNCs produce the majority of graduates, their position on offering the R174 programme as an entrance level to becoming a professional nurse is unclear (Blaauw et al 2014:5). Furthermore, the slow implementation by PNCs causes uncertainty and poses a significant risk to enhanced health workforce performance, strengthening health system functioning, and uplifting nurses' professional status.

The NDOH administers PNC funding. Conditional grants are made to the provinces but there is not one as yet for the PNCs and their funding comes from the unconditional grants given to the provinces although this is meant to change in future as the NDOH should be taking responsibility for nursing education. The funding covers student posts, and provision of resources including equipment, buildings, and human resources. In their study, Zwane and Mtshali (2019:8) found that participants expressed concerns that the move to HE might affect funds that are allocated by the NDOH and Treasury to the provincial DOH for funding colleges, which in turn could compromise the number of nurses needed in the country. Although the DOH is entitled to "establish educational institutions to educate and train health care personnel" (including nurses) in terms of section 52 of the Health Act, 61 of 2003), the Higher Education Act, 101 of 1997, states that NEIs and their educational programmes have to be accredited by the quality council established in terms of the Qualifications Act, 58 of 1995 (South Africa 1995).

In 2008, the DOH published nursing strategies for South Africa to guide the provision of adequate training to comply with the country's requirements and clarify issues in NE and practice and nursing regulation (Bruce et al 2011:69; DoH 2008). The strategies were criticised, however, over a gap in the specialised career ladder and limited development, and because the process of development was driven by the Human Resource Division of the DoH and not directed by nursing professionals (Bruce et al 2011:69). In 2013, the DOH published the strategic plan for nurse education, training and practice. The strategic plan also indicated that new programmes should be submitted to the SANC and CHE by 2015 for accreditation. This process did not materialise.

The DoH made transitional arrangements through partnerships with stakeholders to examine measures to support PNCs to finalise prioritised programmes. The process

included a joint venture between the SANC and CHE in process map development, programme uploading, training to be effected, letters of support, endorsement of a circular and five-year cost enrolment plan to be tabled and the declaration of colleges. The developments that led to the transition from the processing the phasing out of legacy qualifications and the phasing in of HEQSF-aligned nursing qualifications (DHET & DoH 2019). Categories, competencies and regulations for undergraduate programmes were promulgated. Regulations relating to auxiliary nurse, general nurse, midwife, professional nurse and midwife, competencies and regulations for postgraduate programmes were developed published for public comment and are yet to be promulgated by the Minister of Health (SANC 2020).

### 2.5.2 Role of the South African Qualifications Authority (SAQA) in setting standards of education

The South African Qualifications Authority (SAQA) was established by the South African Qualifications Authority (SAQA) Act, 58 of 1995, and is the statutory body responsible for setting country-wide standards in education. The responsibility of SAQA is accreditation, certification and maintenance of national standards in education and training and also provides counselling and guidance to the nursing profession regarding the execution of nursing and training policies (Mekwa 2000:272). The SAQA Act, 58 of 1995, stipulates cross-field outcomes that are critical in curriculum design and learning facilitation.

### 2.5.3 National Qualifications Framework Act, 67 of 2008

The National Qualifications Framework Act, 67 of 2008, makes provision for the NQF's better governance, organisation, and development. This Act pertains to learning programmes for whole, or part-qualification in the country's education institutions and providers of skills development in (South Africa 2008:67). Consistent with the Act, all whole or part-qualification are obligated for registration on the NQF, whose structure expands the scope of educational institutions to create new and varying programmes that accommodate learners' and communities' diverse goals, interests, and qualification needs (Tsimane 2018:123). The NQF structure enables educational institutions to have a broad scope to design diverse and innovative educational programmes to realise different goals to meet different qualification needs of learners and communities. The structures for qualification specification include procedures and arrangements for integrated assessment and recognition of prior learning.

The HEQSF's revised structure is significantly composite to the NQF (Tsimane 2018:124). The revised HEQSF consists of levels 5-10 with the professional Bachelor's degree at level 8. Each NQF level encompasses a level descriptor distinguishing the different complexity levels, which are characteristically a general indication for achieved learning outcomes corresponding to the particular qualification level.

### 2.5.4 Higher Education Act, 101 of 1997

The Higher Education Act, 101 of 1997, makes provision for the promotion and maintenance of quality education in higher education (HE) institutions (South Africa 1997). The Act makes provision for quality in higher education institutions by means of its assurance structures, namely the CHE, HEQC and ETQA for accrediting and monitoring programmes in higher education. The Council on Higher Education (CHE) is accredited by SAQA as the education and training quality assurance body for higher education (Tsimane 2018:127). The CHE regulates nursing education and training in terms of the South African Higher Education Sub-Framework (HEQSF).

### 2.5.5 Council on Higher Education (CHE)

The CHE generates all higher education qualification standards and ensures their conformity to SAQA requirements to be registered on the NQF. The CHE further accredits HE programmes. Accordingly, "every national and provincial department of state, every publicly funded science, research and professional council and every higher education institution must provide the CHE with such information as the CHE may reasonably require for the performance of its quality functions in terms of the Act" (Tsimane 2018:127). Furthermore, education for nurses is also important for higher learning concerns in providing quality education. CHE initiated the Higher Education Quality Committee (HEQC) Sub-Framework [HEQSF] (2008) as an established committee for performing quality assurance and promotion aspects of the CHE in conformity with the Act and the National Qualifications Framework Act.

The responsibility of CHE is to maintain quality for higher education and training (HET) offered by universities, universities of technology and registered higher education institutions (Bruce & Klopper 2017:12). Schools and departments of Nursing based at universities are to meet the requirements and set standards by the CHE and SANC when drafting or finalising nursing programmes, while Public Nursing Colleges are to comply with and adhere to the criteria set by the SANC (Bruce & Klopper 2017:12). Meeting the requirements of regulatory and accrediting agencies should be consistent with the

preparation for implementation of new qualifications (Keating (2014:44). As PNCs are colleges accredited as higher education institutions (HEIs), they also need to meet the stipulated criteria, namely:

- Programme design
- Student recruitment and selection
- Staffing
- Teaching and learning strategies
- Assessment
- Infrastructure and library facilities
- Administrative services
- Postgraduate policies, procedures

Notwithstanding that all PNCs are registered as HEIs, the CHE still has to accredit PNCs for the R174 programme. Naidoo (2018:2) states that the CHE delivered on its mandate of supporting, corroborating and stipulating the criteria for the transformation process. The CHE support in the process of accreditation comprised training evaluators and institutions which expedited processing and cluster evaluations (Naidoo 2018:2). Corroboration included the HEQC decision to accept applications from PNCs, request of upfront payment for applications, support in terms of training evaluators and institutions. Figure 2.1 outlines the process of programme approval.

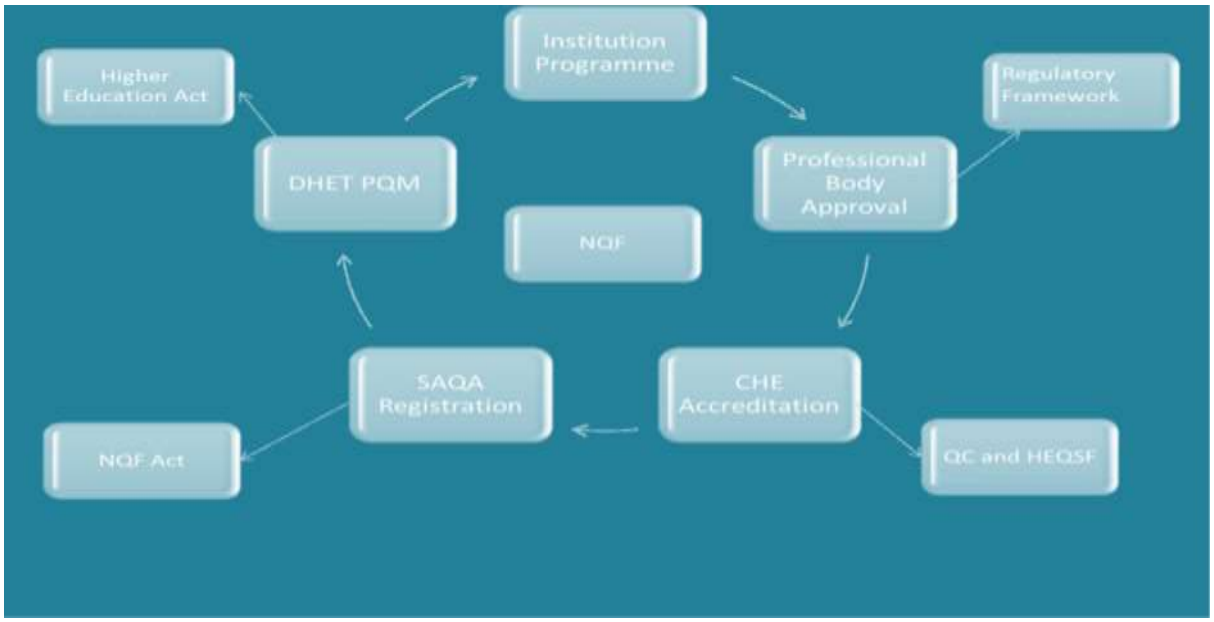


**Figure 2.1: Programme approval cycle**
(Source: Naidoo 2018:2)

### 2.5.6 South African Nursing Council (SANC) and implementation of the new nursing qualifications registered on the National Qualifications Framework (NQF)

The SANC is a self-ruling, financially independent legal body. As a professional body, it is entrusted with setting and maintaining quality standards for nursing education and practice in the country, and operates in terms of the Nursing Act, 33 of 2005 (South Africa 2005). Section 3 of the Nursing Act (2005) makes provision for the SANC to establish, improve and control conditions thus setting standards and quality of nursing education and training. The SANC derives its accreditation from SAQA for education and training quality assurance body (ETQA) for the nursing qualifications (SAQA Act, 58 of 1995, section 5). SANC issues directives and regulations for new nursing programmes/qualifications and endorses new curricula (SANC 2013b).

The SANC sets and maintains nursing education standards and reviews education and training for nursing to be consistent with the country's needs. Moreover, in commissioning NE transformation, the SANC should consider the provisions of the legislative requirements about the accreditation, certification and maintenance of national standards in education and training, as well as provision of counselling and guidance to the nursing profession regarding the execution of nursing education and training policies. This provision safeguards that the nursing standards are upheld, and the NE and training is constantly reviewed for congruence with the health requirements in the country. Moreover, the primary education for professional nurses is a benchmark for progression of education and learning systems in the quest to yield a uniform competency-based outcome amidst increasing globalisation. The objective is to foster high-quality support and care in rapidly evolving nursing environments.

Section 4 of the Nursing Act, 33 of 2005, provides for the accreditation and inspection of NEIs and clinical facilities, to monitor the assessments conducted by accredited institutions, conduct nursing examinations for nursing schools, and grant diplomas and certificates. Furthermore, Section 58(1) (f)) provides for the establishment of regulations related to qualifications and the conditions to be complied with, and registration as nursing practitioners (education and training regulations). As an ETQA, the SANC provides directives and regulations for new nursing programmes/qualifications and endorses new curricula (SANC 2013c). The Regulation 174 (R174 of 2013) new qualification, which is

about approving minimum requirements for a learner's education and training relevant to registration in professional nursing and midwifery is one of the qualifications brought about by NE transformation.

According to R174 (2013:6), students following this programme should be able to always excel in every programme, consonant with the assessment criteria in the National Qualification Framework (SANC 2013b; South Africa 2008). For the students to be deemed competent in critical, analytic and reflective thinking skills, the NEI has to meet accreditation standards and provide proof that the facilitators are adequately skilled in this role. The skilling of the educators should be done through reviewing, exploring and utilising of opportunities for professional development. The educators have to identify own learning needs in order to improve practice and enhance professional knowledge through self-determined learning activities aimed to broaden knowledge base for professional practice and assume responsibility for lifelong learning and maintenance of competence (SANC 2004:43).

The Nursing Act, 33 of 2005, provided qualifications for nurses to comply with the stipulations of the NQF. Based on Section 58(1) of the Act, the Minister might, after consulting with the Council, make regulations relating to the scope of practice of practitioners (South Africa 2005). The most important change brought about by the Act is the new scope of practice which requires the re-categorising of nurses based on new nursing qualification categories. The new qualifications provided by the Act are auxiliary nurse, general nurse, midwife, professional nurse and midwife and nurse specialist and midwife specialist (South Africa 2005). This transformation mandated that the nursing qualifications move from the further education and training sub-framework (FETSF) to the higher education and training sub-framework (HEQSF). This led to the revision of the NQF with ten levels to replace the previous NQF with eight levels, whereby each level provides broad indication of the types of learning outcomes and assessment criteria that are appropriate to a qualification at that level (Blaauw et al 2014:3). Following is Table 2.1 that depicts the NQF-aligned new nursing qualifications (SANC 2016).

**Table 2.1: The NQF-aligned new nursing qualifications**

| Qualifications | NQF level (credits) | Nursing Act provision | Professional registration with SANC |
|---|---|---|---|
| Higher certificate | 5 (120) | Section 31(1)(d) | Auxiliary Nurse |
| Diploma | 6 (360) | Section 31(1)(c) | General Nurse |
| Advanced diploma | 7 (120) | Section 31(1)(b) | Midwife |
| Bachelor's degree | 8 (480) | Section 31(1)(a) | Professional Nurse and Midwife |
| Post-graduate diploma | 8 (120) | Section 31(2) | Nurse Specialist and Midwife Specialist |
| Master's degree (Professional) | 9 (180) | | No determined professional registration with SANC<br>Council to consider keeping a database |
| Master's degree (research) | 9 (180) | | No determined professional registration with SANC<br>Council to consider keeping a database |
| Doctoral degree (Professional) | 10 (360) | | No determined professional registration with SANC<br>Council to consider keeping a database |

(Source: SANC 2016:6)

Table 2.1 above lists the NQF-aligned new nursing qualifications and levels (SANC Circular 7/2016). The changed categories directed all NEIs to align the nursing qualifications as required to provide nursing education and training. Due to accreditation challenges, NEIs were granted extension to continue presenting the legacy programmes, of which the last intake was June 2019. The key recommended level of entry into professional nursing in terms of the current NE transformation is a new 4-year programme with rules and regulations which relate to minimum requirements being approved for a learner's education and training commensurate with registration in professional nursing and midwifery (SANC 2013b).

The proposed change indicated that the entry level for the new nursing qualifications is that for a professional nurse to be registered, he/she should complete a baccalaureate degree in nursing instead of a diploma in nursing. The degree could be offered at SA colleges and universities. The changes in categories directed all NEIs to align nursing qualifications as required in order to provide NE and training. The colleges are expected to meet the accreditation standards as stipulated by the SANC and CHE. Figure 2.2 illustrates the steps to be followed for a programme to be accredited.

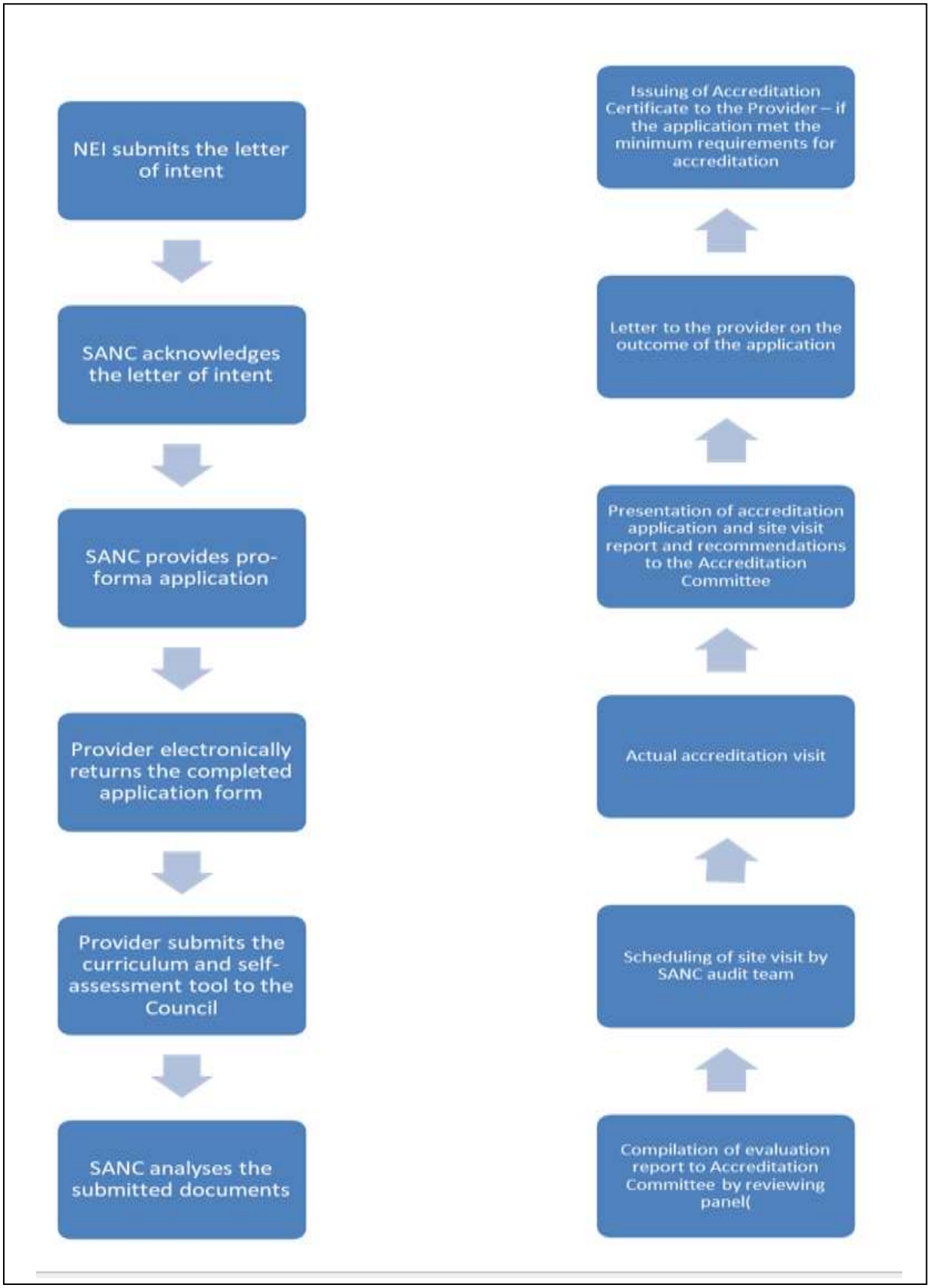


**Figure 2.2: SANC accreditation process**
(Source: Makhanya 2018:5)

### 2.5.7 Legislation applicable in the transformation of nursing education

In examining nursing education transformation in terms of the implementation of the new qualifications at PNCs for the study, the researcher consulted government legislation, SANC and CHE publications. The aim was to indicate and understand the progress made by PNCs in order to develop a support model for the implementation of the new qualifications. Accordingly, the researcher referred to the Nursing Act, 2005; National Health Act, 2003; Higher Education Amendment Act, 1997; National Education Policy of 1996 Act, 1996; SAQA Act, 2005; National Qualifications Framework Act, 2008; Further Education and Training Act, 2006; Skills Development Levies Act, 2010; the South African Nursing Council (SANC) Draft Charter of Nursing Practice, 2004 and the Council on Higher Education (CHE) Higher Education Qualifications Framework, 2007.

#### *2.5.7.1 Nursing Act, 33 of 2005*

In terms of Section 58(1) of the Nursing Act, 33 of 2005, the Minister of Health may, after consultation with the Council, make regulations relating to the scope of practitioners. The most important change brought about by the Act is the new scope of practice which requires the re-categorising of nurses based on new nursing qualifications categories (South Africa 2005).

#### *2.5.7.2 National Health Act, 63 of 2003*

In relation to nursing and nursing education, the National Health Council appointed in terms of the National Health Act, 61 of 2003, ensures the provision of health services at public health institutions. The Council also ensures the development of human resources in the national health system. Of these, the majority are nurses and PNCs produce the most (South Africa 2003).

#### *2.5.7.3 South African Nursing Council (SANC) Draft Charter of Nursing Practice, 2004*

The charter states that education for nurses should advance their competence through lifelong learning. The charter emphasises that nursing practice is at all times based on the competency of the practitioner’s knowledge, skills and judgement resulting from training and experience. Professional development through identification and exploration

of the new roles for nurses in the changing environment and the scope of practice of the new qualifications for auxiliary, general nurse, professional nurse and midwife are outlined (SANC 2004).

#### *2.5.7.4 South African Qualification Authority (SAQA) Act, 9 of 1995*

South African Qualifications Authority Act, 1995; provide for learnerships that lead to recognised occupational qualifications; provides financial skills development by means of a levy-financing scheme and a National Skills Fund; provides regulation of employment services; and the provision for matters connected therewith. The intention is to encourage a planned and structured approach to learning, and to increase employment prospects for work seekers.

#### *2.5.7.5 National Qualifications Framework Act, 67 of 2008*

The Act makes provision for the National Qualifications Framework; the responsibilities of the Minister of Education and the Minister of Labour and the South African Qualifications Authority; to provide for transitional arrangements; repeals the South African Qualifications Authority Act, 58 of 1995, and provides for matters connected therewith.

#### *2.5.7.6 Further Education and Training Colleges Act, 2006, as amended*

The Act makes provision for the promotion of quality in further education and training, and also provides for transitional arrangements and the repeal or amendment of laws; and to provide for matters connected therewith (South Africa 2006).

#### *2.5.7.7 Council on Higher Education (CHE) 2013 – revised higher education qualifications sub-framework (HEQSF)*

In line with its 2007 framework, the CHE's (2013) revised HEQSF provides the basis for integrating all higher education qualifications into the National Qualifications Framework (NQF) and for standards development and quality assurance.

#### *2.5.7.8 Higher Education Amendment Act, 101 of 1997*

In terms of the Act all NEIs were to align the qualifications with the Higher Education Sub-Framework (HEQSF). The Act made provision for access to public health education for previously disadvantaged and marginalised people. Access could be realised through career progression in terms of RPL (South Africa 1997).

#### *2.5.7.9 South African Nursing Council (SANC) 2004 – Draft charter of nursing practice*

The strategy aims at developing, reconstructing and revitalising the profession by skilling nurse practitioners with competencies through promotion and maintenance of high standards of quality nursing education and training (South Africa 2004).

#### *2.5.7.10 National Education Policy Act, 27 of 1996*

The Act provides for the determination of national policy for education; to amend the National Policy for General Education Affairs Act, 76 1984), to substitute certain definitions; to provide afresh for the determination of policy on salaries and conditions of employment of educators, and to provide for matters connected therewith (South Africa 1996).

#### *2.5.7.11 Skills Development Levies Act, 24 of 2010*

The Act provides for the imposition of a skill development levy which will ensure the enhancement of nursing skills (South Africa 2010).

#### *2.5.7.12 SAQA Refined Level Descriptors for a 1- to 10-level NQF*

The document describes the purpose of the level descriptors as providing support to the design, and the implementation of the qualification and part qualification within the NQF (South Africa 2010).

## 2.6 CONCLUSION

In this chapter, the researcher outlined the literature review of this study on nursing education transformation. The literature covered nursing education in developed and developing countries including challenges faced. The researcher also examined the role of the National Department of Health, South African Nursing Council and Council on Higher Education in the transformation process. Chapter 3 discusses the theoretical grounding of the study.

# CHAPTER 3

# THEORETICAL FRAMEWORK

## 3.1 INTRODUCTION

A theory is a construct of interrelated propositions and variables such as concepts, assumptions, and definitions that present a systematic view of phenomena and their interrelatedness for determining predictability (Kerlinger & Lee 2000:11). For Polit and Hungler (1997:107), theories render research findings interpretable and meaningful, and guide researchers to understand different phenomena and their occurrences, and stimulates research and the extension of knowledge. Swanson (2013:122) describes a theoretical framework as the structure supporting or holding a study's theoretical orientation. Additionally, a theoretical framework is a foundational tenet for analysis and interpretation for data for drawing together several aspects of a complex situation, such as a clinical setting or an educational background (Kivunja 2018:46).

The present study's theoretical framework derives from Rogers' (1989) perspective transformation theory based on Mezirow's (1975, 1978) transformative learning theory, as the theoretical framework for the study. Transformative learning theory involves a shift from the transmissive to the transformative state (Tsimane & Downing 2020:91). The implementation of the new qualifications in nursing education is mandatory as the present nursing programmes are considered inadequate to prepare nursing students for their role and to meet national priorities. The transformation will place nursing education in line with global trends, requirements and standards (Tsimane & Downing 2020:91).

The application of the perspective transformation theory enabled the researcher to establish the participants' readiness to embrace implementing the new curriculum and qualifications. Engaging the participants in the process enabled them to interpret and understand the requirements and need for accreditation. The application of the phases of perspective transformation theory (Rogers 1992:22) stimulated them to reflect on the need for further development and equip themselves for new roles and relationships. The strategies to enhance the process and utilisation of the proposed model should bring about change in the working environment.

## 3.2 ROGERS' (1989) PERSPECTIVE TRANSFORMATION THEORY

Mezirow developed his transformative or transformation learning theory which premises on learners' interpretation and reinterpretation of their sense experience as pivotal for enhancing learning and making meaning (Mezirow 1978). Rogers (1989:112) used Mezirow's theory to develop the perspective transformation theory, which premises on the view of each person's potential for particular perspectives or meanings for understanding and interpreting the world. Perspective transformation refers to a process whereby individuals become conscious of, reflect on and critically analyse the assumptions, beliefs and values of their perspectives. The process further entails progressively embracing unique and novel views underpinned by the concomitant fundamental 'lenses' through which individuals perceive themselves and those around them. This process of taking on a new perspective causes individuals to reinterpret their social, personal, or occupational environments (Rogers 1989:113).

Leal Filho, Raath, Lazzarini, Vargas, De Souza, Anholon, Quelhas, Haddad, Klavins and Orlovic (2018:286) are cynical of education for sustainable development and its adequate integration into the parlance of transformation in institutions of higher education. For purposes and reasons congruent with curriculum enhancement and sustainability, academics now ought to formulate collaborative approaches in the redesign of their programmes. Most importantly, academics should also espouse a sustainable vision of diverse epistemologies and multiculturalism as a dedicated topic and field of education research within higher education. Academic values are crucial for guiding students' transformative capacity for future sustainability. Leal Filho et al (2018:286) maintain further that universities need to transform and serve as environmental stewardship and social justice models, which fosters sustainability learning. Nurse educators' and nurses' critical examination of their assumptions and beliefs should lead to perspective transformation, which would impact learning and patient care (Cabaniss 2014:225; Fawcett & De Santo-Madeya 2013:536).

Transformative learning involves a shift from the transmissive to the transformative state (Tsimane & Downing 2020:91). The perspective transformation process has an emotional and cognitive impact on individuals, leads to vulnerability and a profound sense of loss, which will eventually be followed by a sense of liberation and empowerment (Alligood 2014:429). Perspective transformation is categorised nine distinct phases, namely: dwelling with uncertainty, stability, reconceptualization, dissonance, resolution,

confusion, saturation, synthesis, and return to stability (Alligold 2014:432). The theory also includes strategies to facilitate perspective transformation, namely: analogizing understanding terms and application, identifying the nurse's current frame of reference regarding nursing practice, exploring differences between the current and envisaged state of practice, and reinforcement on utilisation of the proposed model (Alligold 2014:432).

The researcher considered the perspective transformation theory as appropriate for the study to enabling understanding of participants' assumptions and perspectives on the preparedness of the PNCs for implementation of the new qualifications. The findings would assist the development of the support model for implementing the new nursing qualification in PNCs. In addition, the theory would assist the participants to understand their role in implementing the new qualifications better. The process of implementation of the new qualifications should bring about relevant change in practice standards to meet changing health needs and improve patient outcomes (Alligold 2014:432).

### 3.2.1 Perspective Transformation Theory Application to the Study

The nine perspective transformation theory phases are depicted diagrammatically in Figure 3.1 below.

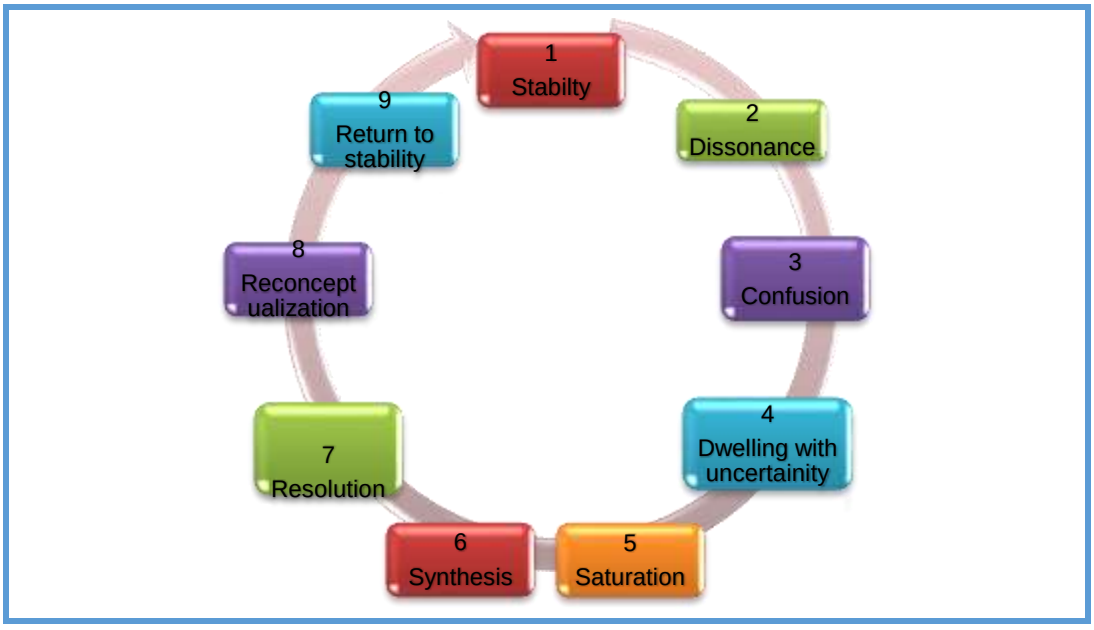


**Figure 3.1: Perspective transformation phases adapted from learning a conceptual model of nursing phases of transformation process**
(Source: Rogers 1992 cited in Fawcett 1995:533)

The researcher described and applied the nine perspective transformation phases to the study as indicated below.

#### *3.2.1.1 Stability*

Stability in this study refers to the phase when the prevalence of stability is undisturbed by PNCs changing the existing nursing practice model or theory, or implementing the new nursing conceptual model (Rogers 1992:22). The prevailing phase of stability referred to the existing legacy qualifications curriculum with which the personnel were familiar and comfortable. Implementing the new nursing qualifications required nursing education institutions' alignment of their qualifications with the HEQSF, which included the development of their programmes through the Council on Higher Education (CHE) for accreditation, and for approval and registration by the South African Qualifications Authority (SAQA) (SANC 2016).

Consequently, NEIs are expected to submit their reviewed curriculum to the SANC and CHE simultaneously (Zwane & Mtshali 2019:6). New nursing programmes had to be curriculated and submitted to both the SANC and CHE. The PNC's commenced with the curriculation of programmes, in terms of which most colleges are accredited for the Diploma in Nursing, but the Bachelor's degree, which is the new level of entrance to the nursing profession, had not been prioritised. The PNC's needed to understand the reasons for the change and participate according to expectation in the curriculation of the new qualification within the stipulated period, which caused a level of instability.

#### *3.2.1.2 Dissonance*

Dissonance refers to a phase when nurses start to examine their prevailing reference frame in view of the challenge of adopting or changing a theory or conceptual model. When nurses begin to learn the new conceptual model's or theory's content, they also appreciate the dissimilarity between the current methods of practice and possible future variants (Rogers 1992:22). In this study, this period of dissonance was marked by examination of the PNCs' present reference frame for practice against the transformation anticipated in order to comply with the implementation of the new qualifications.

The PNCs' current frame of reference is that the PNC are to be aligned to Higher Education Institution level equivalent to the university in terms of compliance in

infrastructure, services and logistics including human resource in order to meet the accreditation standards to comply with the new qualifications' implementation. The current way of practice indicates a need for infrastructural and technology upgrading for libraries, computer and skills labs, student accommodation and dining areas, staff offices, equipment for teaching and learning, internet, Wi-Fi, and a student information system to support e-learning. Educators are also to reflect on their current academic qualifications as the programme mandate that they should be in possession of a degree Higher. The PNCs began to learn the concepts of the new curriculum and to appreciate the envisaged benefits of the new qualifications.

#### *3.2.1.3 Confusion*

Confusion follows the dissonance phase. During this phase nurses find more difficulties in learning about the model or theory and its practice-linked implication, and a feeling of despondency between reference frames prevails (Rogers 1992:22). As the PNCs struggled to learn more about the concept of the new curriculum and its implications for practice, a feeling of "lying in the limbo" between frames of references prevailed. During the dissonance and confusion phases, the principals, vice-principals, educators as well as supporting structures involved in the curriculum changes experienced mixed emotions, anxiety, anger and inability to think. These distressing emotions were akin to grieving over a lost beloved part, namely the legacy qualifications. The legacy qualifications no longer made sense, while the new nursing curriculum had not been meaningfully internalised for resolving experienced dilemmas of transformation.

#### *3.2.1.4 Dwelling with uncertainty*

The dwelling with uncertainty phase refers to a point when nurses acknowledge that their personal deficiencies are not a factor of their confusion, and anxiety replaces a desire for the freedom to intensely interrogate old ways in preference of exploring the new model or theory (Rogers 1992:22). Furthermore, the phase of remaining uncertain is consumed by information that frequently becomes unclear and irrelevant. At this stage, the participants involved in the curriculum changes will acknowledge that their personal inadequacy did not cause their resultant confusion, and as a result will feel free to intensely interrogate the legacy and the new curriculum. Most of the time will be spent on immersing themselves in information in order to share their thoughts on the implementation of new curriculum which at times will seem irrelevant and obscure.

#### *3.2.1.5 Saturation*

This phase transpires in moments of nurses feeling that their learning anything further concerning nursing has saturated (Rogers 1992:22). Saturation is not representative of reality, but a quest to disengage from the arduous process of transformation, which is naturally inherent in the learning experience (Rogers 1992:22). This will be a point where the PNC's and personnel involved in the curriculum will feel the changes and they cannot think or learn anything more about the new curriculum. The personnel involved in the curriculum changes will not resist, but will rather be overloaded or overwhelmed by the transformation process and feel they will like to disengage from the process and flow of learning.

#### *3.2.1.6 Synthesis*

Synthesis occurs when meaningful and coherent insights have accrued from the new conceptual model's or theory's content (Rogers 1992:22). Accordingly, the hitherto unclear conceptual model's or theory's practice implications of become rather clearer and worth the implementation initiative. The continuing tension causes anticipation due to insights on the affinity between nature of the conceptual model/ theory and its nursing application. At this stage, the personnel involved in the curriculum changes will gain insight into the new curriculum implementation and perceive it as meaningful and coherent. These insights will become coherent moments and sparks of unity as clarity will prevail, which will lead to deeper understanding.

#### *3.2.1.7 Resolution*

This phase is characterised by a receptive feeling of comfort regarding the new space presented by the nursing model/ theory (Rogers 1992:23). The feelings of both dissatisfaction and dissonance are reconciled, and the anxiety diminishes. During this phase, nurses viewed themselves and the world, differently and imbued with a novel empowerment sense (Rogers 1992:23). In this study, the phase of resolution will be marked by the personnel involved in the curriculum changes being comfortable with the concept of the new curriculum implementation. The distress symptoms will disappear, and they will describe themselves as changed and empowered to embrace new curriculum implementation.

#### *3.2.1.8 Reconceptualisation*

This phase occurs as nurses consciously reconceptualise their practice through the new nursing theory/ conceptual model. During this stage, nurses compare patient activities from the new ways and inspect if they conform to the new theory or concept (Rogers 1992:23). In this stage, the personnel involved in the curriculum will reconceptualise the new curriculum implementation and its application. They will analyse the application of the new qualifications so that the PNC's can keep up with the new qualifications' implementation.

#### *3.2.1.9 Return to stability*

This is the final stage during which nursing practice is distinctly premised on the new nursing conceptual theory/ model (Rogers 1992:24). This is also the stage when the personnel involved in the curriculum changes will be more comfortable with the new qualifications' implementation.

### 3.2.2 Strategies to facilitate the perspective transformation process

Rogers (1989) noted several strategies to facilitate the transformation process to the new practice frame of reference (Alligood 2014:430). The strategies to facilitate the change include the use of analogies that enable understanding of concepts and their application; identifying the nurse's prevailing nursing practice frame of reference; exploring the variances inherent in the present state and the envisaged state of practice, and reinforcing utilisation of the proposed model. The researcher used the strategies as discussed next.

#### *3.2.2.1 Use of analogies to facilitate understanding of terms*

Analogies such as clarification can be used for a theory (Alligold 2014:431). The researcher has explained the objectives and significance of the study, as well as the envisaged support model to facilitate the transformation process and implementation of the new qualifications. The researcher explained the participants' roles and encouraged their engagement in the transformation process.

#### *3.2.2.2 Identification of the nurses' existing frame of reference for nursing practice*

This strategy encourages nurses' enlisting of words reflecting their views concerning nursing practice and give details, reasons and outcome of the interaction (Alligold 2014:431). Accordingly, the participants were asked to list words that described their views on the implementation of the new qualifications.

#### *3.2.2.3 Exploring the difference between the current state and the envisaged state of practice*

The researcher explored the participants' understanding of the envisaged transformation of the implementation of the new qualifications versus the legacy programmes and what the outcomes would be if they were not implemented as required. Rogers (1989) stated that when nurses noted the difference between the present and the future, their awareness of 'what is' versus 'what could be' resulted in cognitive dissonance or discomfort (Alligold 2014:431). When individual' experience cognitive dissonance, perspective transformation can occur. In this study, the participants' awareness of the envisaged change induced by the implementation of the new qualifications led to cognitive dissonance and perspective transformation. This resulted in a climate for transformation utilising the support model that would be developed.

#### *3.2.2.4 Reinforcing utilisation of the proposed model*

The researcher will encourage the participants to refer to the envisaged support model systematically in order to facilitate the implementation of the new qualifications. Constant reinforcement will facilitate further perspective transformation. The systematic application of the model is essential since there may be periods of uncertainty and repeated reference will lead to positive results (Alligood 2014:432).

## 3.3 CONCLUSION

This chapter mostly discussed the theoretical framework of the study and the phases and strategies of the perspective transformation theory. Chapter 4 discusses the research design and methodology pertaining to the study.

# CHAPTER 4

# RESEARCH DESIGN AND METHODOLOGY

## 4.1 INTRODUCTION

The research design and methodology of the study is discussed in the chapter, including the research paradigm and assumptions, data acquisition and analysis, and reliability and validity.

## 4.2 RESEARCH PARADIGM

A paradigm emphasises a certain way of thought inspired by a belief system to guide practices and action (Creswell 2014:18). A paradigm also expresses views on natural phenomena and encapsulated in philosophical assumptions or principles for guiding one's approach to inquiries on science according to logic rather than proof (Polit & Beck 2017:9). Polit and Beck (2012:15) augment that paradigms are lenses for sharpening the researcher's attention to a phenomenon. The research paradigm then provides a reference frame for the researcher answer the research questions. In this study, the researcher adopted pragmatism as the research paradigm with the inclusion of the post-positivist, interpretivist, and transformative worldviews. This allowed the researcher to use a sequential exploratory mixed method design to collect qualitative and quantitative data and finally develop a support programme for implementation of the R174 programme**.** The pragmatic, post-positivist, interpretive and transformative paradigms are grounded on ontological, epistemological, methodological and axiological assumptions.

Figure 4.1 depicts pragmatism with the inclusion of the post-positivist, interpretivist, and transformative paradigms used in the study.

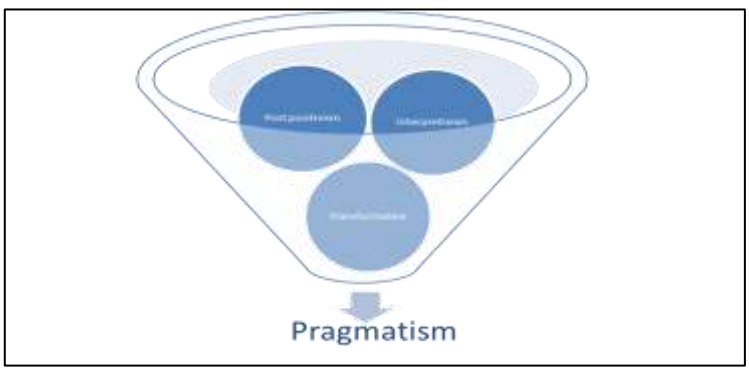


**Figure 4.1: Pragmatism with the inclusion of post-positivism, interpretivism, and transformativism used in the study**

### 4.2.1 Assumptions

Assumptions are proposition statements whose truthfulness premises on reasoned logic rather than proven evidence (Polit & Beck 2017:720). The pragmatist, post-positivist, interpretive and transformative paradigms are grounded on ontological, epistemological, methodological and axiological assumptions.

#### *4.2.1.1 Ontological assumptions*

*Ontology* is premised on the nature or essence of reality or being as viewed by individuals (Polit & Beck 2017:720). In addition, multiple realities manifest in their content and form, depending on the individuals' interpretation the investigated reality (Botma et al 2010:40). In this study, the researcher investigated the preparedness of PNCs for implementation of the new qualifications.

#### *4.2.1.2 Epistemological assumptions*

*Epistemology* encompasses the nature, scope, possibility, and general tenets of knowledge (Botma et al 2010:40). Epistemology also entails individuals' understanding of reality of knowledge as a product of their observed engagement in their environment (Botma et al 2010:40). In research, the interaction between researchers and participants generates knowledge and insight into the phenomenon under study (Polit & Beck 2012:13). Furthermore, epistemology determines how individuals establish what is true (Streubert & Carpenter 2011:153). The study explored the participants' perceptions of the chosen PNCs' level of preparedness for implementation of the new qualifications.

#### *4.2.1.3 Methodological assumptions*

Methodology premises as a plan of action or strategy to link methods, process to outcomes and governs researchers' choice and use of methods and the process of the research (Creswell 2014:17). Methodological assumptions refer to how the researcher will gain knowledge from the chosen research subjects (Polit & Beck 2017:10). The researcher selected a research design to explore the participants' experiences and portray the phenomenon under study (Polit & Beck 2012:725). For the qualitative phase, the researcher collected data to identify principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications and also explored

the strategies and activities utilised by the principals and vice-principals for implementing the new qualifications.

The researcher collected quantitative data to describe and explore nurse educators' perspectives on the preparedness of PNCs for implementation of the new qualifications and also determined the strategies and activities utilised by the nurse educators for the implementation of the new qualifications. Based on the qualitative and quantitative findings, a support model was developed for the implementation of a R174 programme at PNCs in South Africa. The support model was examined and refined for content relevance, and accepted on the basis of consensus expert nurse educators.

#### *4.2.1.4 Axiological assumptions*

Axiological assumptions are values and their role in a study (Polit & Beck 2017:10). It embraces the researcher and the participant's views. The assumptions of the researcher, values and prejudices were noted and bracketed through an application of reflexivity, an interview guide, and the questions were asked in such a way that they did not influence the participant's response, and the guide provided direction. The study is conducted in a social world and the site is not a value free environment. During the quantitative phase the researcher provided objectivity by full describing the methodological process followed, determination of a sample size, triangulation of data, testing of the instrument's reliability and validity including analysis triangulation.

## 4.3 RESEARCH DESIGN

Polit and Beck (2012:741) describe a research design as a detailed plan to address the research question through focused approaches concerning the study's integrity. Grove et al (2013:214) regard a research design as the researcher's own mandate for conducting a study and controlling factors that can disrupt the validity of the findings. The design or approach enables researchers to conduct research systematically and efficiently (Mohajan 2017:60).

The researcher opted for a sequential exploratory mixed methods research design for the study, in terms of which qualitative and quantitative data was gathered (Creswell 2014:16). This design allowed the researcher to firstly collect the qualitative data by exploring the views of the participants and analysed it, then design an instrument for

collecting quantitative data based on the qualitative results. Both results of the qualitative and quantitative phases were merged in order to propose and develop a support model for the implementation of a R174 programme at PNCs in South Africa. The researcher conducted the study in three phases, namely: Phase 1: Qualitative, Phase 2: Quantitative and Phase 3: Developmental. The phases were applied as follows:

### 4.3.1 Phase 1: Qualitative

Qualitative research entails enquiry of phenomena, especially in an in-depth and holistic manner, through rich prosaic materials in a flexible research approach or design (Polit & Beck 2012:739). The approach is explorative, descriptive, contextual and phenomenological in nature.

#### *4.3.1.1 Explorative*

Polit and Beck (2017:463) ascertain that the approach allowed the researcher to act as a key instrument, by becoming intensely involved in collecting data. The researcher utilised numerous data acquisition methods; for instance, as interviews, written documents and records and observation (Grove et al 2015:310). Semi-structured interviews were used and complemented with the researcher's field notes and observed non-verbal cues to identify and explore the principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications.

#### *4.3.1.2 Descriptive*

Descriptive research is described as research that typically portrays the people's circumstances and experiences with a particular phenomenon (Polit & Beck 2017:726). The researcher described the principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications.

#### *4.3.1.3 Contextual*

In this phase the researcher collected data within the natural setting which is at the selected PNC in SA where the principals and vice-principals experienced the process of implementing the newly proposed nursing qualification (De Vos et al 2011:65).

#### *4.3.1.4 Phenomenological*

Streubert and Carpenter (2011:72) point out that the research approach is well suited to the investigation of phenomena important to nursing. The perception of the PNC principals and vice-principals concerning implementation of the new nursing qualification will be better understood, in order to assist in discovering the essence of it.

### 4.3.2 Phase 2: Quantitative

Quantitative study as an objective, formal, rigorous, methodical process in terms of which numerical data are used to acquire information of a phenomenon (Grove et al 2015:32). The research collects numerical data and analyses the data statistically to present results. A simple quantitative strategy which is descriptive in nature was applied in describing phenomena and its facets within a single-subject group, same time frame over a span of minutes, hours, and days, weeks or months (Gray et al 2017:200). A simple descriptive approach allowed the researcher to identify the educator's experiences concerning implementation of the new qualifications at the selected PNC in SA.

### 4.3.3 Phase 3: Developmental

Based on the qualitative and quantitative outcomes, the researcher developed a support model for the implementation of a R174 programme at PNCs in South Africa.

## 4.4 RESEARCH METHODOLOGY

Research methodology is a plan or technique intended to conduct the specific steps of a study and its structure, leading to answering of the research question through the gathered and analysed information (Burns & Grove 2005:129; Polit & Beck 2012:741). Methodology also encompasses the study setting, population, sampling, data acquisition and analysis, and trustworthiness (Burns & Grove 2005:129).

### 4.4.1 Setting or context

A study setting is the particular place/ s where the data acquisition occurred (Brink et al 2018:47). The study setting comprised thirteen (13) multiple sites, which are PNCs in Gauteng, North-West, Free State and Limpopo; all of which are involved in the

implementation of the new qualification. The study sites provided a good spread of rural and urban colleges and also considered past associations, whether deliberately or not, with a variety of universities. The collection of data at different sites enhanced the quality of the study taking place at a wider scale and minimised distortion/errors.

The researcher collected qualitative data from principals and vice-principals who experienced the implementation process of the new nursing qualifications at their PNCs (Creswell 2007:37). Quantitative data was collected from educators to examine their views about implementation of the new nursing qualifications. The different settings were identified because of their accessibility and fulfilled the necessary requirements as accrediting bodies for implementing the new qualification according to the stipulated health needs in education. The study was conducted in the participants' natural setting (Creswell 2007:37). The thirteen (13) PNCs are depicted in Table 4.1 (overleaf).

**Table 4.1: Setting of the study**

| Public Nursing College main campus name | Public Nursing College | Number of educators |
|---|---|---|
| Northwest College of Nursing | PNC 1 | 35 |
| | PNC 2 | 42 |
| Free State School of Nursing (FSSON) | PNC 3 | 22 |
| | PNC 4 | 40 |
| | PNC 5 | 28 |
| Limpopo College of Nursing (LIMCoN) | PNC 6 | 24 |
| | PNC 7 | 24 |
| | PNC 8 | 9 |
| | PNC 9 | 32 |
| Gauteng College of Nursing (GCoN) | PNC 10 | 92 |
| | PNC 11 | 108 |
| | PNC 13 | 27 |
| | PNC 12 | 95 |
| **Total** | | **584** |

### 4.4.2 Population

Polit and Beck (2017:249) describe a population as the totality of cases that interest the researcher. Babbie (2013:199) views a research population as the total elements or units that serve as the pool for selecting a sample. In this study, the researcher selected two populations for qualitative and quantitative data acquisition. The population for the qualitative phase consisted of thirteen (13) principals and vice-principals of the selected PNCs where the new qualifications were implemented. The population for the quantitative

phase consisted of 584 educators from the thirteen (13) selected PNCs where the implementation of the new qualifications was taking place. Table 4.2 above depicts the total number of educators per PNC.

### 4.4.3 Sampling

Sampling is the representation of a population or universe through a smaller sub-group (Polit & Beck 2017:250; Burns & Grove 2009:35; De Vos et al 2011:223). LoBiondo-Wood and Haber (2006:261) posit that sampling is a methodical selection of a segment or sub-unit of a designated larger group to represent that particular group. In this study, probability and non-probability sampling was utilised for each population. The two phases' sampling unfolded as follows:

#### *4.4.3.1 Sampling for the qualitative phase*

For the qualitative phase, the researcher used the purposive sampling method of nonprobability type. Grove et al (2015:263) and Moule and Goodman (2014:298) intimates that non-probability sampling is a process where the researcher is unable to state the chances of every population element having a selection opportunity in the study, or all population appearing in the final sample. The chosen participants chosen ought to also be knowledgeable about to the subject of enquiry in order to provide data pertinent for analysis (Saunders et al 2012:183).

#### *4.4.3.2 Sampling for the quantitative phase*

Gray et al (2017:688) and Polit and Beck (2017:255) point out that probability sampling endorses each case or participant of a selected sampling frame is equally able to be chosen for their involvement in the study. Such an approach helps to estimate the sampling error and keeps sampling error low. The application of the probability sampling approaches maximise generalisation (Brink et al 2018:119). Cluster sampling is posited as a method of sampling which large groupings of the population are grouped into "clusters" (categories) rather than individuals. In the quantitative phase, cluster sampling method of probability was used.

Furthermore, clusters are selected first normally with successive subsampling of smaller units in a multistage approach (Polit & Beck 2018:722). The approach applied simple

random sampling (SRS) within each cluster to ensure that elements in each cluster were given an equal selection chance. In sampling, the researcher and the statistician developed a frame for sampling that included a list of all the nine South African provinces to link elements of the identified population. From the nine South African provinces four provinces (clusters) were randomly selected in order to achieve probability. The four provinces that were selected, namely: Gauteng, Northwest, Free State and Limpopo formed the primary cluster.

The approach applied SRS within each cluster to ensure that elements in each cluster were availed an equal selection chance. From the primary clusters the PNCs were identified as secondary cluster. The PNC that were identified as suitable for the implementation of the new qualification and fit the criteria and granted permission were identified. Thirteen (13) PNCs formed the secondary cluster. From the secondary cluster, elements of interest were identified. The units comprised of educators who were the elements of interest. Each and every educator available and willing to participate were randomly selected thud providing them an equal chance for their involvement in the study.

### 4.4.4 Ethical consideration related to sampling

The researcher received written ethical clearance for permission to undertake the study from the University of South Africa's Health and Research Ethics Committee (HSREC) in the Department of Health Studies (see Annexure A). Further permission was obtained through the Department of Health of each of the selected provinces and from the respective PNCs allowing the study's data acquisition (see Annexure B2). Permission was requested via e-mail from the principals and vice-principals of the chosen PNCs and permission was granted also electronically (see Annexure B3).

Both confidentiality and anonymity were confirmed by ensuring that the researcher could not link the participant's data during the random selection. Participants' confidentiality and anonymity was ensured with the allocation of a code to conceal their identities during the random selection. Consent forms were provided to the participants for signing as an indication of agreement to form part of the study.

### 4.4.5 Sampling criteria

Sampling criteria refer the variables considered in selecting elements to be analysed in the study (De Vos et al 2011:223). In this study, the inclusion and exclusion criteria or considerations were applied for selecting the eligible population. Inclusion sampling criteria is described as the qualities a subject or element ought to possess for becoming part of the sampled population (Burns & Grove 2009:345). An exclusion criterion is described by Portney and Watkins (2014:157) as those factors that might disqualify an individual from becoming respondent or study participants. The sample criteria and the sample size of each phase unfolded as follows:

#### *4.4.5.1 Sample for the qualitative phase*

##### *4.4.5.1.1 Inclusion criteria*

To be included in the qualitative phase of the study, the participants/ respondents had to be principals or vice-principals employed by the selected PNCs and willing to participate.

##### *4.4.5.1.2 Exclusion criteria*

Educators who were not in the position of being principals or vice-principals and were not employed by the selected PNCs, and not interested in participating were excluded from the study.

##### *4.4.5.1.3 Sample size for qualitative phase*

The qualitative phase's sample size was informed by the information needs and saturation of data, the stage where the researcher collected qualitative data to a point where closure is reached because of no new information being obtained due to new data yielding redundant information (Polit & Beck 2017:744). Polit and Beck (2017:497) reiterate that the critical issue in data saturation is to acquire sufficient in-depth data to illuminate the categories, dimensions, and patterns of the phenomenon being studied. The researcher purposively selected the participants. The study sample included 13 principals and vice-principals who availed themselves for participating in the study over face-to-face interview. Table 4.2 indicates the number of participant principals and vice-principals.

**Table 4.2: Number of participant PNC principals and vice-principals**

| Public Nursing College main campus name | Public Nursing College | Principal | Vice-principal | n |
|---|---|---|---|---|
| North-West College of Nursing | PNC1 | | 1 | |
| | PNC 2 | 1 | | |
| Free State School of Nursing (FSSON) | PNC 3 | 1 | | |
| | PNC 4 | 1 | | |
| | PNC 5 | 1 | | |
| Limpopo College of Nursing (LIMCoN) | PNC 6 | 1 | | |
| | PNC 7 | 1 | | |
| | PNC 8 | 1 | | |
| | PNC 9 | | 1 | |
| Gauteng College of Nursing (GCoN) | PNC 10 | 1 | | |
| | PNC 11 | 1 | | |
| | PNC 12 | 1 | | |
| | PNC13 | 1 | | |
| **Total** | | **11** | **2** | **13** |

#### *4.4.5.2 Sample for the quantitative phase*

##### *4.4.5.2.1 Inclusion criteria*

In this study, the quantitative phase inclusion considerations required participants who are nurse educators employed by the selected PNCs and willing to participate.

##### *4.4.5.2.2 Exclusion criteria*

Educators who were not employed by the selected PNCs and not willing to participate were excluded from participating.

##### *4.4.5.2.3 Sample size for quantitative phase*

The samples in the quantitative phase were drawn from the educators at PNCs involved with the process of the implementation of the new qualification. Each and every educator available and willing to participate were randomly selected thus providing them an equal inclusion chance in the study. From each secondary cluster, elements of interest (educators) were randomly selected from those available and participating willingly.

The researcher assisted by the statistician determined the sample size for the quantitative phase, using cluster sampling for computation and analysis of the impact of intra-cluster correlation coefficient (ICC) which refers to the correlation strength within clusters for

sample size calibration. The respective effect is known as the design effect (Deff), which serves as a factor in correction for adjusting the required size of the sample for cluster sampling (Alimohamadi & Sepandi 2019:78).

According to the statistical procedure applied in the computation of the cluster sample size, the sample size and adopting a simple random sample (SRS) were calculated by multiplying with the Deff (Alimohamadi & Sepandi 2019:78). In principle, the Deff is emblematic of the extent of variance inflation attributed to cluster sampling. The sampling process in such a research design requires calculation of the design effect (Deff), whose value in cross-sectional study design is dependent on the case averages of subjects or cluster elements (n) and the intra-cluster correlation (ICC) defined by the function below:

$$\text{Deff} = 1 + p(n-1); \text{ where } p = \text{ICC}$$

In a cluster design with *k* clusters and *m* subjects per cluster, the variance of the sample mean estimate is calculated as based on the function:

$$\text{Var}_{\text{Cluster}}\left(\bar{x}\right) = \left(\sigma^2 / k*m\right)*[1 + p(m-1)]; \text{ where } k*m = n$$

The expression is the variance inflation factor (VIF). The size of the sample was determined based on the simple random sampling (SRS) assumption. Of the total 13 colleges across the four provinces, there were 584 nursing educators. Sample size determination was done using cluster sampling. The listed steps include:

- Step 1: Calculating the variance on college proportion in a simple random sample (SRS).
- Step 2: Calculating the variance on the proportion in the cluster design.
- Step 3: Calculation of the design effect (DEFF).
- Step 4: Minimum sample size calculation using Minitab software and using the margin of error calculated from the population at 95% Confidence Interval. The population standard deviation was also used as one of the input parameters.
- Step 5: Proportionate distribution of minimum sample size across the clusters to get minimum sample size for each cluster.

The sample size required was 209. Table 4.3 presents the calculated minimum sample size for each cluster.

**Table 4.3: The calculated minimum sample size for each cluster**

| Primary site unit (PSU) | Secondary site unit (SSU) | Number of educators (population) | Required Minimum Sample Size (n) |
|---|---|---|---|
| Northwest College of Nursing | SSU 1 | 35 | 12 |
| Northwest College of Nursing | SSU 2 | 42 | 15 |
| Free State School of Nursing (FSSON) | SSU 3 | 22 | 8 |
| Free State School of Nursing (FSSON) | SSU 4 | 40 | 14 |
| Free State School of Nursing (FSSON) | SSU 5 | 28 | 10 |
| Limpopo College of Nursing (LIMCoN) | SSU 6 | 24 | 9 |
| Limpopo College of Nursing (LIMCoN) | SSU 7 | 24 | 9 |
| Limpopo College of Nursing (LIMCoN) | SSU 8 | 9 | 3 |
| Limpopo College of Nursing (LIMCoN) | SSU 9 | 32 | 11 |
| Gauteng College of Nursing (GCoN) | SSU 10 | 98 | 35 |
| Gauteng College of Nursing (GCoN) | SSU 11 | 108 | 39 |
| Gauteng College of Nursing (GCoN) | SSU 12 | 95 | 34 |
| Gauteng College of Nursing (GCoN) | SSU 13 | 27 | 10 |
| **Total** | | **584** | **209** |

### 4.4.6 Data collection

Data collection entails a methodical collection of information for converting into data or in response to the research purpose, specific objectives, questions, or hypotheses of a study (Gray et al 2017:502).

#### *4.4.6.1 Data collection approach and method*

The researcher pursued the exploratory sequential method design in obtaining data. The researcher used multiple data-collection instruments for the collection of qualitative and quantitative data. In phase 1, the researcher collected data by means of face-to-face interviews, used a semi-structured interview guide, and took observational notes while observing the participants for non-verbal cues. In the quantitative phase, the questionnaire was used. The researcher utilised the qualitative themes and sub-themes and grouped those into variables for further exploring the research questions quantitatively. The principal objective was to describe and explore nurse educators' perspectives on the preparedness of PNCs for implementation of the new qualifications and determine the strategies and activities utilised by the nurse educators for the implementation of the new qualifications (see Annexure E). The quantitative data were connected and constructed from the qualitative findings.

#### *4.4.6.2 Development and testing of the data collection instrument*

A structured interview guide was developed for the qualitative phase, while the questionnaire was developed and tested for the quantitative phase.

##### *4.4.6.2.1 Development and characteristics of the qualitative data collection instruments*

*Semi-structured interview guide*

In the qualitative phase, the researcher gathered data in face-to-face interviews by utilising a self-designed semi-structured interview guide, which is a list of questions designed to elicit information (data) on the research topic during an interview (Brink et al 2018:143; Grove et al 2013:77). The goal was to obtain rich evidence and allow the participants to give as many descriptions as they wished (Polit & Beck 2017:510).

*Characteristics of the interview guide*

The qualitative phase interview guide derived from the Council on Higher Education's and South African Nursing Council's accreditation criteria to collect data. The questionnaire was the product of the qualitative phase results. The interview guide consisted of an open-ended grand tour question: "Please explain your views regarding the preparedness of your nursing college for implementation of the new qualifications"; which was followed by four open-ended questions on the PNCs' human resources and student profile, programme design, infrastructure and library facilities, and clinical placement. These questions allowed participants to express themselves in their own words in order to obtain rich information. The researcher also used probing questions (see Annexure E) for the semi-structured interview guide).

In addition, the researcher took observational notes to capture main points for further clarification and or probing to note non-verbal communication. Observational notes are notes made immediately, during or following the observation such as the context, meta communication and immediate reaction or responses of the researcher concerning what transpired (Gray et al 2017:257).

#### *4.4.6.2.2 Development and testing of the quantitative data collection instrument*

*Questionnaire*

In the quantitative phase, a questionnaire served as the major instrument for acquiring data as guided by the research objectives. Themes and subthemes emerging from the analysed qualitative data were grouped into further constructs to enhance the research questions. Consequently, the quantitative data were constructed and linked qualitatively. A questionnaire is composed of a series of questions to systematically gather information from study participants (Jacobsen 2017:360). Quantitative research questions interrogated the relationship among variables to be answered by the (Creswell & Creswell 2018:250). A structured questionnaire allows for the identification of similar patterns of responses and general conclusions.

A pre-test or pilot study (trial-run) was undertaken to prepare for, or testing the feasibility of the actual (main) study, clarity (non-ambiguity) of its questions, and time precision for completing the questionnaire (Polit & Beck 2017:739). The questionnaire was tested with five (5) respondents who were excluded in the actual study. Accruing from the feedback received, the researcher modified the questionnaire. Some of the lessons learnt from pre-testing the questionnaire included: access to the educators which took longer than expected; reluctance by some to be involved in the study. Accessing population may be longer than expected, materials for participants' direct and immediate use may need simplification; and participant's burdensome data collection needs could necessitate a reduction (Pilot & Beck (2017:624).

*Characteristics of the questionnaire*

Questionnaire items/ variables were close-ended, and developed utilising a Likert scale with various of statements about a topic that participant rate according to their degree of agreeability or disagreeability (Moule & Goodman 2014:370). The questionnaire in this study used the 5-point Likert scale whose score ranged from 1 to 5 (see Annexure E for copy of questionnaire). The five sections of the questionnaire are depicted below:

- Section A: Demographic and general information
- Section B: Preparation for transition from the legacy to the new qualifications
- Section C: Institutional support experienced

- Section D: Challenges encountered
- Section E: Process operations
- Section F: Suggestions to improve readiness for implementation

*Reliability*

The quality of quantitative research is weighed up upon its validity and reliability as the most vital measurement constructs (De Vos et al 2011:110). Reliability concerns the repeatability, dependability, and consistency of the measured attributes or variables during the course of study (Brink et al 2018:157; Polit & Beck 2012:308). Cronbach's alpha coefficient was applied for measuring reliability of the instrument. This statistical method is used in calculating a questionnaire's internal consistency; that is, the close relatedness in a group of items. The higher the coefficient value, the higher the reliability (Polit & Beck 2017:344). Cronbach's alpha demonstrates further that scales of tests in research projects resonate with their purpose and in respect of questionnaire items' internal consistency (i.e., reliability) (Likert 1932:11; Taber 2018:1273).

The calibrated Cronbach's alpha coefficient value ($\alpha = 0.844$) for the thirty-nine items exceeded the acceptable statistical minimum ($\alpha = 0.700$) reliability threshold (Cronbach 1951:311). The computed outcome reflects that surveyed items calibrated a uni-dimensional latent construct of the research. Polit and Beck (2018:308) specify that the scale reliability is informed by the correlation measure that is between 0 and 1. The closer the measure is to 1, the more the correlation; and the higher the value of coefficiency, the higher the response reliability.

*Validity*

Validity depicts the extent of a measuring instrument's specific focus on its specified object of measurement (Leedy & Ormrod 2015:117; Polit & Beck 2012:335). In this study, construct validity was considered, which is a measure of the research instrument's (questionnaire's) assessment of unobservable characteristics, but rather is assumed to exist on the basis of a proposed theory (Brink et al 2018:155). The literature review and qualitative findings provided basis for the developed questionnaire. Content validity was assured it measured the survey questionnaire's adequacy under each dimension. The questionnaire contents were appraised by research supervisor and the statistician (Brink et al 2018:152).

Furthermore, the questionnaire was pre-evaluated on five respondents who were not in the main study in order to evaluate question clarity. According to Leedy and Ormrod (2015:387), internal validity measures the degree to which a study was carried out based on the relationships among variables studied, as well as the operating item descriptions of the questionnaire. The pre-tested results were used to examine the nexus between questionnaire dimensions to the applicable items, including how respondents generally understand the research instrument. The questionnaire was evaluated by the statistician for content validity, as well as accuracy, readability, and relevance of the content to the study aim.

Gray et al (2017:221) describe construct validity as the extent of the study's reflection of operational and conceptual definitions, and constructs as well. Leedy and Ormrod (2015:115) further assert that 'construct validity' reflects an instrument's measures of unobservable characteristics that are based on people's behavioural patterns (e.g., creativity and motivation). In order to determine the analogous construct of question items under each construct, responses given to the group of items in every construct were statistically analysed using the Keiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) method. The KMO-MSA measured whether items were adequate to describe their analogous construct and if such items measured the construct as intended.

The KMO-MSA criterion was applied to determine adequacy of sampling, in which case a KMO-MSA value equal to at least 0.600 provides as the threshold minimum of statistically acceptability (Chan & Idris 2017:405). The overall KMO-MSA value of the total 31 items equal to 0.875 surpassed the minimum 0.6 generally acceptable threshold (Chan & Idris 2017:400), which implied that all variables of the questionnaire were statistically valid. The items therefore measured what they were intended to measure in the study.

Concurrently, KMO-MSA values for each construct and associated items showed that the constructs were valid, where the scores per construct were preparations executed (=0.760), institutional support (=0.661), challenges encountered (=0.793), process operations (=0.838) and suggestions to improve readiness for implementation (=0.930). The constructs were therefore statistically valid in measuring the targeted issues (see Annexure E). Then factor analysis was done.

*Factor analysis*

Factor analysis is a process used to categorise clusters of related items, namely dimensions, underlying a broad concept and each dimension represents a relatively unitary attribute (Polit & Beck 2017:319). The two common factor analysis types are exploratory and confirmatory factor analysis. In this study, exploratory factor analysis was selected to test the structural validity hypothesis about dimensionality of the scale (Polit & Beck 2017:319). This was used for identifying and grouping different items used to measure immanent attributes, such as preparation, institutional support, and challenges encountered. In addition, factor analysis requires a larger sample size that can reduce error in data. Before administration of the questionnaire to participants, the researcher conducted a pre-test.

### 4.4.7 Data-collection process

#### *4.4.7.1 Qualitative data collection*

The researcher sent invitations by e-mail to the principals and vice-principals of the selected PNCs to arrange and confirm suitable dates for the interviews. Principals and vice-principals of the PNCs in the Northwest, Limpopo and Free State responded and confirmed suitable dates. The principals and vice-principals in Gauteng referred the researcher to the gatekeepers who were the research coordinators of each nursing college to finalise access and interview dates. The researcher conducted about 8 rounds of face-to-face interviews which were held at selected provinces for a period of eight months between the year 2018 and 2019. Table 4.4 below depicts the dates for the rounds of interviews held:

**Table 4.4: Dates for the rounds of interviews held**

| Order of interview rounds | Public Nursing College | Date |
|---|---|---|
| First | PNC 11 & PNC 10 | 05/11/2018 |
| Second | PNC 7 & PNC 6 | 9/11/2018 |
| Third | PNC 1 | 12/12/2018 |
| Fourth | PNC 2 | 13/12/2018 |
| Fifth | PNC 9 & PNC 8 | 15/12/2018 |
| Sixth | PNC 5 & PNC 4 | 09/01/2019 |
| Seventh | PNC 3 | 30/5/2019 |
| Eighth | PNC 12 | 25/06/2019 |

The interviews were conducted at the PNCs on the abovementioned dates. The interview took place in the principals and vice-principals offices and a few in the boardroom according to convenient times for the participants. The venues environment was suitable and conducive at the desired temperature, had limited noise and sufficient lighting for data collection process. The sitting arrangement at most PNC were around the table whilst at some was across the table and both allowed for face-to-face engagement, whilst the relaxed atmosphere enhanced free communication. The venues provided privacy and confidentiality and were free from disturbance or interruption. The researcher greeted the respondents and introduced herself to establish rapport.

Before the interviews, the researcher alerted the respondents of the study's purpose and significance; that participation was not coerced and they were free to leave the study at any time should they so wish, and the interview would last between 50- and 60-minutes. Their anonymity and confidentiality were safeguarded, as no names would be provided in the interview guides or the study report (Polit & Beck 2017:141). Moreover, the data collected would be kept confidential in safe storage. Only the researcher, the coder and the researcher's supervisor would have unfettered access to the data. The researcher also obtained the respondents' permission to audiotape the interviews (Polit & Beck 2015:508). The respondents were then permitted to ask questions before signing informed consent.

The interview commenced with the grand tour question. The researcher encouraged the respondents to reflect on their feelings and express how they had felt during the process of curriculation. When necessary, the researcher asked probing questions. The researcher took observational notes during the interviews of how participants reacted and looked while considering and answering the questions. Observational notes contribute to the context and interpretation of the audio-recorded information and assist researchers to recall factors in a situation that may be salient during data analysis (Gray et al 2017:685; Polit & Beck 2017:523). The researcher observed that the participants listened attentively. Several said "hmmm" and some took a moment or two to think about and concentrated on questions.

At times the researcher paraphrased in order to clarify or verify what was said. Towards conclusion of the interview, the researcher asked for the respondents' about participating in the study. Most of the respondents stated that they were glad to have participated in the study which enabled them to express their views. The participants appeared

interested and confident and relaxed throughout the interviews. The researcher thanked the respondents and concluded the interview. In qualitative studies, data saturation is important (Brink et al 2018:124). Data saturation is achieved when no further information emerges during interviews. Data saturation was reached after 8 interviews, but the researcher nevertheless conducted all 13 interviews.

#### *4.4.7.2 Quantitative data collection*

Permission to conduct the second phase of the study had been obtained from the PNCs in the qualitative phase. The researcher therefore contacted the principals, vice-principals and research coordinators at the selected PNCs via e-mail to request a date for information sessions with the educators. The researcher attached the letter of permission to the request. Data was collected between January 2020 and October 2020 from the participants who complied with the inclusion criteria and consented to participate. The process took longer due to challenges because of preparations taking place in the curriculation process and adjustment levels during COVID-19. Table 4.5 presents the quantitative data collection dates for the selected PNCs.

**Table 4.5: Quantitative data collection dates for the selected PNCs**

| PSU | SSU (College) | Data collection dates |
|---|---|---|
| Northwest College of Nursing | SSU 1 | 14/01/2020 |
| Northwest College of Nursing | SSU 2 | 15/01/2020 |
| Free State School of Nursing (FSSON) | SSU 3 | 09/09/2020 |
| Free State School of Nursing (FSSON) | SSU 4 | 10/09/2020 |
| Free State School of Nursing (FSSON) | SSU 5 | 06/02/2020 |
| Limpopo College of Nursing (LIMCoN) | SSU 6 | 21/08/2020 |
| Limpopo College of Nursing (LIMCoN) | SSU 7 | 24/08/2020 |
| Limpopo College of Nursing (LIMCoN) | SSU 8 | 28/08/2020 |
| Limpopo College of Nursing (LIMCoN) | SSU 9 | 28/08/2020 |
| Gauteng College of Nursing (GCoN) | SSU 10 | 24/02/2020 |
| Gauteng College of Nursing (GCoN) | SSU 11 | 01/10/2020 |
| Gauteng College of Nursing (GCoN) | SSU 12 | 24/02/2020 |
| Gauteng College of Nursing (GCoN) | SSU 13 | 10/10/2020 |

The questionnaires were distributed to the selected PNCs. The principals, vice-principals and research coordinators assisted the researcher to distribute the questionnaires and collect data. The principals, vice-principals and research coordinators all had basic research skills and facilitated research at their colleges. The researcher trained them on the questionnaire to answer participants' questions and provide clarity on the questionnaire. Appointment dates for information sessions for each college were

confirmed according to the educators' availability and at times convenient for them. The participants were recruited from their respective PNCs and information sessions were provided to ensure an adequate sample size.

The total accessible target population of 584 educators were requested to be involved in the study; 389 questionnaires were distributed, and 243 were returned. From the questionnaires returned, 34 were spoiled and 209 were considered adequate for representativeness. The response rate was 62% which is considered adequate. The critically salient aspect of a probability sample is that it should exactly represent the population which is drawn (Fox & Bayat 2007:61). In the PNCs, the principals or research coordinators accompanied the researcher to the arranged information session venues. The participants assembled in the auditorium or in staff rooms.

The educators were informed beforehand of the time and were available for the information session. The researcher brought along two envelopes containing a set of information leaflets with detachable consent forms and a questionnaire to explain to the participants. The researcher also provided two separate boxes clearly marked 'consent forms' and 'questionnaires'. Both boxes were sealed and had an opening in the lid for the folded consent forms and questionnaires. The researcher was introduced to the participants by the research coordinator. After greeting the participants, the researcher and research coordinators or principals distributed the information leaflets to the participants. The researcher then explicated the study purpose and significance that coerced participation was unacceptable, and they could abandon their involvement in the study whenever they desired so.

Their confidentiality and anonymity were safeguarded through non-disclosure of their names in the questionnaires, which were designed for anonymous completion by participants (Polit & Beck 2017:141). Moreover, the data collected would be kept confidential and locked for safety, with only the researcher, the statistician and the researcher's supervisor having access to the data. The participants were then allowed to ask questions before signing informed consent. The researcher duly alerted participants that the principals or research coordinators would distribute the questionnaires to them. The questionnaire had a covering letter which explained the purpose of the study and full instructions were given on how to complete the questionnaire and not provide their names. The completion time was given as 30-45 minutes.

The research coordinators and principals assisted with the data collection. They reported that the participants completed the questionnaire within 35 minutes and deposited the questionnaires they completed and the signed consent forms in the respective marked boxes. The research coordinators and principals sealed the boxes. Data collection did not take place as planned due to the challenges of accessing the educators imposed by the COVID-19 pandemic and its induced restrictions on interprovincial movement and closure of colleges when data-collection had been scheduled already. Consequently, the researcher made alternative arrangements to email the remaining consent forms and questionnaires to individual educators.

The researcher then obtained due participant permission to obtain their email addresses and office telephone numbers from the principals. The participants were contacted telephonically, and information session dates confirmed. The researcher therefore had to visit various PNCs at different times due to the curriculation process and the COVID-19 pandemic regulations on the total number of staff allowed to return. Information sessions were held with smaller groups of 3 (three) could be reached at each information session. The participants were permitted to complete the questionnaires and return them by post. The data was stored safely, marked according to the PNC names and date of data collection, and kept locked safely for access by the researcher only.

### 4.4.8 Ethical considerations related to data collection

Ethics is concerned with matters of right and wrong. Where study participants are involved, maximum care ought to be taken to ensure protection of their rights (Polit & Beck 2012:748). Babbie (2013:62) avers that researchers ought to observe standards and rules consistent with ethical conduct and also ensure safety of their subjects. Accordingly, due permission was obtained for undertaking the study by the HSREC, while informed consent was granted by participants (Brink et al 2018:29; Polit & Beck 2012:748). The following ethical principles (overleaf) were adhered to.

#### *4.4.8.1 Right to autonomy*

The right to autonomy (self-determination) accrues from the notion of respect for persons, which stipulates that individuals have the right to decide whether or not to be involved in a study without any consequential penalty, risk, or prejudicial treatment meted against them (Burns & Grove 2009:181). The right to self-determination was upheld by informing

them of their right to uncoerced participation, and the right to discontinue whenever they viewed such withdrawal ac correct.

#### *4.4.8.2 Beneficence*

Beneficence (the right to be protected from harm and discomfort) accrues from the ethical principle that individuals should desist from doing any harm (Burns & Grove 2009:190). As such, researchers are obligated to protect their subjects from undue harm and discomfort (Polit & Beck 2012:152). In this regard, no physical, social, or emotional threat of discomfort or harm faced the participants, who were assured that the obtained information would not be used against them or divulged in any form. The researcher envisaged no risks associated with participation in the study. The overall reward or benefit accruing from this study is in its contribution with development of a support model for the implementation of a R174 programme and the new qualifications at PNCs in South Africa.

#### *4.4.8.3 Justice*

The justice principle entails fair treatment, privacy, anonymity and confidentiality. Accordingly, participants were selected and treated with fairness. Anonymity was ensured by providing no names or identifying information. They were informed of the study purpose and significance, after which they signed informed consent prior to participation. Interviews were held in a private room which was free from interruption and disturbance and at a time convenient for the participants (Polit & Beck 2012:156). The questionnaires were completed privately with no names provided. The researcher kept all the data in a restricted safe place accessible only to the researcher (Polit & Beck 2012:158).

### 4.4.9 Data analysis

Analysing data is initiated with data organisation first (Gray et al 2017:675). The intention of data analysis is to organise, structure, synthesise, and allocate meaning from the acquired data (Polit & Beck 2017:530). For Brink et al (2018:170), analysing data also involves a methodical ordering, categorisation, manipulation, description, and summarising data meaningfully (Polit & Beck 2012:725). Meanwhile, Brink et al (2018:181) add that analysing data analysis is emblematic of methodical recognition of patterns, systematising and describing data in a detailed manner. During data analysis

researchers formulate themes and categories from the acquired data with the support of more information added (Creswell 2014:45; Polit & Beck 2012:557).

In qualitative studies, data analysis entails the reduction and organisation of data to ensure effective responses to the research questions by deriving meaning from analysed data (Gray et al 2017:675). The researcher analysed the qualitative data and utilised SPSS Version 26 programme to analyse the quantitative data (see Chapter 5 for full discussion). For quantitative studies, analysing data involves the utilisation of data conversion techniques in numerical form and subjecting such data to statistical analysis (Babbie 2013:557; De Vos et al 2011:73). In this study, the qualitative and quantitative data were analysed separately (Creswell 2014:227).

In phase 3, the findings were utilised to develop a support model for implementing the new qualifications. Figure 4.2 illustrates the two phases of data analysis.

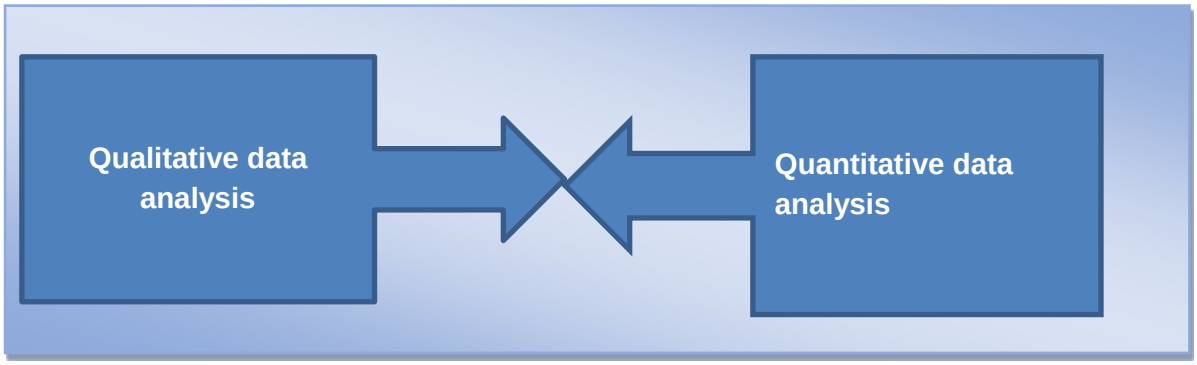


**Figure 4.2: Two phases of data analysis**

#### *4.4.9.1 Qualitative data analysis*

The researcher transcribed the audio-recorded interviews verbatim and immersed herself in the data by reading the transcripts, followed by analysing qualitative data through Tesch's eight-step method (Creswell 2014:198; Grove et al 2013:280). Accordingly, the researcher undertook the following:

- First reading all transcriptions meticulously to obtain a holistic sense.
- Picked up one document at a time to deduce underlying meanings. Repeated the same with other documents and noting important thoughts.
- Listed all pertinent topics in the documents, and clustering similar topics into main, novel, and redundant topics.

- Abbreviated and coded the topics next to relevant text segments.
- Described the topics and translated them into categories.
- Reduced the category list into groups of interrelated topics.
- Abbreviating and listing each category alphabetically.
- Assembled data categories and performed initial analysis.

The researcher used an independent coder for confirming the codes. Four themes and fourteen (14) subthemes emerged from the data, whose analysis and interpretation is discussed in Chapter 5.

#### *4.4.9.2 Quantitative data analysis*

The researcher was assisted by the statistician to analyse quantitative data by using the SPSS Version 26 statistical programme. The researcher used frequencies, exploratory factor analysis (EFA) and descriptive statistics and presented the results in diagrams and charts. Chapter 5 outlines the data analysis and interpretation, and findings in detail.

## 4.5 PHASE 3: DEVELOPMENT OF THE MODEL

The researcher used the qualitative and quantitative findings to develop the support model for the implementation of the new qualifications. Concept analysis was applied to identify main concepts in order to clarify and distinguish its definition and examine its characteristics and attributes. Walker and Avant's (2011:160) recommend the use of the following eight steps method of concept analysis in model development which are discussed in detail in Chapter 7.

- Selecting a concept.
- Determine the analysis purpose.
- Identifying all conceptual uses.
- Determining the concept's defining qualities.
- Identifying model related, borderline, and contrary cases.
- Identifying antecedents and aftermaths.
- Identifying empirical referents or ways to measure the concept.

The analysis of the concept will give clarity and further be integrated as composite blocks of the model (Dickhoff, James & Wiedenbach 1968). The support model should assist principals, vice-principals, and educators at PNCs to implement the R174 programme.

## 4.6 RIGOUR OF THE STUDY

### 4.6.1 Data quality in mixed methods approach

Data quality for the qualitative phase was ensured through validity and reliability. The quantitative phase data quality enhanced trustworthiness was utilised to ensure rigorousness of the chosen mixed method study.

#### *4.6.1.1 Data quality in the quantitative phase*

##### *4.6.1.1.1 Validity*

The data acquisition tool's face and content validity were corroborated by a statistician, related literature on new the implementation of the new nursing qualification was reviewed. The data collection instrument was pretested to effect changes on grammar and items that were challenging to understand. The researcher ensured content validity through presenting the data collection instrument to supervisor and the statistician who found the tool suitable for the study.

##### *4.6.1.1.2 Reliability*

Brink et al (2018:155) allude to reliability as the data instrument yielding consistent results if repeated over time. The researcher ensured reliability through pre-testing of the data instrument to determine the strength and weakness of the questionnaire. The outcomes of the qualitative phase, and existing relevant literature provided a base when developing the questionnaire.

#### *4.6.1.2 Data quality in the qualitative phase*

##### *4.6.1.2.1 Trustworthiness*

Trustworthiness of the qualitative data was applied through the credibility, dependability, confirmability, and transferability measures.

##### *4.6.1.2.2 Credibility*

Credibility is a means to evaluate integrity and quality of qualitative findings for generating confidence in their truthfulness (Polit & Beck 2012:724). In addition, credible findings instil and reconcile participants' views and their reconstruction and representation by the researcher (Moule & Goodman 2014:455). A study's credible findings are reflected in the authentic participant experiences and perceptions (Moule & Goodman 2014:455).

The researcher ensured credibility by establishing trust, rapport through prolonged engagement and triangulation (Polit & Beck 2012:589-594). Prolonged engagement involved the allocation of enough time to understand participants' views (Polit & Beck 2012:589). Triangulation involved the verification of information through different sources for increasing credibility (Polit & Beck 2012:589). The researcher took notes of her observation of non-verbal cues in the interviews. Literature sources, the independent coder and the researcher's supervisor were for data authentication.

##### *4.6.1.2.3 Dependability*

Dependability is the methodical confirmation of data integrity and stability over conditions and time (Moule & Goodman 2014:457; Polit & Beck 2012:591). Dependability of the study findings was optimised through dense description, categorisation, and coding of data. Additionally, interview and other related materials were safely kept and only accessed by the researcher (Polit & Beck 2012:591).

##### *4.6.1.2.4 Confirmability*

Confirmability is premised on integrity of qualitative findings intended to establish neutrality or objectivity in interpretation of the data (Moule & Goodman 2014:455; Polit & Beck 2012:585). The researcher was objective throughout the study by not publicly

pronouncing on her personal views regarding the study and its outcomes. The information obtained would be kept safely for future researchers' reference. The confirmability measures of credibility, dependability and transferability were applied in this study (Moule & Goodman 2014:466).

#### *4.6.1.2.5 Transferability*

Transferability is generalisation of findings (especially in quantitative studies) based on the extent of their transferability or applicability in other contexts (Moule & Goodman 2014:466; Polit & Beck 2012:585). For Streubert and Carpenter (2011:49), transferability reflects the probability of the study findings' meaning and relevance in other situations of similar verisimilitude. In this study, the researcher explicated the study background, research design and methodology, including the data acquisition and analysis. Other researchers will be enabled to utilise the findings of the current study for future research.

## 4.7 CONCLUSION

This chapter has described the research design and methodology and prominently explicated the preferred sequential mixed methods design in order to detail an appropriate context for the developed a support model for implementing the new nursing qualifications framework. Chapter 5 presents discussions on the analysis and interpretation of the acquired data as the pivotal focus of the findings.

# CHAPTER 5

# DATA ANALYSIS AND INTERPRETATION, AND FINDINGS

## 5.1 INTRODUCTION

In this chapter, the researcher discusses data analysis and interpretation as well as the findings of the two (2) phases of the study, with reference to the literature review in Chapter 2.

## 5.2 DATA ORGANISATION AND MANAGEMENT

Data should be protected, and it is the researcher's responsibility to store an organised data in a well-protected area (Gray et al 2017:268). Accordingly, the original raw data were prepared as hardcopy file folders for the qualitative and the quantitative data separately for analysis by the researcher. The original files were kept safely in a locked file drawer, furthermore data was also scanned and stored on an external storage disk, and safely stored in a locked safe. According to the stipulated requirements of management of data, the researcher undertook to store the original files and the scanned documents for a specified period of time before being permanently destroyed. In the qualitative phase, the researcher checked for the completeness of the interview transcripts and field notes before scanning them into electronic folders. The files were consistently and clearly labelled according to the allocated identity codes, dates and institutions for timeous retrieval. One of the copies was put away for safekeeping and the other was kept handy for utilisation (Paton 2002:440).

## 5.3 DATA ANALYSIS

Data analysis is the synthesis and systematic organisation and of research data (Gray et al 2017:675; Polit & Beck 2012:725). The researcher, with the assistance of a qualified statistician analysed quantitative data using the SPSS version 26 program and further analysed qualitative data from the interviews.

### 5.3.1 Phase 1: Qualitative

Phase 1 answered the following two questions:

- What are principals' and vice-principals' views and perceptions with regards to PNCs' level of preparedness for the implementation of the new qualification?
- What strategies and activities did the principals' and vice-principals' utilise for the implementation of the new qualification?

To respond to the two questions on Phase 1, the researcher collected the qualitative data to identify and explore the strategies and activities utilised by the principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications.

### 5.3.2 Phase 2: Quantitative

Phase 2 the following two questions:

- What are nurse educators' views on PNCs' preparedness for implementation of the new qualification?
- What strategies and activities did the nurse educators utilise for the implementation of the new qualification?

To respond to the above two questions, the researcher collected the quantitative data describe and explore nurse educators' perspectives on the preparedness of PNCs for implementation of the new qualifications as well as to determine the strategies and activities utilised by the nurse educators for the implementation of the new qualifications. The findings of the data analysis are presented separately for the two phases.

## 5.4 QUALITATIVE FINDINGS

**Phase 1: Qualitative**

Phase 1 answered the following two questions:

- What are principals' and vice-principals' views and perceptions with regards to PNCs' level of preparedness for the implementation of the new qualification?
- What strategies and activities did the principals and vice-principals utilise for the implementation of the new qualification?

To respond to the two questions on Phase 1, the researcher collected the qualitative data to identify and explore the strategies and activities utilised by the principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications. The PNCs' and participants' demographic profiles and the findings from the interviews are discussed next.

### 5.4.1 Demographic profiles

The researcher's demographic findings are the selected PNCs' and the participant principals' and vice-principals' profiles.

#### *5.4.1.1 PNCs*

Thirteen (13) selected PNCs from four (4) provinces, namely Limpopo, Gauteng, North-West and Free State, were selected as study sites, and thirteen participants consented to participate in the study, Table 5.1 below summarises the PNCs' demographic details.

**Table 5.1: Selected PNCs' demographic profile**

| Province | PNC's name | College capacity | Principal | Vice-principal | N |
|---|---|---|---|---|---|
| North-West | PNC 1 | 600-699 | 0 | 1 | 1 |
| North-West | PNC 2 | 700-799 | 1 | 0 | 1 |
| Free State | PNC 3 | 900-999 | 1 | 0 | 1 |
| Free State | PNC 4 | 700-799 | 1 | 0 | 1 |
| Free State | PNC 5 | 600-699 | 1 | 0 | 1 |
| Limpopo | PNC 6 | 900-999 | 1 | 0 | 1 |
| Limpopo | PNC 7 | 900-999 | 1 | 0 | 1 |
| Limpopo | PNC 8 | 500-599 | 1 | 0 | 1 |
| Limpopo | PNC 9 | 900-999 | | 1 | 1 |
| Gauteng | PNC 10 | 1200-1299 | 1 | 0 | 1 |
| Gauteng | PNC 11 | 1200-1299 | 1 | 0 | 1 |
| Gauteng | PNC 13 | 300-399 | 1 | 0 | 1 |
| Gauteng | PNC 12 | 1300-1399 | 1 | 0 | 1 |
| **Total** | | | **11** | **2** | **13** |

The above Table 5.1 depicts demographic profile of PNCs in four (4) provinces, whereby Gauteng Province has the majority of four (4) Principals and no Vice Principal, followed

by Limpopo Province with three (3) Principals and one (1) Vice Principal, as well as Free State Province with three (3) Principals and no Vice Principals. The minority of two (2) Principals was North-West Province who also had one (1) Vice Principal.

#### *5.4.1.2 Participants*

Table 5.2 below depicts the participants' demographic profile which included their gender, nationality, race, age, educational qualifications, employment status and years of management experience.

**Table 5.2: Participants' demographic profile**

| Criterion | Characteristics | Frequency | Percentage |
|---|---|---|---|
| Gender | Female | 11 | 84.61 |
| | Male | 2 | 21.43 |
| Nationality | South African | 13 | 100.0 |
| | Non-South African | 0 | 0.0 |
| Race | White | 1 | 7.69 |
| | Black | 11 | 84.6 |
| | Coloured | 0 | 0.0 |
| | Indian | 1 | 7.69 |
| | 35-40 | 0 | 0.0 |
| | 41-45 | 1 | 7.69 |
| | 46-50 | 3 | 23.0 |
| | 51-55 | 2 | 15.38 |
| | 56-60 | 4 | 30.76 |
| | 61-65 | 3 | 23.0 |
| | Post-graduate | 10 | 76.92 |
| | Master's | 2 | 15.38 |
| | PhD | 1 | 7.69 |
| Employment status | Permanent | 12 | 92.30 |
| | Contract | 1 | 7.69 |
| Years of experience in managing the institution | 0-5 years | 0 | 0.0 |
| | 6-10 years | 2 | 15.38 |
| | 10-15 years | 5 | 38.46 |
| | 16-20 years | 6 | 46.15 |

The majority of the participants, 84.61% (n=11) were female and 21.43% (n=2) were male. All participants 100% (n=13) were South African, whereby, the majority of 84.61% (n=11) were Black; 7.69% (n=1) were White and 7.69% (n=1) were Indian. Based on the age distribution, the majority of 30.76% (n=4) were between the ages 55-60 years old; followed by 23% (n=3) who were between the ages 46-50 years; only 23% (n=3) participants who were between 61-65 years old; 15.38% (n=2) were between 51-55 years, and only 7.69% (n=1) between the ages 41-45 years old. The majority of 76.92%

(n=10) had postgraduate qualifications; followed by 15.38% (n=2) who had a Master's degree, and only 7.69% (n=1) had a PhD degree. Based on the employment status, the majority of 92.30% (n=30) were permanent and 7.69% only (n=1) participant who was on contract hence temporary. The majority of 46.15% (n=6) had 16-20 years of management experience; followed by 38.46% (n=5) who had had 10-15 years of management experience and the minority of 15.38% (n=2) had 6-10 years of management experience.

### 5.4.2 Themes and sub-themes

Four (4) themes and 14 sub-themes emerged from the data analysis. Table 5.3 below, lists the themes and sub-themes of the PNCs' preparedness for implementation.

**Table 5.3: Central storyline, themes, and sub-themes of PNCs' preparedness for implementation of the new qualifications**

| **Central storyline** | Public Nursing colleges received support during the curriculation of the new programmes from different bodies that govern accreditation of study programmes and experienced challenges |
|---|---|
| **Themes** | **Sub-themes** |
| 1. Preparations for the implementation of the new qualifications | 1.1 Strategies and activities in preparation for the implementation of the new qualifications<br>1.2 Level of readiness and preparation for implementation of the new qualifications<br>1.3 Staff development strategies to implement new qualifications<br>1.4 Programme coordinators for guiding staff members |
| 2. Support provided to PNCs in preparation for implementation of the new qualifications | 2.1 Support from programme accreditation bodies (DOH, SANC, CHE, NEPI, CNO)<br>2.2 Collegial and management support at various levels of the PNCs |
| 3. Challenges experienced during preparations to implement the new qualification programmes | 3.1 Human resource challenges to implementing new qualifications<br>3.2 Infrastructural and material constraints expected to affect the implementation<br>3.3 Service and logistical problems which might affect implementation<br>3.4 Institutional challenges at initial and working stage of recurriculation of new programmes |
| 4. Explanation of processes required during preparations to implement the new qualification programmes | 4.1 Procedures for managing the setting, storing, writing and providing feedback on tests and examinations<br>4.2 Situational analysis and memorandums of understanding (MOU's) of identified clinical areas for clinical placement<br>4.3 Established quality assurance systems of PNCs<br>4.4 Communication channels and procedures during implementation |

#### *5.4.2.1 Theme 1: Preparations for the implementation of the new qualifications*

The preparations and activities for the implementation of the new qualifications were explained by the participants. The activities included consultations and meetings with the DOH, SANC, CHE, NEPI, and CNO as well as the establishment of curriculum teams and workshops for capacitating staff.

##### *5.4.2.1.1 Strategies and activities in preparation for the implementation of new the qualifications*

The participants described the strategies and activities in preparation for the implementation of the new qualifications. According to participants:

> **P11:** We are to divide the existing academic personnel to manage the new programmes and the students that are still busy with the legacy qualification as it is phasing out. We got support from DOH … and we are busy upgrading the library getting the high-fidelity simulation model. The curriculums were submitted to the CHE and SANC on the 31st of August. The CHE acknowledged receipt of our document … but from the SANC no feedback yet … The priority envisaged programme will be R.171 for the year 2020, and others will follow, but I can attest that other colleges are at 25% whilst some are at 50%.
>
> **P4:** The progress with regard to the two programmes is that we have submitted them both to the SANC and CHE for accreditation. As for the Bachelor programme, we have not yet submitted as it was not indicated as one of the priority programmes now, and we do not have sufficient staff with Master's qualifications.
>
> **P12:** We are in the process of preparing for offering the programmes. The preparations are in terms of preparing the curriculum itself and improving college infrastructure and capacitating the staff so that they can be in a position to offer the new qualifications programmes. For instance, we are having educators who are currently busy with their master's degree so that when the time comes to offer even the Bachelor's programme, they should or most of them should have completed their studies.
>
> **P1:** We had to send lecturers to the University for them to be prepared with regard to taking on the new qualification as we do not have lecturers with a Master's degree. We are having about 6 lecturers currently busy with their Master's degree, on a part-time basis. A team has been developed, namely the Curriculum Development Team, where they are busy with programme update and they are updating themselves with all the information for curriculum development.

The participants had meetings and consulted with different national bodies that govern programme accreditation. Following are the statements by the participants based on the consultation with different national bodies:

> **P1:** The team attended the curriculum meetings at national level … with the people who coordinate workshops, meetings, and updates as well as mentoring the progress.

> **P2:** We got support from the National DOH, SANC and CHE. The SANC sent information, and we had a nursing indaba organised by SANC which we attended. The CHE also supported us, I can remember around 2017, we were in a meeting with SANC and CHE was present and they were trying to allay the fear of the colleges as you know. We attended those CIPASA meetings three times per year. In those meetings, SANC was sometimes invited and the National DOH so that they could engage with the college principals as well as the nurse educators. There has been a lot of support until we were able to come up with the curriculum for the R171.

> **P3:** The group known as curriculum champions have been trained by a certain professor from a university with regard to curriculum development. The college provided the funding for the group to meet, as well as the National Department of Health. We developed the curriculum documents and also policies that will be used to develop the new curriculum.

> **P8:** We were guided by the current policies in place. I must indicate that the level of our understanding of curriculum development based on the legacy qualification influenced our progress, and we were able to develop and conclude it.

The participants indicated that engagement with national bodies that govern accreditation was experienced with mixed reactions on the submitted programmes. There were both negative and positive responses. Following are the participants' responses:

> **P13:** We got some feedback from SANC and CHE and the SANC's non-compliance areas were re-addressed, and feedback was sent back around September. We also got a letter from CHE, following acknowledgment of receipt of initial submission. We also did self-correction.

Although some participants acknowledged the engagement to some extent, most indicated lack of engagement from different bodies. According to participants:

> **P9:** At the SANC there were some challenges on the outgoing and incoming council, delay in the appointments, and the handover. Because of all these changes, things did not go the way they were supposed to. Feedback on submitted accreditation documents took long.

> **P10:** There was no feedback on the submitted documents, and no appointment for possible accreditation was set from SANC. The CHE acknowledged the receipt of uploaded documents, and a prescribed fee for accreditation was set. However, no dates have been established with us yet.

In their analysis of nursing education reform in South Africa, Blaauw et al (2014:9) reported the slow-moving process of phasing in the new qualifications which was as a result of poor collaboration between the accreditation bodies. Furthermore, recommendations were suggested by Blaauw et al (2014:24) to the SANC in collaboration with the National Department of Health, CHE and SAQA to expedite the processing and implementation of the new Nursing Qualifications' Framework and appropriate transitional arrangements, such as provision of quick feedback. Botma (2014:23) found that a lack of accreditation certificates from the accreditation bodies in Lesotho negatively affected the implementation of their new curriculum for nursing.

The participants indicated that the establishment of a curriculum team (Champions) in the colleges was due to the consultation and meetings with different national bodies. Different structures including the NDOH, and provincial department of health funded the curriculum teams to attend workshops, whose purpose was to capacitate the curriculum teams on issues of the curriculum. On that note, following are the participants' responses:

> **P2:** There were people that were nominated from the sub-committee to represent the college at the national level in terms of the actual curriculum development. We called them "the champions.

> **P8:** As a college, we have appointed a curriculum committee called the champions. The group consists of the vice-principals from the … colleges (sub campuses). The vice-principal from one sub campus is the chairperson of the curriculum committee, and there are additional members in terms of educators from other sub campuses.

> **P1:** The Curriculum Development Team is composed of the Director of Nursing who is heading the team of 5 lecturers from each college. The lecturers were chosen on the basis that about four have Master's qualifications, and the other six are busy, hoping that by 2020 they will have completed their programme to participate in the recurriculation of programmes.

*5.4.2.1.2 Level of readiness and preparation for implementation of the new qualification*

The participants indicated that some PNCs were ready for the implementation of the new qualifications, but others were still in the process of preparations for the implementation of the new qualifications. According to participants:

> **P4:** With regard to the designed programme, remarkable progress is noted as we as a college managed to compile and submit R171, R169 to the SANC and CHE. The Advanced Diploma in Midwifery (R121) is only moderated and still to be submitted to the SANC and CHE, as we are also still awaiting the finalisation and publishing of the new regulations.
>
> **P13:** My experience over the implementation of the new qualification was very difficult and yet interesting at some stages. We were about to upload the curriculated programmes to the SANC and CHE around August 2018, when our CNO advised us that we cannot upload as independent colleges, looking at the cumbersome requirements concerned with uploading to the CHE & SANC. It is still in the early phase of its onset, we are still busy with the process.

Keating (2014:44) points out that meeting the requirements of regulatory and accrediting agencies should be consistent with the preparation for implementation of new qualifications. As such, SANC recommended that the National Department of Health should design some strategies to enhance and expedite the preparation of phase-in of the new qualification SANC (2018:7).

#### *5.4.2.1.3 Staff development strategies in preparation of staff to implement the new qualifications*

The participants averred that staff development strategies that were employed in preparing staff members for the implementation of the new qualifications. The strategies included giving staff members acting positions and capacitating staff through acquiring of necessary qualifications, granting of study leaves and bursaries, mentoring and workshops. According to participants:

> **P1:** We have to send lecturers to the University to prepare them with regard to taking on the new qualification as we do not have lecturers with a Master's degree. We have about 6 lecturers currently busy with their Master's degree, on a part-time basis.
>
> **P8:** So, we are planning the process of transfer and staff development. For example, if some are not willing to do a master's degree they will have to be transferred to an institution where they could be accommodated in terms of qualification band. The ones prepared to do the programme should be placed at our campus. So, the first thing is to look at the exchange strategy.
>
> **P4:** Yearly we complete a skills development plan or identified needs of all personnel and it is sent to the DOH. The Department is very supportive in the development of staff. The needs get prioritised and there are also bursaries; for example, this year there is one person who is studying … At the moment there are

> currently lecturers that are doing Master's degrees through distance learning. There is a policy on research related or clarifying time and leave for such.

Bvumbwe and Mtshali (2018:1) shared similar sentiments about the strategies that need to reform the training of nurse educators and clinical preceptors to assist in the implementation of the new qualification programme. Botma (2014:23) noted that the Lesotho nursing profession used accreditation criteria to transform a traditional nursing curriculum to a competency-based in developing the profession. Zwane and Mtshali (2019:1) indicated the need of strategies in reforming the training of nurse educators and clinical preceptors in assisting with the implementation of the new qualification programmes.

*5.4.2.1.4 Programme coordinators to guide staff members*

The participants indicated that programme coordinators were guiding staff in the implementation of the new qualifications. According to a participant:

> **P10:** The programme coordinators held meetings, worked together on an activity so there is a team that is working on teaching and learning activities. They met and discussed, and then gave feedback to the directorate, principals. The college has the curriculum committee meeting that the colleges … will work together for the development of the programmes. However, we individualised the curriculation at some stage, but we submitted as one campus. The champions that were trained by the NDOH and CHE shared an overview of how to upload. The champions were identified to work solely on the curriculum as much as they can co-opt for different activities, such as policy development.

Spector, and Odom (2012:40) highlighted the important role played by the curriculum committee who championed the development of nursing education. Furthermore, they indicated the role of curriculum committee members who contributed to coordinate activities of the new programme.

### *5.4.2.2 Theme 2: Support provided to PNCs in preparation for implementation of the new qualifications*

The participants were divided in their experience of collegial, management, provincial DOH, SANC, and CHE support. Some indicated adequate support while others indicated inconsistent support. The support provided is discussed in the following sections.

*5.4.2.2.1 Support from bodies responsible for accreditation (DOH, SANC, CHE, NEPI and CNO)*

The participants indicated various levels of support from the provincial DOH, SANC, CHE, NEPI and CNO, some of the participants indicated adequate support; others indicated limited support, and the rest indicated that they received no support. The anticipated support was regarding the development of study guides, curriculation, increasing different staff categories, and development of staff. According to participants:

> **P1:** The team attended the curriculum meetings at the national level as part of support for equipping the lecturers. There are people at the national level who coordinate workshop, meeting, and updates as well as mentoring the progress. All the provinces are included in that national level.
>
> **P4:** The CHE gave support in terms of teaching the colleges how to upload the curriculum. There were regular meetings of principals with the CNO, and the state of readiness report was also compiled which included infrastructure plans were submitted to the Director General Office, HOD of the province for assistance. The CHE also gave a workshop in 2016 during the first submission.
>
> **P8:** We haven't had any contact with the accrediting bodies so I can't say we have support.

Abdullahi et al (2019:419) indicated that in Nigeria, the development of the nursing profession was enforced by the support received from the National Universities Commission, National Board of Technical Education and National Commission of Colleges for Education. Furthermore, nursing profession was affected by the lack of government support which also affected the development of nursing programmes.

In South Africa, the support from the SANC and CHE determined the effectiveness of integrating PNCs into higher education (Zwane & Mtshali 2019:1). According to White (2017:185), the political forces were a challenge to the abilities of policymakers, educators, health system administrators, and nurse leaders to influence change in England and United States. The two countries had to strengthen the nursing workforce through improving education and aligning policies for smooth transition to the baccalaureate degree for entry to practice.

*5.4.2.2.2 Collegial and management support at various levels*

The participants indicated that collegial and management support at various levels of the PNCs enhanced the implementation of the new qualifications, whereby colleges and universities assisted each other during curriculation and with aspects of the new qualifications. This support was facilitated by campus managers. Following are the statements by the participants:

> **P4:** The study guides are compiled, peer reviewed, and we got support from the … University and are waiting for them to be published.
>
> **P6:** At first the curriculation process was done blindly. Then a certain professor from a university assisted once or twice and the experienced campus principals … were able to manage, with the assistance of the educators selected.

Collaboration and support between universities and colleges ensures successful integration of Public Nursing Colleges into the higher educational system (Zwane & Mtshali 2019:1). Direko and Davhana-Maselesele (2017:1) reported the continuous collaboration between the universities and colleges in support of integrating the public nursing colleges into higher institutions, and as well as producing more nursing staff to support the new qualification. Similarly, Keating (2014:33) indicated the ultimate responsibility by faculty members to collaborate with other disciplines and share best practices within colleges and universities in order to meet the ever changing and complex health care systems, technology and the process of accreditation.

### *5.4.2.3 Theme 3: Challenges experienced during preparations to implement the new qualification programmes*

The participants averred the experience they had with human resource, material and infrastructural constraints, and service and logistical problems in the implementation of the new qualifications' programmes.

*5.4.2.3.1 Human resource challenges*

According to the participants, human resource challenges were as a result of the shortage of suitably qualified lecturers and support staff to implement the new qualifications. The challenges caused by the application and creation of old and new posts due to the existing moratorium and lack of funds. Other problems mentioned by participants were staff

related that were anticipated to affect the implementation of new qualifications, such as lack of Occupational Specific Dispensation (OSD) which might lead to poor interest by nurse educators to work in this space.

The participants further indicated a lack of or limited number of qualified lecturers and support staff to assist in the implementation of the new qualifications. According to participants:

> **P8:** From the CHE I identified that we are going to have serious challenges, although we have people with a Master's degree … it is not a clinical Master's degree as required. We don't have educators with a Master's degree
>
> **P10:** We have got challenges in preparing for the Bachelor's Degree because the offering of these programme will require the educators to have a qualification above that. They need to have a Master's degree, so that is where we are having challenges; however, educators are coming forward to register with universities. For instance, we are having educators who are currently busy with their master's degree, so that when the time comes to offer the programme most of them should have completed their studies.
>
> **P6:** The 16 educators are more experienced, and their qualifications range from Bachelor's, Master's to PhD degrees. Currently some are having a Master's degree, while others are currently busy with a PhD and only the other 4 with a diploma in nursing education are having 4 to 5 years' experience ready to be graded.

*5.4.2.3.1.1 Creation and application of old and new posts problematic resulting from the existing moratorium and lack of funds*

The participants indicated that the creation and application of old and new posts were problematic due to the existing moratorium and lack of funds, which affected the implementation of the new qualifications. According to participants:

> **P1:** The challenges were the moratorium over recruitment, but it seems like it was lifted as last month we advertised for about 11 posts for the two colleges to share, and we are awaiting the Provincial Health Department to approve the position.
>
> **P8:** The main challenge is the salary structure. The salary cannot cater to their needs, so they do not even consider applying. I think with the curriculated programme, the requirement for Master's degree is going to be more of a challenge. I am having 4 vacant positions, I am losing 4 in December, 3 retired, 1 resigned, and 3 contracts are terminated at the end of December
>
> **P4:** We do have nine vacant posts. Most personnel are lost due to retirement age, and others adventuring into new challenges … We have already had interviews

> and are waiting for HR to issue suitable candidates with an appointment letter ... the HR processes delay the appointment.

#### *5.4.2.3.1.2 Staff-related problems expected to affect the implementation of the new qualifications*

The participants indicated staff-related problems that could affect the implementation of new qualifications, such as lack of occupation-specific dispensation (OSD) at PNCs, leading to poor interest by nurse educators. According to participants:

> **P8:** The other challenge at this college is that we cannot recruit and retain educators due to salary structure (OSD), so we are losing people due to the salary structure and the possible growth over career path in clinical department promotions
>
> **P13:** The main challenge stems from the salary structure because we can't recruit particularly the experienced staff because the OSD has put them at a higher notch, and if they accept the positions at a college without teaching experience, they will then be downgraded salarywise.
>
> **P11:** We do not experience any challenges in recruitment, we do receive quite a number of applicants, up to getting potential candidates interviews conducted with success. However, our candidates do not accept the offer because of the salary structure ... It is frustrating as we cannot change the OSD policy. This affects the staff as everybody is stretched.

As indicated by Abdullahi et al (2019:415), the shortage of faculty members and poor staffing impacted the development of the nursing profession in Nigeria. However, Botma (2014:24) proffered that most nurses felt challenged about implementing the new curriculum which incorporated simulations and the use of technology in Lesotho. Similar findings were reported by Blaauw et al (2014:3) who indicated that NEIs poach and head hunt from each other, resort in hiring retirees on contracts, rather than promoting to hire newly qualified nurse educators. On the other hand, the latter situation is justified that the replacement for those who retire within the academic and clinical institutions is unavailable or non-existent due to financial constraints in the health sector, while the government remains adamant to serve the state funding on the expense of not creating posts in the nursing profession.

Furthermore, Kotze et al, (2013:2) argue that the causes of nurse educator shortage are well known, such as the compensation that is not competitive with practice settings; where there is attraction of the Occupation Specific Dispensation (OSD) and rural allowance,

retired nurses who are not replaced, and an insufficiently qualified nurse educator's cohort to teach in the new academic programmes.

#### *5.4.2.3.2 Infrastructural and material constraints expected to affect the implementation of new qualifications*

The participants referred to infrastructural and material resource problems expected to affect the implementation of the new qualifications, including the lack of transport to clinical practice; libraries; computer labs were unable to accommodate them, the space was limited; mentors for students were also limited, lack of kitchens for students; student accommodation was also limited, skills lab, data projectors, and staff offices. Technology-related problems to realise the 4th industrial revolution (4IR). According to participants:

> **P1:** We have one library which can accommodate fifty students and there is one under construction. We have a computer laboratory which accommodates 42 students ... Classrooms are small for a large number of students.
>
> **P8:** Our institution has serious gaps in infrastructural and material resources. Our library is quite small, and we need to expand it. Our computer centre can only take 20 computers. The library is small with a capacity of accommodating 6 computers. The library can take 10-12 students studying at a time. I do not have a separate study centre, so those are big gaps.
>
> **P6:** The campus is old; it was earmarked in 2014 for renovation. The process did commence but unfortunately, it is not yet completed. This poses a lot of challenges in terms of accommodation for our students, whereby they are being renovated but still incomplete. These classrooms have been renovated, they are complete, although there are no aircons, blinds, windows, and furniture. We are still not having projectors or Internet. We are also in need of a well-developed and equipped library. We also need a model's gadget, computers, and have e-learning programmes. The classroom sizes that we have are small, the sizes were increased up to 70 capacities, and to convert another classroom to establish a computer laboratory for our students. In the admin block, we are in the process of buying the exchange machine, whereby we contacted the IT person at the district who is willing to assist us, to ensure cabling of the whole admin block and have Wi-Fi connection as well as the computer lab for the students.

Abdullahi et al (2019:415) reported that lack of material due to poor funding affected the development of nursing programmes in Nigeria. In the North-West province, Direko and Davhana-Maselesele (2017:2223) found that the continuous challenges in resources in the nursing profession could be salvaged by facilitated interdependence, participation and sharing of resources with a healthy collaboration between hospitals, contributions, colleges and universities.

*5.4.2.3.2.1 Technology-related problems to realise 4IR*

The participants indicated technology-related problems such as a lack of devices for teaching and learning, Internet, WiFi, and a student information system to support e-learning. According to participants:

> **P8:** We do not have the student management system, and I believe there are none at all the Public Nursing Colleges throughout South Africa.
>
> **P4:** No e-books established as yet. The IT challenge includes WiFi due to financial constraints.
>
> **P13:** The biggest challenge was on the learner management info system. We are required to have one running. So, at the present moment, we outsourced a service provider. Our aim is to focus on looking at digitalising. If we can have a recruitment process fully online for selection and potential candidates, to write a computerised selection and also take a learner from registration to completion.

The use of medical technologies and other Information Computer and Technology facilities has been deliberated by Ralph et al (2014:13), who indicated the significant impact of technology in healthcare settings in Australia. While Christiansen et al (2018:570) reported that knowledge and skills that include the effective use of e-health technologies are critical determinants for nurses and the profession at large.

The aforementioned authors further indicated that technology advances such as telehealth and telemedicine, mobile devices, and information and communication technologies, are transforming the way health care is delivered, and is central to the national nursing strategy. The curriculum development in the nursing profession in Lesotho incorporated amongst others, training of nursing staff as well as equipping the classroom with ICT facilities to enhance the use of e-health (Botma 2014:23). It is further noted that NEPI assisted the nursing schools in Lesotho with the establishment of simulation and computer laboratories that were incorporated into the new curriculum.

*5.4.2.3.3 Service and logistical problems which might affect implementation*

The participants reported service and logistical problems which might affect implementation of the new qualifications in the colleges. These included lack of mentors in the clinical areas; lack of deliveries for midwives; lack of high-fidelity models; retiring

staff not replaced, and lack of readiness with other programmes. According to participants:

> **P1:** The clinical site for midwifery challenge of not having enough deliveries to cater for both colleges and university students, absenteeism which is not well managed, and by the time we find out we urge the students to make up the hours in order for them to have the required clinical hours. We also had unrest earlier due to students complaining of a shortage of lecturers, transport, and construction not getting completed as it affects their accommodation.
>
> **P5:** There are challenges ranging from a shortage of nursing personnel. The registered nurses cannot cope with the mentoring function, so the educators do accompaniment whilst they are also understaffed. So, it is not easy for them. Remember, after block they have scripts to mark, and they are also expected to go for accompaniment. The students are scattered in many hospitals.
>
> **P6:** We don't have clinical mentors, but we rely on the registered nurse teaching responsibility to mentor the students. The plan is that we collaborate with the hospitals and establish a clinical practicum team. We believe that these teams will improve the liaison of the college and the institution in terms of communication; clinical accompaniment needs of the students; challenges and make the clinical areas to be more conducive to learning.

In 2016, Mogano (2016:40) mentioned that transition of programmes and accreditation from old to new programmes and accreditation was essential to address the critical nursing shortages. The transfer of nursing training to only the Department of Higher Education and Training (DHET) had not yet taken place and PNCs were still waiting for amendments to the Nursing Act. Moreover, for the new programmes to have an impact on the nursing profession, newly qualified professionals need to be supported through a preceptorship or mentorship programme.

The participants referred to problems with the Management of Information System (MIS) with regard to implementation of the new qualifications. According to participants:

> **P1:** The student information system is the key issue. If it is not available, we may not be accredited.
>
> **P8:** We have serious challenges because our student affairs personnel consists of only, one student clerk. We do manual filing. We have one archive which was flooded the other day. The CNO has been in communication with the relevant department to try and set up this system nationally.
>
> **P10:** For record-keeping, there is the registry office which is unoccupied at the moment. The filing sections, are utilised by HR. It is always locked, and their records are labelled. There is also an office for student affairs. It is safe with

> cameras for monitoring. There is always one person who has access to it. The examination process is as follows: The examination paper is compiled in pencil and the HOD uses a stand-alone computer using a USB. Then the exam papers will be printed and then stored in the safe until written.

The use of Learning Management System is gaining its momentum within different professions, nursing included. There use of Learning Management System with Blended Learning has been inconsistent, especially that the two system provide different learning opportunities to the students (Sáiz-Manzanares, Escolar-Llamazares & González 2020:1589). Based on the above findings, the researcher is of the opinion that the use of LMS can assist in the implementation of the new programme within the nursing profession.

Similarly, the findings of the current study are deliberated by Posey and Pintz (2017:126), who reported that colleges has some potential in the using Learning Management System for scholarly developments to both students and educators. The Council on Higher Education (2000:20) indicated that there were insufficient information systems for higher education in South Africa. It is further highlighted that records should be properly managed to help higher education institutions in managing their information, efficiently and fulfil their mandate to protect them from litigation, preserve their corporate memory, and foster accountability and good governance.

#### *5.4.2.3.4 Institutional challenges at initial and working stages of recurriculation of new programmes*

The participants indicated that they faced challenges in the initial and working stages of recurriculation of the new programmes. According to participants:

> **P10:** I feel that there is still a need for more workshops, especially with clarification of new concepts, the approach, and this was spotted as there was a lot of discussion and debate. I really think the educators still need some workshops to thoroughly understand the changes involved.

> **P13:** We were under the impression that we would be given the national curriculum of which did not happen, and we were informed that we should start curriculating as provinces. This posed a challenge as we are operating as four independent colleges.

> **P10:** Nobody is an expert, the process was marked by trial and error, which incurred some costs and expenditure that were lost. When you start a process with no clear guidance and once in the process you are told, oh no! you should have

> done it this way that is a loss from resource utilised, money, paper, and time. Human resources that were assigned, namely champions, were commissioned from our personnel thus leaving others to manage. As I already mentioned that we are having vacant positions, the travelling of those committee members put a strain on the educators remaining behind. They had to meet at a common place which was necessary for consistency of members. Some people were not present in the meeting and others sent inconsistent members constituted quite a draw back on the programme. At the moment, due to our priority programme being R171, we will be able to offer in terms of our educators' qualifications, but further challenges will be the Bachelor's programme requirements. The other challenge is the educator attrition without replacement. Another challenge is curriculating the postgraduate diploma as we are still awaiting the finalisation and uploading on the SANC website.

Blaauw et al (2014:9) and Zwane and Mtshali (2019:2) found a lack of clarity and consistency in terms of policy direction regarding transitioning to higher education; poor communication of stakeholders; a drop in clinical and learning standards and clinical learning support to students, and the lack of a policy framework to guide the transitioning process, poor collaborative planning, and unclear transitional arrangements.

#### *5.4.2.4 Theme 4: Explanation of processes required during preparations to implement the new qualification programmes*

The participants explained the processes required during preparations to implement the new qualifications programmes. The processes included procedures for managing, setting, storing, writing and providing feedback on tests and examination; situational analysis and memorandums of understanding (MOU) of identified clinical areas for clinical placement; established quality assessment systems of PNCs, and communication channels and procedures during implementation.

##### *5.4.2.4.1 Procedures for managing, setting, storing, writing and providing feedback on tests and examinations*

Following participants' statements indicated the procedures for managing, setting, storing, writing and providing feedback on tests and examinations to implement the new qualifications.

> **P8:** For the setting of an exam, we use a memory stick and it is sent to HOD and vice-principal and it gets moderated and taken to external moderators on a memory stick. When it is done, the memory stick is locked in the safe.

**P4:** The record-keeping area is fully covered by the CCTV security system. It is managed by the senior clerk. There is a policy on record-keeping and that is upheld. The strong-room is available for examination scripts and managed according to policy.

**P13:** Within the structure, there are keyboard operators. One is designated strictly to examination/assessment. The lecturers write or compile examinations by hand and submit to the keyboard operator for typing on a standalone computer not attached to a network point. Then for storage, we have two strong-rooms, one in the Principal's office and other at the adjacent site, which are fire safe. The hard drives with information and exams are kept in the fire safe one, in the principal office. The information on the network is back-up and that is done every two weeks and also put in the safe. We also have central monitoring cameras and biometrics system which is not fully functioning; we are aiming to have it running soon and it will be accessible to the principal, for example.

Posey and Pintz (2017:126), indicated that the use of Learning Management System provided an opportunity for safe record keeping.

#### *5.4.2.4.2 Situational analysis and memorandums of understanding (MOU) of identified clinical areas for clinical placement*

The participants outlined the identified situational analysis, and MOU of identified clinical areas for clinical placement. According to participants:

**P1:** The institutions' situational analysis was compiled. The hospitals and the health centres are enough to accommodate the new curriculum. The memorandum of understanding was also signed.

**P8:** We have entered into a memorandum of understanding (MOU) with a certain university so that we can share the facilities. We have already been in discussions, and they have a beautiful simulation lab that can cater to most of our needs, so from the central office they are looking at the MOU.

**P4:** All MOU' were obtained and situational analysis conducted. The challenge was that it took time and at some places we had to go physically for follow-up despite the arrangements for an appointment, information, and submission.

Zwane and Mtshali (2019:2) reported that because Public Nursing Colleges need to allocate nursing students to clinical facilities for clinical learning, sustaining the existing agreements between the colleges and clinical facilities remains a critical step even in the new programmes.

*5.4.2.4.3 Established quality assurance systems of PNCs*

According to the participants, quality assurance systems of the PNCs was established. Following are the statements from the participants:

> **P8:** The QA committee and they have a regular meeting, and I have one educator who attends to quality assurance.
>
> **P4:** The Quality Assurance Committee controls all academic activities, examination, HR, risks, finance and administration, is fully fledged and committed to continuous performance.
>
> **P10:** There is a designated quality assurance officer based at the college making sure that everything is aligned with the programmes. They focus on issues that need to be streamlined for quality purposes, and the officer has got her section that she is handling on quality. The buzz word is aligned in terms of curriculum, policies, etc.

One of the responsibilities of the South African Nursing Council (SANC) is being responsible for the education and training quality assurance for the nursing profession. Zwane and Mtshali (2019:2) reported that the academic quality assurance and educational aspects of nurses' training and assessment, such as examinations, would be done in collaboration with the DHET, CHE and SANC.

*5.4.2.4.4 Communication channels and procedures during the implementation of the new qualifications*

Following are the participants' statements based on the communication channels and procedures during the implementation of the new qualifications:

> **P6:** There is an allocation of students drawn by educators and HOD distributed to hospitals and clinics to make off-duties for them and be allocated according to the required hours and disciplines. There are monthly reports written from the units. The challenges are mostly the transport for educators when going to the clinical areas. However, if they requisition for the college car in time, they drive themselves according to the teams for that institution.

SANC (2018:7) reported similar findings of the current study whereby the pilot study that was conducted indicated a need to develop communication strategy between the public and private nursing colleges, universities, CHE and SANC for effective implementation of the new programme. The desire to integrate the public nursing colleges into higher

academic institutions mandated the accreditation bodies to design and implement the communication channels regarding the new qualifications. The SANC resolved issued a prospective to NEIs to comply with the regulations of three different bodies to offer new qualifications such as R174, R169, and R171.

The application process for the NEI, is to apply for accreditation to SANC and submit the programmes in order to get endorsement. When the endorsement has been acquired, the NEI submits the programme with the SANC endorsement to CHE for accreditation. After approval with CHE, furthermore, the NEI submits all the documents obtained from SANC and CHE to the DHET to obtain a registration certificate and number. It is the NEI's responsibility to adhere to the National Development Plan 2030 which formulated the standard operating procedures regarding the formal communication between the clinical facilities and public nursing colleges.

## 5.5 QUANTITATIVE FINDINGS

The researcher collected quantitative data using a structured questionnaire grounded in the qualitative findings.

In Phase 2, the following two questions were prominent:

- What are nurse educators' views on PNCs' preparedness for implementation of the new qualification?
- What strategies and activities did the nurse educators utilise for the implementation of the new qualification?

The researcher collected the quantitative data to describe and explore the nurse educators' perspectives on the preparedness of PNCs for implementation of the new qualifications. The researcher collected quantitative data to determine the strategies and activities utilised by the nurse educators for the implementation of the new qualifications.

The objective aimed at investigating the views of nurse educators on the PNCs' preparedness for implementation of the new qualifications as per the standard operating procedures formulated by the National Development Plan 2030. Based on the qualitative and quantitative findings, the researcher developed a support model for the implementation of a R174 programme at PNCs in South Africa. The quantitative data was

collected using a structured questionnaire comprising of closed questions. The questions were developed utilising a 5-point Likert scale (see Annexure E for questionnaire). The questionnaire comprised of six (6) sections:

Section A: Demographic and general information
Section B: Preparation for transition from the legacy to the new qualifications
Section C: Institutional support experienced
Section D: Challenges encountered
Section E: Process operations
Section F: Suggestions to improve readiness for implementation

A total of 209 respondents completed the questionnaire. Data was analysed by the researcher assisted by the statistician using the SPSS version 26 program for statistical data analysis of frequencies, construct validity, internal consistency, and total variances explained and factor loadings, while Stata was used to conduct Confirmatory factor analysis (CFA) on each construct and associated variables. Inferential statistics were used to establish the level of significance of the collected data.

The results were presented in contingency tables containing percentages and frequencies distribution as well as graphs. Data becomes organised with the usage of descriptive statistics in methods that enhance insight (Grove et al 2015:502). The researcher employed inferential statistics to establish the level of significance of the data that was collected. The construct validity, and scale reliability of constructs demonstrated the quality of the data-collection instrument. Exploratory factor analysis (EFA) of total variances and factor loading were applied as measures assessing the factor structure of each construct. Confirmatory factor analysis (CFA) determined the relation between each construct and its observed variables.

### 5.5.1 Respondents' demographic profile

In this section the researcher outlines the respondents' demographic data and general information, including, age, gender, highest educational qualification attained, experience as a nurse educator, and campus where respondents are located.

### *5.5.1.1 Respondents' gender*

Table 5.4 below depicts the respondents' gender, whose total number of participants 100% (n=209). The demographic profile is as follows: the majority number of participants were females 84% (n=176) and 16% (n=33) were males. This demographic profile revealed that females dominated the nursing profession and nursing education in the selected PNCs and provinces. There are generally fewer males than females in the nursing profession. Following is Table 5.4 the respondents' gender.

**Table 5.4: Respondents' gender (N=209)**

| Gender | Frequency (N) | Proportion (%) |
|---|---|---|
| Male | 33 | 16.0 |
| Female | 176 | 84.0 |
| **Total** | **209** | **100.0** |

### *5.5.1.2 Respondents' age*

Table 5.5 presents the respondents' age and Figure 5.1 depicts the respondents' ages of respondents grouped in 10-year intervals.

**Table 5.5: Respondents' age (N=209)**

| Age | Frequency (N) | Proportion (%) |
|---|---|---|
| 25-29 years | 2 | 1.0 |
| 30-39 years | 26 | 12.0 |
| 40-49 years | 57 | 27.0 |
| 50-59 years | 100 | 48.0 |
| >=60 years | 24 | 12.0 |
| **Total** | **209** | **100.0** |

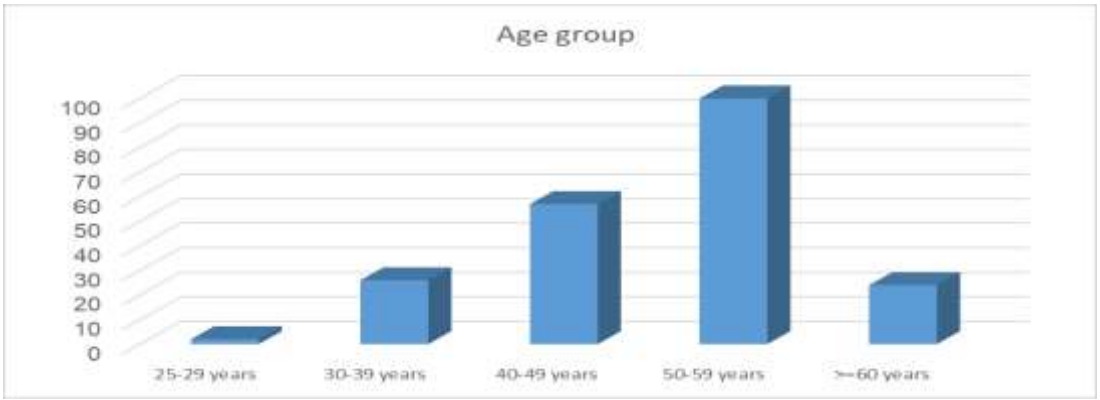


**Figure 5.1: Respondents' age in 10-year intervals (N=209)**

The above Table 5.5 and Figure 5.1 depicts the majority of the respondents, 48% (n=100) were 50-59 years old, followed by respondents 27% (n=57), aged between 40-49 years; 12% (n=26) were aged between 30-39 years; as well as 12% (n=24) aged 60 years and above, and the minority of 2% (n=1) was aged between 26-29 years old. The participants between the ages of 50-59 years accounted for the largest proportion of 48% (n=100) respondents, followed by 27% (n=57) in the age group 40-49 years. Cumulatively, respondents in the age group of 40-59 years accounted for 75% (n=157) of the total participants in the study. The retirement age of the nurse educator ranges from 60 to 63 years of age, when maximum age for the service is 65 years. The findings of the study indicates that 12% of respondents therefore reached retirement age. In addition, further 48% would reach this age group within ten (10) years.

#### *5.5.1.3 Respondents' highest educational qualification*

Figure 5.2 below depicts the respondents' highest education qualification.

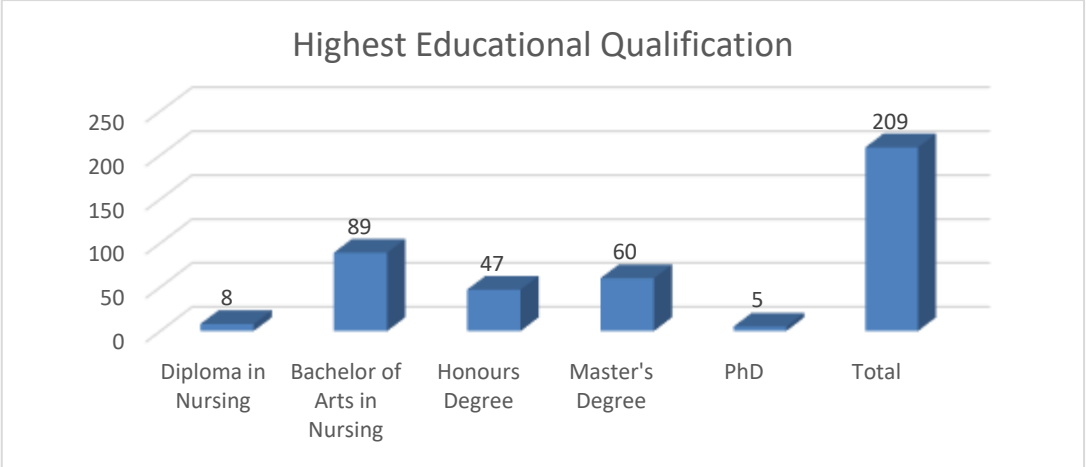


**Figure 5.2: Respondents' highest educational qualification (N=209)**

The above Figure 5.2 above, depicts respondent's highest educational qualification. The majority of 43% (n=89) had a Bachelor of Arts in Nursing degree; followed by 29% (n=60) who had a Master's degree; 22% (n=47) had an Honours degree; the minority of 4% (n=8) had a diploma in nursing, as well as 2% (n=5) who had a PhD degree. Specific qualifications are set as the minimum educational requirements for teaching at PNCs. Qualifications and knowledge as well contribute to a person's experience in the process of curriculation of the programmes for them to be accredited by the CHE and SANC. The minimum requirement to teach at a PNC that was relevant to the legacy qualifications is the diploma in nursing education. In this study, most the respondents had a degree in nursing. This was of concern because the proposed new R174 Bachelor's degree

requires educators to have a higher qualification than the programme they teach. The respondents were not asked to specify whether their master's degrees were acquired in the clinical, academic, or research field. It is the PNC's responsibility to encourage ongoing professional development in order to facilitate educators' competence for transition and implementation of the new qualifications.

#### *5.5.1.4 Province of respondents' PNCs*

Table 5.6 below presents the provinces where the respondents' PNCs are located.

**Table 5.6: Province where respondents' PNCs are located (N=209)**

| Province where respondents' PNCs are located | Frequency (n) | Proportion (%) |
|---|---|---|
| Gauteng (GP) | 97 | 47.0 |
| Free State (FS) | 40 | 19.0 |
| Limpopo (LP) | 38 | 18.0 |
| North West (NW) | 34 | 16.0 |
| **Total** | **209** | **100.0** |

In the above Table 5.6, the majority of 47% (n=97) were based in Gauteng's PNCs; followed by 19% (n=40) of respondents who were based in the Free State; 18% (n=38) were based in Limpopo, and the minority of 16% (n=34) were based in North-West. Funding of PNCs is the responsibility of The National Department of Health (NDoH). Government grants are conditionally distributed to the provinces however, yet there is no money allocated to the PNCs although this money might be valuable to change the future of the NDOH. The allocation of resources per province is key in facilitating the implementation of the new qualifications.

### 5.5.2 Measures to enhance the quality of the questionnaire

For the purpose of the study, construct validity and scale reliability were applied to measure the quality of the questionnaire.

#### *5.5.2.1 Construct validity*

Construct validity is present when questions in a survey instrument measure the theoretical construct that the instrument is intended to assess (Jacobsen 2017:143; LoBiondo-Wood & Haber 2010:576). Statistical validity tests of each of the five (5) constructs and associated indicators or items were conducted using the Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) criterion of the factor analytic procedure. Following Table 5.7 presents the construct validity results for constructs and associated items.

**Table 5.7: Construct validity results for constructs and associated items**

| Construct | Item description | Communalities – Extraction | KMO-MSA value | No of items |
|---|---|---|---|---|
| Preparations executed | B101. There is consistent engagement with all relevant stakeholders such as South African Nursing Council (SANC), Council of Higher Education (CHE) and the Department of Health (DoH) | .377 | 0.760 | 6 |
| | B102. There is consistent involvement with the college management and curriculum development committee in formulation and endorsement of functional committees in the development of the new qualifications implementation plan | .791 | | |
| | B103. There is consistent engagement in designing programmes curricula that fulfil accreditation requirements | .604 | | |
| | B105. Recruitment, appointment and placement of qualified personnel is conducted on time towards preparations of the new qualifications | .450 | | |
| | B106. There is mobilisation of material resources for teaching and learning | .747 | | |
| | B107. There is development of the Quality Management Systems (QMS) | .379 | | |
| Institutional support | C101. There was adequate involvement and support towards inspections by bodies involved in programmes accreditation | .415 | 0.661 | 3 |
| | C102. There was sufficient guidance regarding compliance to norms and standards for clinical practice | .722 | | |
| | C103. There was some form of partnership on sharing of resources with university where programmes are located | .388 | | |
| Challenges encountered | D104. There are budget constraints for procurement of resource materials for the facilitation of teaching and clinical support | .672 | 0.793 | 6 |
| | D105. There is weak leadership and governance in planning and oversight | .535 | | |
| | D107. There is inadequate funding limiting capacity for admission of students | .260 | | |
| | D109. There is ineffective implementation of staff development programmes | .443 | | |
| | D110. There is lack of communication between clinical and academic settings | .661 | | |
| | D111. There is uncooperative and limited commitment by key role players | .637 | | |
| Process operations | E102. The staff participates in continuous quality assurance improvement processes, monitoring and regular review of internal quality assurance structures and processes, e.g. teaching and learning, research | .347 | 0.838 | 7 |
| | E103. There is adequate student support services and community engagement | .309 | | |
| | E104. There is available and effective utilisation of efficient mechanisms for learner support services | .556 | | |

| Construct | Item description | Communalities – Extraction | KMO-MSA value | No of items |
|---|---|---|---|---|
| | E105. There is consistent involvement of external stakeholders in formal quality assurance processes | .538 | | |
| | E106. There is collection and use of data and information for performance review and improvement | .423 | | |
| | E107. There is upgrading of Information Communication Technology infrastructure | .430 | | |
| | E108. There is academic planning and curriculum review and development of programmes qualifications | .178 | | |
| Suggestions to improve readiness for implementation | F101. There should be constant improvement of educator capacity through systematic review such as reviews of salary structure and analysis | .417 | 0.930 | 9 |
| | F102. There should be a review of funding norms for students to provide targeted funding for new qualifications | .525 | | |
| | F103. There should be an establishment of common standards for lecturers to support the implementation of new qualifications | .724 | | |
| | F104. There should be maintenance and strengthening collaborations and engagements with stakeholders in the system | .748 | | |
| | F105. There should be leadership and governance weaknesses should be addressed to support the improvement in efficiencies | .709 | | |
| | F106. There should be appointment of ample qualified staff required for implementation of new qualifications should be done | .645 | | |
| | F107. There should be an Increase in material and human resources and college capacity for admission of students | .692 | | |
| | F108. There should be consistent and effective implementation of the Management of Information System (MIS) should be in place | .740 | | |
| | F109. There should be implementation of development programmes and capacity building for all staff members | .827 | | |
| **Total items** | | | **0.875** | **31** |

The overall KMO-MSA value of the total 31 items equal to 0.875 surpassed the minimum 0.6 generally acceptable threshold (Chan & Idris 2017:400), therefore, all variables of the questionnaire were statistically valid. The items therefore measured what they were intended to measure in the study. Concurrently, KMO-MSA values for each construct and associated items showed that the constructs were valid, where the scores per construct were preparations executed (=0.760), institutional support (=0.661), challenges encountered (=0.793), process operations (=0.838) and suggestions to improve readiness for implementation (=0.930). The constructs were therefore statistically valid in measuring the targeted issues.

#### *5.5.2.2 Scale reliability*

The scale reliability coefficients of constructs and associated items were computed using the Cronbach's alpha criterion (Cronbach 1951). The Cronbach's alpha is a test of internal consistency that simultaneously compares each respective item in a scale to all others (LoBiondo-Wood & Haber 2010:576). The scale reliability coefficients show the degree to which the questionnaire items had internal consistency. Following Table 5.8 depicts the scale reliability results of each construct.

**Table 5.8: Construct validity results for constructs and associated items**

| Construct | Item description | Cronbach's alpha if item deleted | Cronbach's alpha coeff | No of Items |
|---|---|---|---|---|
| Preparations executed | B101. There is consistent engagement with all relevant stakeholders such as South African Nursing Council (SANC), Council of Higher Education (CHE) and the Department of Health (DoH) | .780 | 0.801 | 6 |
| | B102. There is consistent involvement with the college management and curriculum development committee in formulation and endorsement of functional committees in the development of the new qualifications implementation plan | .754 | | |
| | B103. There is consistent engagement in designing programmes curricula that fulfil accreditation requirements | .764 | | |
| | B105. Recruitment, appointment and placement of qualified personnel is conducted on time towards preparations for the new qualifications | .783 | | |
| | B106. There is mobilisation of material resources for teaching and learning | .753 | | |
| | B107. There is development of the Quality Management Systems (QMS) | .785 | | |
| Institutional support | C101. There was adequate involvement and support for inspections by bodies involved in programme accreditation | .695 | 0.744 | 3 |
| | C102. There was sufficient guidance regarding compliance with norms and standards for clinical practice | .567 | | |
| | C103. There was some form of partnership on sharing of resources with university where programmes are located | .713 | | |
| Challenges encountered | D104. There are budget constraints for procurement of resource materials for the facilitation of teaching and clinical support | .784 | 0.793 | 6 |
| | D105. There is weak leadership and governance in planning and oversight | .746 | | |
| | D107. There is inadequate funding limiting capacity for admission of students | .808 | | |
| | D109. There is ineffective implementation of staff development programmes | .748 | | |
| | D110. There is lack of communication between clinical and academic settings | .729 | | |
| | D111. There is uncooperative and limited commitment by key role players | .739 | | |
| Process operations | E102. The staff participates in continuous quality assurance improvement processes, monitoring and regular review of internal quality assurance structures and processes, e.g. teaching and learning, research | .793 | 0.813 | 7 |
| | E103. There are adequate student support services and community engagement | .795 | | |
| | E104. There is available and effective utilisation of efficient mechanisms for learner support services | .768 | | |

| Construct | Item description | Cronbach's alpha if item deleted | Cronbach's alpha coeff | No of Items |
|---|---|---|---|---|
| | E105. There is consistent involvement of external stakeholders in formal quality assurance processes | .774 | | |
| | E106. There is collection and use of data and information for performance review and improvement | .787 | | |
| | E107. There is upgrading of Information Communication Technology infrastructure | .786 | | |
| | E108. There is academic planning and curriculum review and development of programmes qualifications | .814 | | |
| Suggestions to improve readiness for implementation | F101. There should be constant improvement of educator capacity through systematic review such as reviews of salary structure and analysis | .946 | 0.944 | 9 |
| | F102. There should be a review of funding norms for students to provide targeted funding for new qualifications | .942 | | |
| | F103. There should be established common standards for lecturers to support the implementation of new qualifications | .935 | | |
| | F104. There should be maintenance and strengthening of collaboration and engagement with stakeholders in the system | .934 | | |
| | F105. There should be leadership and governance weaknesses should be addressed to support the improvement in efficiencies | .935 | | |
| | F106. There should be appointment of ample qualified staff required for implementation of new qualifications | .937 | | |
| | F107. There should be an increase in material and human resources and college capacity for admission of students | .935 | | |
| | F108. There should be consistent and effective implementation of the Management of Information System (MIS) | .934 | | |
| | F109. There should be implementation of development programmes and capacity building for all staff members | .932 | | |
| **Total items** | | | **0.753** | **31** |

The overall Cronbach's alpha coefficient of the 31 items equal to 0.753 surpassed the minimum 0.7 value generally acceptable threshold (Cronbach 1951), which implied that all variables of the research instrument being the collected data were statistically reliable. Therefore, the items were reliable in measuring what they were intended to measure in the study. Concurrently, alpha coefficients of each construct and associated items showed that the constructs were reliable, with Cronbach's alpha coefficients for each of the constructs being: preparations executed (alpha=0.801), institutional support (alpha=0.744), challenges encountered (alpha=0.793), process operations (alpha=0.813) and suggestions to improve readiness for implementation (alpha=0.930). The constructs were thus all reliable in assessing the targeted issues.

### 5.5.3 Exploratory Factor Analysis (EFA)

Subsequent to the evaluation of validity and scale reliability of constructs and associated items, exploratory factor analysis (EFA) was conducted to evaluate factor structures of each of the constructs. When EFA is applied, a variety of solutions in selecting factors and their corresponding items is explored (Gray et al 2017:678). The results are presented in the next two sub-sections. Section 5.5.3.1 presents the results of the total variance explained of factors extracted under each dimension, and section 5.5.3.2 outlines the factor loadings of variables under each of the five (5) dimensions.

#### *5.5.3.1 Total variance explained*

In this section the results are presented of the total variance explained conducted in line with the EFA data reduction multidimensional analytic approach. The latent root criterion was used to assess the grade of variance that was uniformly distributed through the extracted factors in line with the alpha factoring Varimax rotation procedure. Following tables, (Tables 5.9 to 5.13) present the results of the total variance explained for each construct.

**Table 5.9: Preparations executed**

| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.026 | 50.427 | 50.427 | 2.612 | 43.534 | 43.534 | 1.756 | 29.269 | 29.269 |
| 2 | 1.146 | 19.102 | 69.528 | .736 | 12.266 | 55.800 | 1.592 | 26.531 | 55.800 |
| 3 | .660 | 10.993 | 80.522 | | | | | | |
| 4 | .502 | 8.359 | 88.881 | | | | | | |
| 5 | .387 | 6.457 | 95.337 | | | | | | |
| 6 | .280 | 4.663 | 100.000 | | | | | | |
| **Extraction Method: Alpha factoring** | | | | | | | | | |

The results from the final iteration show the presence of two initial eigenvalues greater than 1 hence two factors were extracted from the selected set of items in the dataset for the construct “preparations executed”. The rotation sums of squared loadings show that about 55.8% of total variance in the data of the particular construct was explained by two factors. Relatively, factor 1 accounted for the largest proportion of 29.3%, while factor 2 explained the remaining 26.5% of the variance in the reserved dataset. Since more than one factor was mined from the final iteration, the factor structure was assessed based on the pattern of factor loadings to determine if there were items that exhibited a complex structure based on the statistical practical principle that items that show high loadings on more than one factor (cross loadings) should be removed from the analysis (Tabachnick & Fidell 2007:22). Variables that loaded up on a single factor via the Varimax rotation with Keiser normalization were reserved.

**Table 5.10: Institutional support**

| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 1.991 | 66.365 | 66.365 | 1.525 | 50.834 | 50.834 |
| 2 | .605 | 20.162 | 86.527 | | | |
| 3 | .404 | 13.473 | 100.000 | | | |
| **Extraction Method: Alpha factoring** | | | | | | |

The results from the last iteration reveal the existence of one initial eigenvalue greater than 1 hence one factor was extracted from the particular set of items in the dataset for the construct “institutional support”. The results from extraction sums of squared loadings show that about 50.8% of total variance in the dataset was accounted for by just one factor. Since only one factor was produced from the final iteration, there was no basis to

analyse the pattern of factor loadings to assess whether there were items that exhibited a complex structure, hence all variables were retained in a single factor.

**Table 5.11: Challenges encountered**

| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.017 | 50.286 | 50.286 | 2.581 | 43.012 | 43.012 | 2.165 | 36.087 | 36.087 |
| 2 | 1.103 | 18.385 | 68.671 | .628 | 10.469 | 53.482 | 1.044 | 17.394 | 53.482 |
| 3 | .632 | 10.535 | 79.206 | | | | | | |
| 4 | .511 | 8.516 | 87.722 | | | | | | |
| 5 | .425 | 7.086 | 94.807 | | | | | | |
| 6 | .312 | 5.193 | 100.000 | | | | | | |
| **Extraction Method: Alpha factoring** | | | | | | | | | |

The findings from the final iteration show the presence of two initial eigenvalues greater than 1 thus two factors were obtained from the selected set of items in the dataset for the construct “challenges encountered”. The rotation sums of squared loadings show that about 53.5% of total variance in the data of the specific construct was accounted for by two factors. Factor 1 accounted for the relatively larger amount of 36.1%, while factor 2 accounted for the remaining 17.4% of the variance in the retained dataset. Given that more than one factor was extracted from the final iteration, the factor structure was assessed based on the pattern of factor loadings to analyse if there were items that displayed a complex structure based on the practical statistical norm that variables which reflect high loadings on more than one factor (cross loadings) must be removed from the analysis. Thus, variables that loaded on only a single factor via the Varimax rotation with Keiser normalization were retained for further analysis.

**Table 5.12: Process operations**

| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.345 | 47.784 | 47.784 | 2.782 | 39.743 | 39.743 |
| 2 | .986 | 14.088 | 61.872 | | | |
| 3 | .671 | 9.589 | 71.461 | | | |
| 4 | .598 | 8.549 | 80.010 | | | |
| 5 | .593 | 8.475 | 88.485 | | | |
| 6 | .462 | 6.598 | 95.084 | | | |
| 7 | .344 | 4.916 | 100.000 | | | |
| **Extraction Method: Alpha factoring** | | | | | | |

The results from the final iteration show the existence of one initial eigenvalue greater than 1 hence one factor was extracted from the set of items in the dataset the of the construct “process operations”. The results from the extraction sums of squared loadings show that approximately 39.7% of total variance in the dataset was accounted for by only one factor. Since merely one factor was produced from the final iteration, there was no need to analyse the pattern of factor loadings to assess whether there were items that revealed a complex structure, therefore all items were retained in a single factor.

**Table 5.13: Suggestions to improve readiness for implementation**

| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.341 | 70.454 | 70.454 | 6.028 | 66.974 | 66.974 |
| 2 | .670 | 7.442 | 77.896 | | | |
| 3 | .524 | 5.818 | 83.714 | | | |
| 4 | .375 | 4.167 | 87.880 | | | |
| 5 | .311 | 3.460 | 91.340 | | | |
| 6 | .296 | 3.285 | 94.625 | | | |
| 7 | .203 | 2.259 | 96.884 | | | |
| 8 | .157 | 1.742 | 98.626 | | | |
| 9 | .124 | 1.374 | 100.000 | | | |
| **Extraction Method: Alpha Factoring.** | | | | | | |

The results from the final iteration show the existence of one initial eigenvalue greater than 1 hence one factor was extracted from the set of items in the dataset the of the construct “suggestions to improve readiness for implementation”. The results of extraction sums of squared loadings show that about 67.0% of total variance in the dataset was explained by one factor. Since only 1 factor was extracted from the final iteration, there was no rationale to analyses the pattern of factor loadings to assess whether there were items that had a complex structure, hence all the items were retained in a single factor.

#### *5.5.3.2 Factor loadings analysis*

This section presents the results of analysis of factor structures based on factor loadings of variables on their analogous constructs. The relative size of each variable’s factor loading score reflects the magnitude to which the respective variable contributes to the total variance in the matching factor under each construct. Tables 5.14 to 5.18 present the factor loadings results of each of the constructs. For constructs that had more than one factor, the extracted diagrams depicting factor plots are correspondingly shown below the tables containing the factor loadings scores.

**Table 5.14: Preparations executed – rotated factor matrix**

| Preparation executed observed variable | Factor | |
|---|---|---|
| | 1 | 2 |
| B101. There is consistent engagement with all relevant stakeholders such as South African Nursing Council (SANC), Council on Higher Education (CHE) and the Department of Health (DoH) | .568 | .234 |
| B102. There is consistent involvement with the college management and curriculum development committee in formulation and endorsement of functional committees in the development of the new qualifications implementation plan | .863 | .215 |
| B103. There is consistent engagement in designing programmes curricula that fulfil accreditation requirements | .741 | .232 |
| B105. Recruitment, appointment and placement of qualified personnel are conducted on time for preparations of the new qualifications | .202 | .640 |
| B106. There is mobilisation of material resources for teaching and learning | .248 | .828 |
| B107. There is development of the Quality Management Systems (QMS) | .194 | .584 |
| Extraction method: Alpha factoring<br>Rotation method: Varimax with Kaiser normalisation | | |
| a. Rotation converged in 3 iterations | | |

Table 5.14 shows the rotated factor loadings of each item describing the construct "preparations executed". Factor loadings were extracted using the alpha factoring method and Varimax with Keiser normalization rotation method. The results show that out of the six variables that were retained for analysis, three items loaded on factor 1 and the other three items loaded on factor 2 (see Table 5.14 and Figure 5.3).

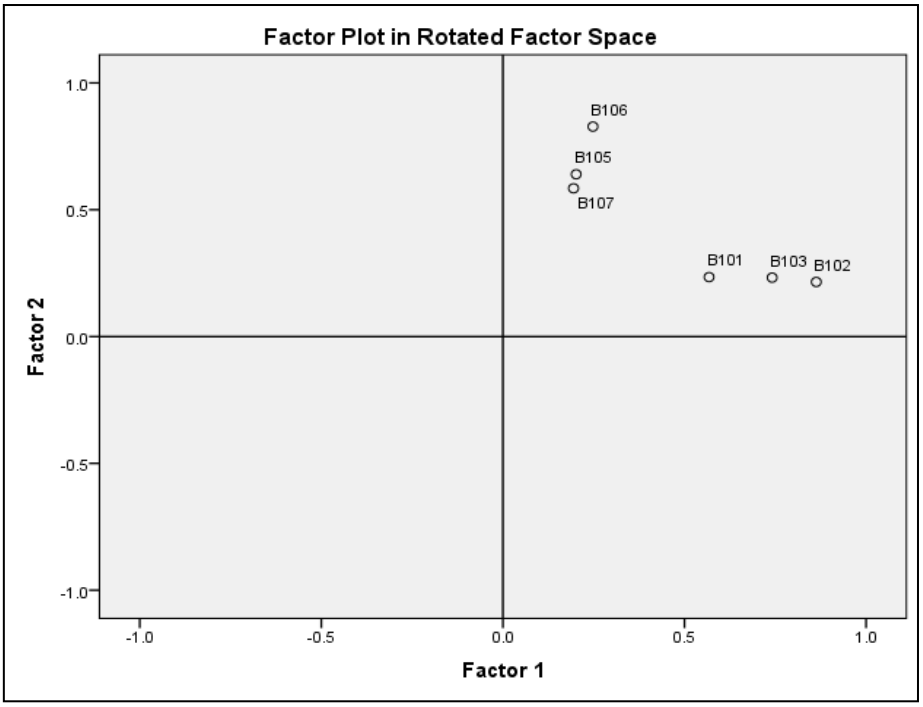


**Figure 5.3: Preparations executed – rotated factor plot**

Across the two factors extracted, items with highest contributions to preparations executed were those which the respondents reported that:

There is consistent involvement with college management and curriculum development committee in formulation and endorsement of functional committees in the development of the new qualifications implementation plan:

- (loading=0.863) under factor 1, and that there is mobilisation of material resources for teaching and learning
- (loading=0.828) under factor 2

Based on the size of variables' factor loadings reflecting the degree of importance of conditions described in relation to the preparations executed:

- (loading=0.741): there is consistent engagement in designing programmes curricula that fulfil accreditation requirement
- (loading=0.640): Recruitment, appointment and placement of qualified personnel is conducted on time towards preparations of new qualifications
- (loading=0.584): There is development of the Quality Management Systems (QMS) and
- (loading=0.568): There is consistent engagement with all relevant stakeholders such as South African Nursing Council (SANC), Council on Higher Education (CHE) and the Department of Health (DoH"

**Table 5.15: Institutional support – factor matrixa**

| **Institutional support observed variable** | **Factor** |
|---|---|
| | **1** |
| C101. There was adequate involvement and support for inspections by bodies involved in programmes accreditation | .645 |
| C102. There was sufficient guidance regarding compliance with norms and standards for clinical practice | .850 |
| C103. There was some form of partnership on sharing of resources with university where programmes are located | .623 |
| Extraction method: Alpha factoring. | |
| a. Attempted to extract 1 factor. More than 5 iterations required. (Convergence=.012). Extraction was terminated. | |

The results show that all three variables measuring "institutional support" loaded on a single factor 1 thus no factor plot in rotated factor space was produced. Of the three

variables that loaded on one factor, the variables with the highest contribution in measurement of institutional support indicated that:

- (loading=0.850): There was sufficient guidance regarding compliance to norms and standards for clinical practice
- (loading=0.645): There was adequate involvement and support towards inspections by bodies involved in programmes accreditation
- (loading=0.623): There was some form of partnership on sharing of resources with university where programmes are located

**Table 5.16: Challenges encountered – rotated factor matrixa**

| Challenges encountered observed variable | Factor | |
|---|---|---|
| | 1 | 2 |
| D104. There are budget constraints for procurement of resource materials for the facilitation of teaching and clinical support | .189 | .798 |
| D105. There is weak leadership and governance in planning and oversight | .710 | .177 |
| D107. There is inadequate funding, limiting capacity for admission of students | .154 | .486 |
| D109. There is ineffective implementation of staff development programmes | .614 | .259 |
| D110. There is lack of communication between clinical and academic settings | .787 | .204 |
| D111. There is uncooperative and limited commitment by key role players | .778 | .177 |
| Extraction method: Alpha factoring<br>Rotation method: Varimax with Kaiser normalization | | |
| a. Rotation converged in 3 iterations. | | |

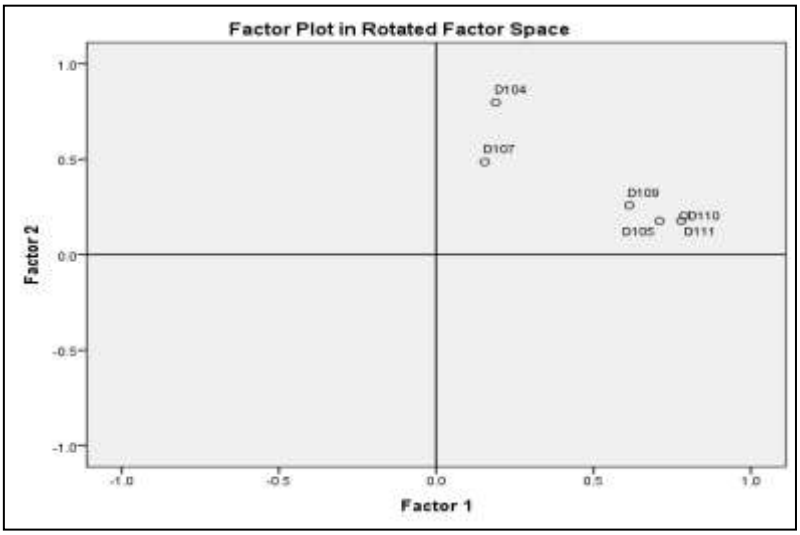


**Figure 5.4: Challenges encountered – rotated factor plot**

The results of the rotated factor loadings show that out of the six variables that were retained for analysis, four items loaded on factor 1 and two items loaded on factor 2 (see

Table 5.16 and Figure 5.4). Across the two factors extracted, features with the highest contributions to challenges encountered were the:

- (loading=0.798): Budget constraints for procurement of resource materials for the facilitation of teaching and clinical support under factor 2
- (loading=0.787): Lack of communication between clinical and academic settings under factor 1. Additional contributors to the challenges encountered included
- (loading=0.778): Uncooperative and limited commitment by key role players
- (loading=0.710): Weak leadership and governance in planning and oversight
- (loading=0.614): Ineffective implementation of staff development programmes
- (loading=0.486): Inadequate funding limiting capacity for admission of students

**Table 5.17: Process operations – factor matrixa**

| **Process operations observed variable** | **Factor** |
|---|---|
| | **1** |
| E102. The staff participates in continuous quality assurance improvement processes, monitoring and regular review of internal quality assurance structures and processes, e.g. teaching and learning, research | .589 |
| E103. There is adequate student support services and community engagement | .556 |
| E104. There is available and effective utilisation of efficient mechanisms for learner support services | .746 |
| E105. There is consistent involvement of external stakeholders in formal quality assurance processes | .734 |
| E106. There is collection and use of data and information for performance review and improvement | .650 |
| E107. There is upgrading of Information Communication Technology infrastructure | .655 |
| E108. There is academic planning and curriculum review and development of programmes qualifications | .422 |
| Extraction Method: Alpha factoring | |
| a. 1 factor extracted. 6 iterations required. | |

The results indicate that all seven variables measuring “process operations” loaded on one factor hence no factor plot in rotated factor space was produced. Of the seven variables, the top four items with highest contributions to process operations were (loading=0.746): Available and effective utilisation of efficient mechanisms for learner support services:

- (loading=0.734): Consistent involvement of external stakeholders in formal quality assurance processes
- (loading=0.655): Upgrading of Information Communication Technology infrastructure

- (loading=0.650): Collection and use of data and information for performance review and improvement

**Table 5.18: Suggestions to improve readiness for implementation – factor matrixa**

| Suggestions to improve readiness for implementation observed variable | Factor |
|---|---|
| | 1 |
| F101. There should be constant improvement of educator capacity through systematic review such as reviews of salary structure and analysis | .646 |
| F102. There should be a review of funding norms for students to provide targeted funding for new qualifications | .725 |
| F103. There should be common standards for lecturers to support the implementation of new qualifications | .851 |
| F104. There should be maintenance and strengthening collaborations and engagements with stakeholders in the system | .865 |
| F105. There should be leadership and governance weaknesses should be addressed to support the improvement in efficiencies | .842 |
| F106. There should be appointment of ample qualified staff required for implementation of new qualifications should be done | .803 |
| F107. There should be an increase in material and human resources and college capacity for admission of students | .832 |
| F108. There should be consistent and effective implementation of the Management of Information System (MIS) should be in place | .860 |
| F109. There should be implementation of development programmes and capacity building for all staff members | .909 |
| Extraction method: Alpha factoring | |
| a. 1 factor extracted. 4 iterations required. | |

The results show that nine (9) variables providing “suggestions to improve readiness for implementation” loaded on one factor hence no factor plot in rotated factor space was produced. Of the nine (9) variables, the majority of four (4) has the highest contributions to readiness, for implementation were that:

- (loading=0.909): There should implementation of development programmes and capacity building for all staff members
- (loading=0.865): There should be maintenance and strengthening collaborations and engagements with stakeholders in the system
- (loading=0.860): There should be consistent and effective implementation of the Management of Information System (MIS) should be in place
- (loading=0.851): There should be common standards for lecturers to support the implementation of new qualifications.

### 5.5.4 Confirmatory factor analysis (CFA)

Confirmatory factor analysis (CFA) is a method to extract common variances and put them into factors. It determines the factor and factor loading of measured variables and also confirms what is expected of the basic or pre-established theory by presuming that each factor is associated with a specified subset of measured variables. CFA was undertaken to assess relationships between each construct and its related observed variables. Tables 5.19 to 5.27 present the results.

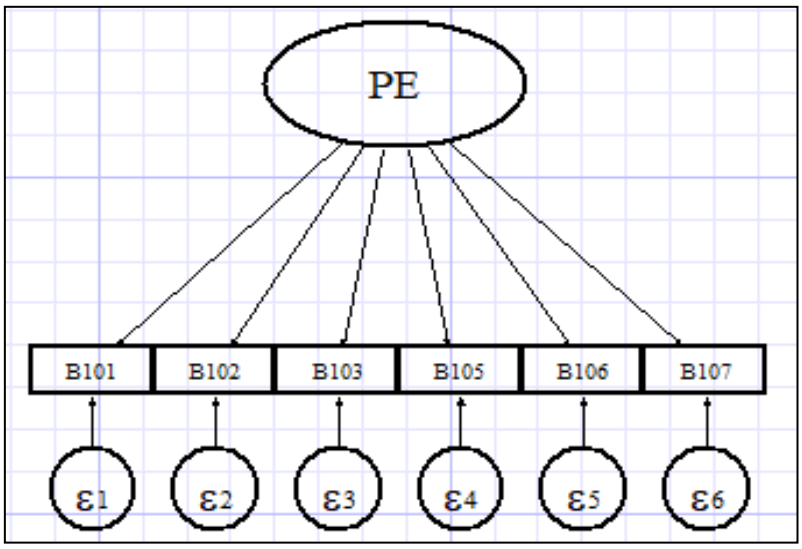


**Figure 5.5: Preparations executed – hypothesised model**

Variables: B101. There is consistent engagement with all relevant stakeholders such as South African Nursing Council (SANC), Council on Higher Education (CHE) and the Department of Health (DoH); B102. There is consistent involvement with the college management and curriculum development committee in formulation and endorsement of functional committees in the development of the new qualifications implementation plan; B103. There is consistent engagement in designing programmes curricula that fulfil accreditation requirements; B105. Recruitment, appointment and placement of qualified personnel are conducted on time for preparation of the new qualifications; B106. There is mobilisation of material resources for teaching and learning. B107. There is development of the Quality Management Systems (QMS).

The construct “preparations executed” was measured by six indicators. Table 5.19 shows the CFA results of the construct and its observed indicators or variables.

**Table 5.19: Preparations executed – CFA standardised estimates**

| **Estimation method** | | **=ML** | | | **No of obs** | **=209** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | =- 1543 | | | | |
| | Coeff. | Std Err. | Z-stat | P > \| Z \| | [95% Conf Interval] | |
| **Measurement** | | | | | | |
| B101 ← | | | | | | |
| PE | 0.619 | 0.049 | 12.42 | 0.000 | 0.521 | 0.716 |
| B102 ← | | | | | | |
| PE | 0.882 | 0.035 | 25.12 | 0.000 | 0.813 | 0.951 |
| B103 ← | | | | | | |
| PE | 0.781 | 0.038 | 20.08 | 0.000 | 0.705 | 0.857 |
| B105 ← | | | | | | |
| PE | 0.361 | 0.066 | 5.44 | 0.000 | 0.231 | 0.491 |
| B106 ← | | | | | | |
| PE | 0.468 | 0.060 | 7.78 | 0.000 | 0.350 | 0.586 |
| B107 ← | | | | | | |
| PE | 0.350 | 0.067 | 5.17 | 0.000 | 0.217 | 0.483 |
| var (e.B101) | 0.616 | 0.061 | | | 0.506 | 0.750 |
| var (e.B102) | 0.220 | 0.062 | | | 0.127 | 0.382 |
| var (e.B103) | 0.389 | 0.060 | | | 0.286 | 0.528 |
| var (e.B105) | 0.869 | 0.047 | | | 0.780 | 0.968 |
| var (e.B106) | 0.780 | 0.056 | | | 0.677 | 0.899 |
| var (e.B107) | 0.876 | 0.047 | | | 0.788 | 0.975 |
| var (PE) | 1 | . | | | . | . |
| cov (e.B105, e.B106) | 0.499 | 0.053 | 9.35 | 0.000 | 0.394 | 0.604 |
| cov (e.B105, e.B107) | 0.322 | 0.063 | 5.09 | 0.000 | 0.198 | 0.446 |
| cov (e.B106, e.B107) | 0.452 | 0.056 | 7.97 | 0.000 | 0.341 | 0.564 |
| **LR test of model vs saturated: chi2 (6)=9.81, Prob>chi2=0.1331** | | | | | | |

Table 5.19 estimates of each observed items were all statistically significant at 1 percent level. In relative terms, the indicators that had highest associations with the construct “preparations executed” and described it more significantly were those which indicated that “there is consistent involvement with the college management and curriculum development committee in formulation and endorsement of functional committees in development of the new qualifications implementation plan” (coefficient=0.882; Z-statistic=25.12; p<0.01), “there is consistent engagement in designing programmes curricula that fulfil accreditation requirements” (coefficient=0.781; Z-statistic=20.08; p<0.01), and “there is consistent engagement with all relevant stakeholders such as the South African Nursing Council (SANC), Council on Higher Education (CHE) and the Department of Health (DoH)” (coefficient=0.619; Z-statistic=12.42; p<0.01). Covariance estimates between indicators were statistically significant at 1 percent level. Table 5.21 shows estimates of the CFA model goodness of fit tests, namely Chi-square statistics, root mean squared error of approximation (RMSEA), and comparative fit index (CFI) and Tucker-Lewis index (TLI).

**Table 5.20: Preparations executed – CFA model goodness of fit estimates**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (11) | 9.806 | Model vs saturated |
| p>chi2 | 0.133 | |
| chi2_bs (21) | 435.732 | Baseline vs saturated |
| p>chi2 | 0.000 | |
| Population error | | |
| RMSEA | 0.055 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.000 | |
| upper bound | 0.115 | |
| Pclose | 0.381 | Probability RMSEA <=0.05 |
| Information criteria | | |
| AIC | 3098.127 | Akaike information criterion |
| BIC | 3148.262 | Bayesian information criterion |
| Baseline comparison | | |
| CFI | 0.991 | Comparative fit index |
| TLI | 0.977 | Tucker-Lewis index |
| Size of residuals | | |
| SRMR | 0.027 | Standardised root mean squared residual |
| CD | 0.858 | Coefficient of determination |

Table 5.20 goodness of fit test results show that the model did fit the data well. The Chi-square (9.806; p=0.133) statistically insignificant at 5 percent level showed that the model did fit sample data satisfactorily. A pclose value (=0.381) which was larger than 0.05 showed a good model fit. The RMSEA<0.05 suggested a good fit, while a value between 0.05 and 0.08 showed an adequate fit. In this study, the RMSEA value equal to 0.055 marginally above 0.05 suggests that the model of preparations executed has an adequate fit. A coefficient of determination value (CD=0.858) closer to 1 indicated a good fit of the model. Finally, the CFI=0.991 and TLI=0.977 confirmed a good fit of the latent variable "preparations executed" and the corresponding observed variables.

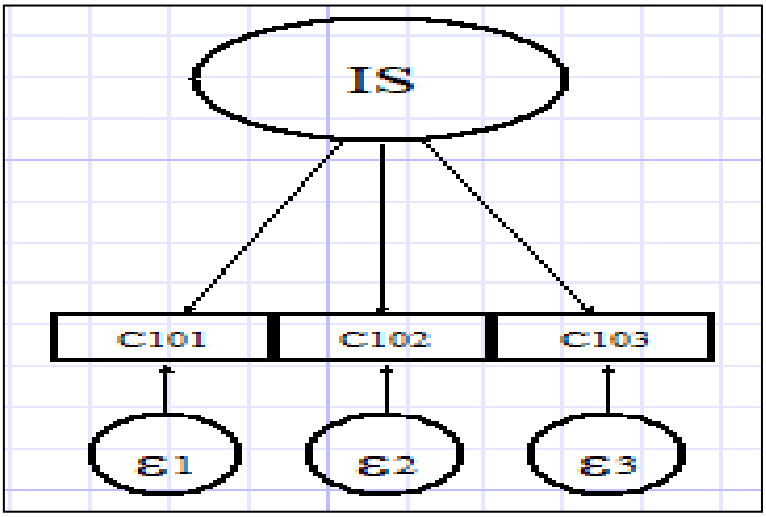


**Figure 5.6: Institutional support – hypothesised model**

Variables: C101.There was adequate involvement and support for inspections by bodies involved in programmes accreditation; C102. There was sufficient guidance regarding compliance with norms and standards for clinical practice. C103. There was some form of partnership on sharing of resources with university where programmes are located. The construct “institutional support” was measured by three variables. Table 5.21 shows the CFA results of the respective construct and the associated observed indicators.

**Table 5.21: Institutional support – CFA standardised estimates**

| **Estimation method** | | **=ML** | | | **No of obs** | **=209** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | =-802.98 | | | | |
| | Coeff. | Std Err. | Z-stat | P > \| Z \| | [95% Conf Interval] | |
| Measurement | | | | | | |
| C101 ← | | | | | | |
| IS | 0.641 | 0.058 | 11.15 | 0.000 | 0.528 | 0.753 |
| C102 ← | | | | | | |
| IS | 0.865 | 0.058 | 15.05 | 0.000 | 0.752 | 0.978 |
| C103 ← | | | | | | |
| IS | 0.616 | 0.058 | 1064 | 0.000 | 0.503 | 0.731 |
| var (e.C101) | 0.588 | 0.073 | | | 0.460 | 0.752 |
| var (e.C102) | 0.251 | 0.099 | | | 0.115 | 0.546 |
| var (e.C103) | 0.619 | 0.071 | | | 0.493 | 0.776 |
| var (IS) | 1 | . | | | . | . |
| **LR test of model vs saturated: Chi2 (0)=0.00, Prob>Chi2=.** | | | | | | |

The results of each of the variables were statistically significant at 1 percent level. In comparative terms, the variable that had the highest association with the construct “institutional support” and described it more significantly was the one that stated that “there was sufficient guidance regarding compliance with norms and standards for clinical practice” (coefficient=0.865; Z-statistic=15.05; $p<0.01$). The other variables also showed that there was “adequate involvement and support for inspections by bodies involved in programmes accreditation” (coefficient=0.641; Z-statistic=11.15; $p<0.01$), and lastly “some form of partnership on sharing of resources with university where programmes are located” (coefficient=0.616; Z-statistic=10.64; $p<0.01$). Table 5.22 shows the statistics of the CFA model goodness of fit tests.

**Table 5.22: Institutional support – CFA model goodness of fit estimates**

| Fit statistic<br>Likelihood ratio | Value | Description |
|---|---|---|
| chi2_ms (11) | 0.000 | Model vs saturated |
| p>chi2 | . | |
| chi2_bs (21) | 151.318 | Baseline vs saturated |
| p>chi2 | 0.000 | |
| Population error | | |
| RMSEA | 0.000 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.000 | |
| upper bound | 0.000 | |
| Pclose | 1.000 | Probability RMSEA <=0.05 |
| Information criteria | | |
| AIC | 1617.969 | Akaike information criterion |
| BIC | 1638.023 | Bayesian information criterion |
| Baseline comparison | | |
| CFI | 1.000 | Comparative fit index |
| TLI | 1.000 | Tucker-Lewis index |
| Size of residuals | | |
| SRMR | 0.000 | Standardised root mean squared residual |
| CD | 0.811 | Coefficient of determination |

The goodness of fit test results showed that the model did fit the data well. The close value (=1.000) larger than 0.05 showed a good model fit. The RMSEA<0.05 suggested a good fit, while a value between 0.05 and 0.08 showed an adequate fit. The RMSEA value equal to 0.000 below 0.05 showed that the model for institutional support had an adequate fit. A coefficient of determination value (CD=0.811) closer to 1 showed a good fit of the model. Overall, the CFI=1.000 and TLI=1.000 confirmed a good fit of the construct "institutional support" and the corresponding observed variables.

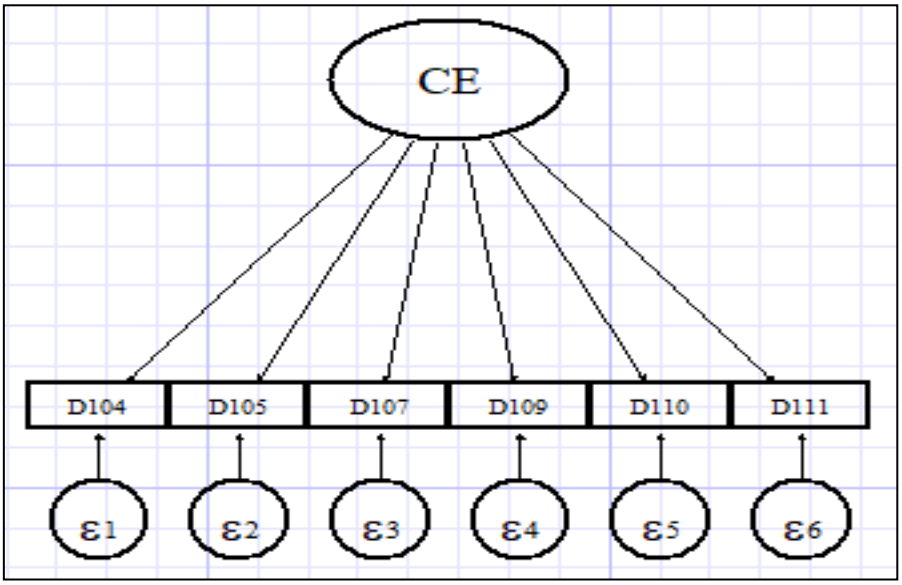


**Figure 5.7: Challenges encountered – hypothesised model**

Variables: D104. There are budget constraints for procurement of resource materials for the facilitation of teaching and clinical support; D105. There is weak leadership and governance in planning and oversight; D107. There is inadequate funding, limiting capacity for admission of students; D109. There is ineffective implementation of staff development programmes; D110. There is lack of communication between clinical and academic settings. D111. There is uncooperative and limited commitment by key role players. The construct “challenges encountered” was measured by six indicators. Table 5.23 shows the CFA results of the construct and its observed indicators or variables.

**Table 5.23: Challenges encountered – CFA standardised estimates**

| **Estimation method** | | **=ML** | | | **No of obs** | **=209** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | =-1690.4 | | | | |
| | Coeff. | Std Err. | Z-stat | P > \| Z \| | [95% Conf Interval] | |
| **Measurement** | | | | | | |
| D104 ← | | | | | | |
| CE | 0.382 | 0.065 | 5.84 | 0.000 | 0.254 | 0.510 |
| D105 ← | | | | | | |
| CE | 0.728 | 0.041 | 17.81 | 0.000 | 0.647 | 0.808 |
| D107 ← | | | | | | |
| CE | 0.280 | 0.069 | 4.02 | 0.000 | 0.143 | 0.417 |
| D109 ← | | | | | | |
| CE | 0.668 | 0.045 | 14.60 | 0.000 | 0.578 | 0.757 |
| D110 ← | | | | | | |
| CE | 0.813 | 0.033 | 24.04 | 0.000 | 0.747 | 0.880 |
| D111 ← | | | | | | |
| CE | 0.793 | 0.035 | 22.49 | 0.000 | 0.723 | 0.862 |
| var (e.D104) | 0.853 | 0.050 | | | 0.761 | 0.957 |
| var (e.D105) | 0.470 | 0.059 | | | 0.366 | 0.602 |
| var (e.D107) | 0.921 | 0.039 | | | 0.847 | 1.001 |
| var (e.D109) | 0.553 | 0.061 | | | 0.445 | 0.687 |
| var (e.D110) | 0.337 | 0.055 | | | 0.245 | 0.464 |
| var (e.D111) | 0.371 | 0.055 | | | 0.276 | 0.498 |
| var (CE) | 1 | . | | | . | . |
| cov (e.D104, e.D107) | 0.349 | 0.061 | 5.66 | 0.000 | 0.228 | 0.470 |
| **LR test of model vs saturated: Chi2 (8)=14.73, Prob>Chi2=0.0646** | | | | | | |

The estimates of each of the observed variables were statistically significant at 1 percent level. Relatively, variables that contributed more significantly to challenges encountered were the “lack of communication between clinical and academic settings” (coefficient=0.813; Z-statistic=24.04; p<0.01), “uncooperative and limited commitment by key role players” (coefficient=0.793; Z-statistic=22.49; p<0.01), and “weak leadership and governance in planning and oversight (coefficient=0.728; Z-statistic=17.81; p<0.01). The covariance estimate was significant at 1 percent level. Table 5.24 presents the estimates of the CFA model goodness of fit tests.

**Table 5.24: Challenges encountered – CFA model goodness of fit estimates**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (11) | 14.732 | Model vs saturated |
| p>chi2 | 0.065 | |
| chi2_bs (21) | 407.399 | Baseline vs saturated |
| p>chi2 | 0.000 | |
| Population error | | |
| RMSEA | 0.063 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.000 | |
| upper bound | 0.114 | |
| Pclose | 0.287 | Probability RMSEA <=0.05 |
| Information criteria | | |
| AIC | 3406.783 | Akaike information criterion |
| BIC | 3450.233 | Bayesian information criterion |
| Baseline comparison | | |
| CFI | 0.983 | Comparative fit index |
| TLI | 0.968 | Tucker-Lewis index |
| Size of residuals | | |
| SRMR | 0.030 | Standardised root mean squared residual |
| CD | 0.853 | Coefficient of determination |

The goodness of fit test results showed that the model did fit the data well. The Chi-square (14.732; p=0.065) statistically insignificant at 5 percent level indicated that the model did fit sample data satisfactorily. A pclose value (=0.287) larger than 0.05 showed a good model fit. The RMSEA equal to 0.063, in the range between 0.05 and 0.08 showed an adequate fit. A coefficient of determination value (CD=0.853) closer to 1 showed a good fit of the model. The CFI=0.983 and TLI=0.968 confirmed a good fit of the confirmatory model of challenges encountered.

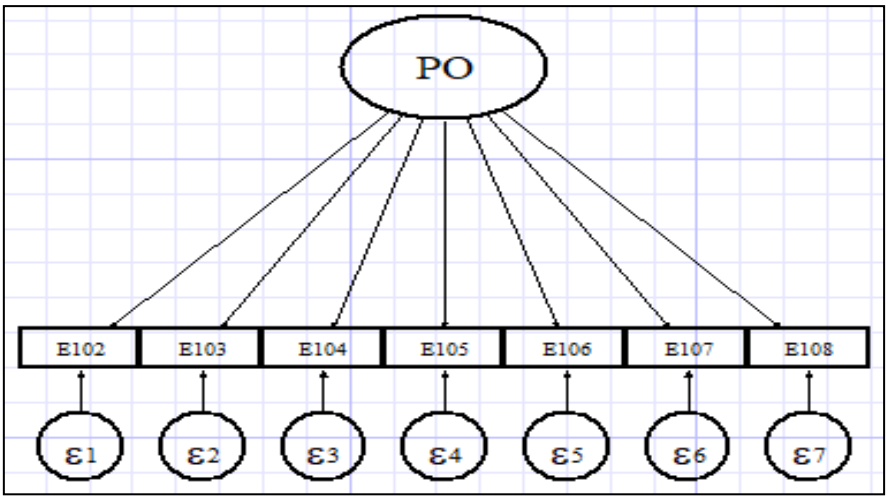


**Figure 5.8: Process operations – hypothesised model**

Variables: E102. Staff participates in continuous quality assurance improvement processes, monitoring and regular review of internal quality assurance structures and processes, e.g. teaching and learning, research. E103. There is adequate student support services and community engagement; E104. There is available and effective utilisation of efficient mechanisms for learner support services. E105. There is consistent involvement of external stakeholders in formal quality assurance processes. E106. There is collection and use of data and information for performance review and improvement. E107. There is upgrading of Information Communication Technology infrastructure. E108. There is academic planning and curriculum review and development of programmes qualifications. The construct “process operations” was measured by seven variables. Table 5.25 presents the CFA results of the construct and its observed indicators or variables.

**Table 5.24: Process operations – CFA standardised estimates**

| **Estimation method** | | **=ML** | | | **No of obs** | **=209** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | =- | | | | |
| | Coeff. | Std Err. | Z-stat | P > \| Z \| | [95% Conf Interval] | |
| **Measurement** | | | | | | |
| E102 ← | | | | | | |
| PO | 0.565 | 0.056 | 10.08 | 0.000 | 0.455 | 0.675 |
| E103 ← | | | | | | |
| PO | 0.532 | 0.060 | 8.84 | 0.000 | 0.414 | 0.650 |
| E104 ← | | | | | | |
| PO | 0.704 | 0.045 | 15.43 | 0.000 | 0.615 | 0.794 |
| E105 ← | | | | | | |
| PO | 0.732 | 0.043 | 16.91 | 0.000 | 0.647 | 0.817 |
| E106 ← | | | | | | |
| PO | 0.650 | 0.049 | 13.06 | 0.000 | 0.552 | 0.747 |
| E107 ← | | | | | | |
| PO | 0.652 | 0.049 | 13.17 | 0.000 | 0.555 | 0.750 |
| E108 ← | | | | | | |
| PO | 0.458 | 0.063 | 7.25 | 0.000 | 0.334 | 0.582 |
| var (e.E102) | 0.680 | 0.063 | | | 0.566 | 0.816 |
| var (e.E103) | 0.716 | 0.064 | | | 0.600 | 0.853 |
| var (e.E104) | 0.503 | 0.064 | | | 0.392 | 0.646 |
| var (e.E105) | 0.463 | 0.063 | | | 0.354 | 0.606 |
| var (e.E106) | 0.577 | 0.065 | | | 0.463 | 0.718 |
| var (e.E107) | 0.573 | 0.065 | | | 0.459 | 0.715 |
| var (e.E108) | 0.789 | 0.058 | | | 0.684 | 0.912 |
| var (P0) | 1 | . | | | . | . |
| cov (e.B105, e.B106) | 0.359 | 0.071 | 5.07 | 0.000 | 0.220 | 0.498 |
| **LR test of model vs saturated: chi2 (13)=25.19, Prob>chi2=0.0218** | | | | | | |

The results for each indicator were statistically significant at 1 percent level. In relative terms, variables that had the highest significant contributions to “process operations” were those that stated that there is “consistent involvement of external stakeholders in formal quality assurance processes” (coefficient=0.732; Z-statistic=16.91; p<0.01), “available and effective utilisation of efficient mechanisms for learner support services” (coefficient=0.704; Z-statistic=15.43; p<0.01), “upgrading of Information Communication Technology infrastructure (coefficient=0.652; Z-statistic=13.17; p<0.01), and “collection and use of data and information for performance review and improvement” (coefficient=0.650; Z-statistic=13.06; p<0.01). The covariance estimate between identified indicators was statistically significant at 1 percent level. Table 5.26 lists the results of the CFA model goodness of fit tests.

**Table 5.25: Process operations – CFA model goodness of fit estimates**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (11) | 25.186 | Model vs saturated |
| p>chi2 | 0.022 | |
| chi2_bs (21) | 434.680 | Baseline vs saturated |
| p>chi2 | 0.000 | |
| Population error | | |
| RMSEA | 0.067 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.025 | |
| upper bound | 0.106 | |
| Pclose | 0.213 | Probability RMSEA <=0.05 |
| Information criteria | | |
| AIC | 3941.961 | Akaike information criterion |
| BIC | 3992.096 | Bayesian information criterion |
| Baseline comparison | | |
| CFI | 0.971 | Comparative fit index |
| TLI | 0.952 | Tucker-Lewis index |
| Size of residuals | | |
| SRMR | 0.043 | Standardised root mean squared residual |
| CD | 0.816 | Coefficient of determination |

The goodness of fit test results showed that the model did fit the data well. The pclose value (=0.213) larger than 0.05 showed a good model fit. The RMSEA equal to 0.067 in the range between 0.05 and 0.08 suggested an adequate fit. The estimated coefficient of determination value (CD=0.853) closer to 1 showed a good fit of the model. The CFI=0.971 and TLI=0.952 confirmed a good fit of the confirmatory model of process operations.

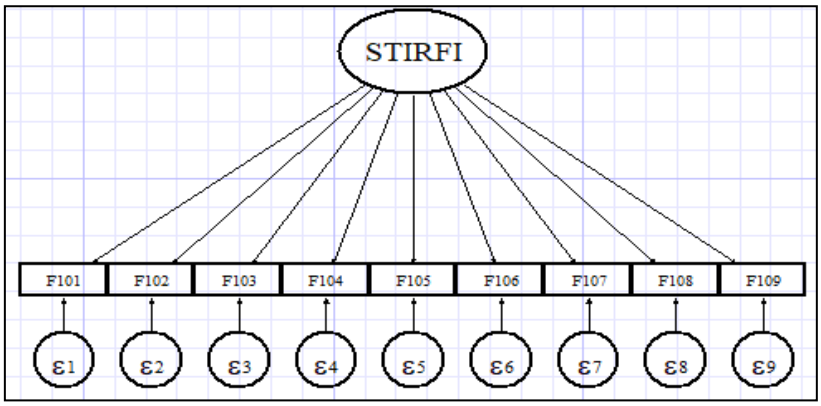


**Figure 5.9: Suggestions to improve readiness for implementation – hypothesised model**

Variables: F101. There should be constant improvement of educator capacity through systematic review such as reviews of salary structure and analysis; F102. There should be a review of funding norms for students to provide targeted funding for new qualifications; F103. There should be an establishment of common standards for lecturers to support the implementation of new qualifications; F104. There should be maintenance and strengthening collaborations and engagements with stakeholders in the system; F105. Leadership and governance weaknesses should be addressed to support the improvement in efficiencies; F106.

Appointment of ample qualified staff required for implementation of new qualifications should be done; F107. There should be an Increase in material and human resources and college capacity for admission of students; F108. Consistent and effective implementation of the Management of Information System (MIS) should be in place; and F109. There should be implementation of development programs and capacity building for all staff members. The construct “suggestions to improve readiness for implementation” was measured by nine variables. Table 5.27 shows the CFA results of the construct.

**Table 5.26: Suggestions to improve readiness for implementation – CFA estimates**

| **Estimation method** | | **=ML** | | | **No of obs** | **=209** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | =- | | | | |
| | Coeff. | Std Err. | Z-stat | P > \| Z \| | [95% Conf Interval] | |
| **Measurement** | | | | | | |
| F101 ← | | | | | | |
| STIRFI | 0.649 | 0.042 | 15.39 | 0.000 | 0.566 | 0.732 |
| F102 ← | | | | | | |
| STIRFI | 0.731 | 0.034 | 21.30 | 0.000 | 0.664 | 0.799 |
| F103 ← | | | | | | |
| STIRFI | 0.857 | 0.020 | 40.82 | 0.000 | 0.815 | 0.898 |
| F104 ← | | | | | | |
| STIRFI | 0.871 | 0.019 | 44.26 | 0.000 | 0.832 | 0.909 |
| F105 ← | | | | | | |
| STIRFI | 0.851 | 0.021 | 39.45 | 0.000 | 0.809 | 0.893 |
| F106 ← | | | | | | |
| STIRFI | 0.779 | 0.029 | 26.26 | 0.000 | 0.721 | 0.837 |
| F107 ← | | | | | | |
| STIRFI | 0.814 | 0.026 | 31.18 | 0.000 | 0.763 | 0.865 |
| F108 ← | | | | | | |
| STIRFI | 0.845 | 0.022 | 37.01 | 0.000 | 0.800 | 0.890 |
| F109 ← | | | | | | |
| STIRFI | 0.890 | 0.017 | 50.28 | 0.000 | 0.855 | 0.924 |
| var (e.F101) | 0.578 | 0.054 | | | 0.480 | 0.696 |
| var (e.F102) | 0.464 | 0.050 | | | 0.375 | 0.574 |
| var (e.F103) | 0.265 | 0.035 | | | 0.203 | 0.346 |
| var (e.F104) | 0.240 | 0.034 | | | 0.182 | 0.318 |
| var (e.F105) | 0.275 | 0.036 | | | 0.211 | 0.357 |
| var (e.F106) | 0.392 | 0.046 | | | 0.310 | 0.494 |
| var (e.F107) | 0.336 | 0.042 | | | 0.262 | 0.431 |
| var (e.F108) | 0.285 | 0.038 | | | 0.219 | 0.372 |
| var (e.E109) | 0.207 | 0.031 | | | 0.154 | 0.279 |
| var (STIRI) | 1 | . | | | . | . |
| cov (e.F106, e.F107) | 0.454 | 0.060 | 7.54 | 0.000 | 0.336 | 0.573 |
| cov (e.F108, e.F109) | 0461 | 0.066 | 6.99 | 0.00 | 0.332 | 0.591 |
| **LR test of model vs. saturated: chi2 (25)=69.25, Prob>chi2=0.000** | | | | | | |

The results show that all the suggestions were statistically significant at 1 percent level. The suggestions that had highest significant considerations were that “there should be implementation of development programmes and capacity building for all staff members” (coefficient=0.890; Z-statistic=50.28 $p<0.01$), “there should be maintenance and strengthening collaborations and engagements with stakeholders in the system” (coefficient=0.871; Z-statistic=44.26; $p<0.01$), “there should be established common standards for lecturers to support the implementation of new qualifications” (coefficient=0.857; Z-statistic=40.82; $p<0.01$), “leadership and governance weaknesses should be addressed to support the improvement in efficiencies” (coefficient=0.851; Z-statistic=39.45; $p<0.01$). The covariance estimates between identified indicators were

statistically significant at 1 percent level. Table 5.28 shows the results of the CFA model goodness of fit tests.

**Table 5.27: Suggestions to improve readiness for implementation – CFA model goodness of fit estimates**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (11) | 69.246 | Model vs saturated |
| p>chi2 | 0.000 | |
| chi2_bs (21) | 1693.572 | Baseline vs saturated |
| p>chi2 | 0.000 | |
| Population error | | |
| RMSEA | 0.092 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.067 | |
| upper bound | 0.118 | |
| Pclose | 0.005 | Probability RMSEA <=0.05 |
| Information criteria | | |
| AIC | 2471.549 | Akaike information criterion |
| BIC | 2538.396 | Bayesian information criterion |
| Baseline comparison | | |
| CFI | 0.973 | Comparative fit index |
| TLI | 0.962 | Tucker-Lewis index |
| Size of residuals | | |
| SRMR | 0.031 | Standardised root mean squared residual |
| CD | 0.945 | Coefficient of determination |

The goodness of fit test results indicated that the model did fit the data well. The RMSEA equal to 0.092 suggested an adequate fit while the estimated coefficient of determination value (CD=0.945) closer to 1 showed a good fit of the model. CFI=0.973 and TLI=0.962 confirmed a good fit of the confirmatory model.

### 5.5.5 Summary of quantitative findings

In this section the researcher briefly summarises the quantitative findings. The majority of respondents, 84% (n=176) were females and 16 % (n=33) were males. Females dominated nursing and nursing education in the selected PNCs and provinces. There are generally fewer males than females in the nursing profession. Age distribution has majority of 48% (n=100) respondents who were aged 50-59 years, followed by 27% (n=57) aged 40-49 years, 12% (n=26) were 30-39 years, 1% (n=2) was 25-29 years old and 12% (n=24) were 60 years and above.

The researcher noted that the majority of 43% (n=89) had a Bachelor of Arts in Nursing degree; followed by 29% (n=60) who had a Master's degree; 22% (n=47) had an Honours

degree; 4% (n=8) had a diploma in nursing, and only 2% (n=5) had a PhD degree. A diploma in Nursing Education is the minimum prerequisite to teach at a PNC and was relevant to the legacy qualifications. In this study, most of the respondents had a degree in nursing. The factors significant to the preparation for implementing the new qualifications programme were:

- Consistent involvement with the college management and curriculum development committee in formulation and endorsement of functional committees in the development of the new qualifications implementation plan.
- Consistent engagement in designing programmes curricula that fulfil accreditation requirements.
- Recruitment, appointment and placement of qualified personnel conducted on time for preparations of new qualifications.
- Development of the Quality Management Systems (QMS).
- Consistent engagement with relevant stakeholders such as South African Nursing Council (SANC), Council on Higher Education (CHE) and the Department of Health (DoH).

The variable with the highest contribution in measurement of institutional support indicates that:

- There was sufficient guidance regarding compliance with norms and standards for clinical practice.
- There was adequate involvement and support towards inspections by bodies involved in programmes accreditation.
- There was some form of partnership on sharing of resources with universities where programmes are located.

The challenges encountered by the researcher were:

- Budget constraints for procurement of resource materials for the facilitation of teaching and clinical support.
- Lack of communication between clinical and academic setting.
- Uncooperative and limited commitment by key role players.
- Weak leadership and governance in planning and oversight.

- Ineffective implementation of staff development programmes and inadequate funding, limiting capacity for admission of students.

The factors that contributed to process operations were:

- Available and effective utilisation of efficient mechanisms for learner support services.
- Consistent involvement of external stakeholders in formal quality assurance processes.
- Upgrading of Information Communication Technology infrastructure and collection.
- Use of data and information for performance review and improvement.

Challenges to partnerships to assist in preparation of the new programmes were:

- Lack of communication between clinical and academic settings.
- Uncooperative and limited commitment by key role players.
- Weak leadership and governance in planning and oversight.

## 5.6 CONCLUSION

Data analysis and findings were discussed in this chapter for the qualitative and quantitative phases of the study, with reference to the literature reviewed. The participants' perspectives and responses were discussed in terms of three (3) factors: preparations executed, challenges encountered, and support received or needed for the implementation of the new programmes. In Chapter 6, the researcher is going to present the integration of the qualitative and quantitative findings of the study.

# CHAPTER 6

# INTEGRATION AND INTERPRETATION OF FINDINGS

## 6.1 INTRODUCTION

Integration and interpretation of the qualitative and quantitative findings are presented in this chapter. A sequential exploratory mixed methods research design and approach were selected by the researcher, which guided the integration phase. The usage of a sequential exploratory design allows the usage of the qualitative findings to design the quantitative tool (Gray et al 2017:312). This chapter discusses the central themes based on the qualitative and quantitative findings that formed the basis for the development of a support model for the implementation of the new qualifications. Figure 6.1 depicts the research methodology.

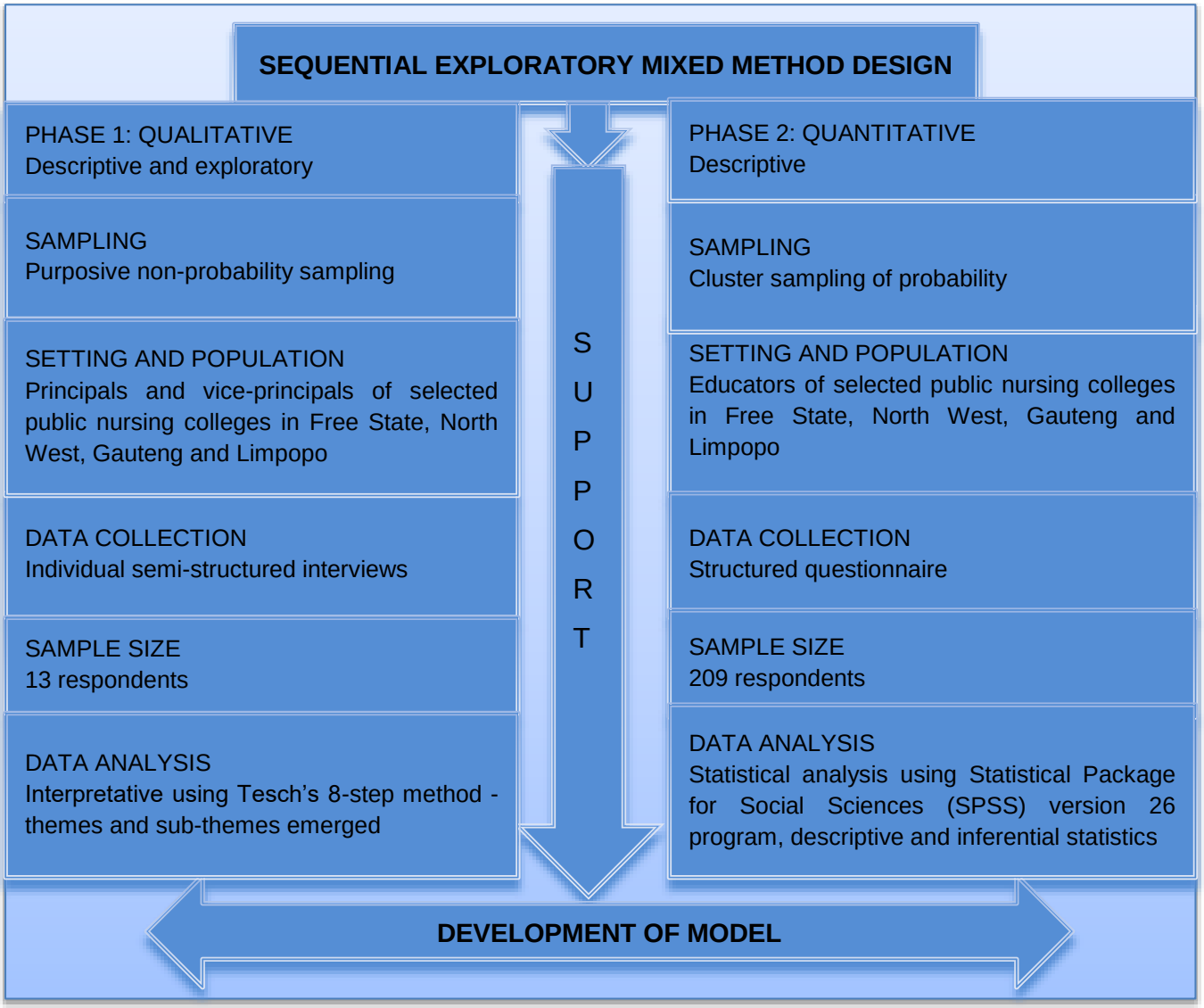


**Figure 6.1: Schematic illustration of the research methodology**

## 6.2 OVERVIEW OF QUALITATIVE FINDINGS

Phase 1 answered the question: What is the level of preparedness of the PNCs with regard to implementation of the new qualifications? The researcher collected qualitative data in identifying principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications. Face-to-face interviews were conducted and Tesch's 8-step model was used to analyse data (Creswell 2014:198).

Four themes and 14 sub-themes emerged from the data analysis. The themes were:

- Preparations for the implementation of the new qualifications.
- Support provided to PNCs in preparation for implementation of the new qualifications.
- Challenges experienced during preparations to implement the new qualification programmes.
- Explanation of processes required during preparations to implement the new qualification programmes. Figure 6.2 illustrates the main qualitative findings.


**Figure 6.2: Main qualitative results**

### 6.2.1 Preparations for the implementation of the new qualifications

The procedure of was explained by participants on how to prepare and implement the new qualifications. The activities included consultations and meetings with the DOH, SANC, CHE, NEPI, and CNO as well as establishing curriculum teams and workshops for capacitating staff. The participants indicated that some PNCs were ready for implementing the new qualifications, but others were still in the process of preparations for the implementation of the new qualifications. The findings indicated that the participants experienced the transition and preparations for the implementation of the new qualifications positively. Some of the challenges encountered in Lesotho were to implement and sustain a curricular innovation in a midwifery programme, as well as development of learning and teaching resources for faculty members, quality assurance to meet accreditation standards, and co-responsibility of the educator and the student in the implementation of new qualifications (Nyoni & Botma 2018:100).

### 6.2.2 Support provided to PNCs in preparation for implementation of the new qualifications

The implementation of the new qualifications requires that PNCs be supported in the transition process. The participants indicated various levels of support from the provincial DoH, SANC, CHE, NEPI and CNO. Most of the participants indicated adequate support; some indicated limited support, and others had received no support. The participants indicated that collegial and management support at various levels of the PNCs enhanced the implementation of the new qualifications.

The anticipated support was regarding the development of study guides, curriculation, increasing different staff categories, and development of staff. Zwane and Mtshali (2019:1) state that partnership between healthcare organisations, academic institutions, and government assist in resolving challenges related to curriculum and training issues in clinical and academic institutions. Support for Public Nursing Colleges in preparation for implementing the new qualifications is essential. Therefore, the support model should assist PNCs, especially in cases of minimal or lack of support during the implementation of the new qualifications.

### 6.2.3 Challenges experienced by the PNCs during preparations to implement the new qualifications programmes

The participants indicated that they experienced human resource, material and infrastructural constraints, service and logistical problems and challenges in the initial and working stages of recurriculation of the new programmes. The human resource challenges referred to a lack of suitably qualified lecturers and support staff to implement the new qualifications, and the creation and application of old and new posts were problematic because of the existing moratorium and lack of funds. Staff-related problems that could affect the implementation of new qualifications included a lack of occupation-specific dispensation (OSD) at PNCs, leading to poor interest by nurse educators. Infrastructural and material resource problems expected to affect the implementation of the new qualifications included the lack of transport to clinical practice; small libraries; few spaces at computer labs; lack of kitchens for students, and shortage of mentors, student accommodation, skills labs, data projectors, staff offices, libraries, and computer labs.

Technology-related problems included a lack of devices for teaching and learning, Internet, WiFi, and a student information system to support e-learning. Service and logistical problems which might affect implementation of the new qualifications in the PNCs included lack of mentors in the clinical areas; lack of deliveries for midwives; lack of high-fidelity models; retiring staff not being replaced, and lack of readiness with other programmes. Problems with the Management of Information System (MIS) with regard to implementation of the new qualifications included unavailability of the student information system (SIS). Problems and challenges in the initial and working stages of recurriculation of the new programmes included lack of a national curriculum; educator attrition without replacement, and inability to curriculate the postgraduate diploma because PNCs were awaiting the finalisation and uploading on the SANC website.

### 6.2.4 Explanation of processes required during preparations to implement the new qualification programmes

The CHE and SANC accreditation criteria require various processes related to existing operations to run activities during the implementation of new programmes. The participants explained the processes required during preparations to implement the new qualifications programmes. The processes included procedures for managing the setting,

storing, writing and providing feedback on tests and examinations; situational analysis and memorandums of understanding (MOU) of identified clinical areas for clinical placement; established quality assurance systems of PNCs; communication channels, and procedures during implementation.

The participants indicated that institutions/facilities for clinical placement had been identified and the MOUs signed. Communication channels and procedures to follow during the implementation of the new qualifications were also outlined. The participants indicated the need for support on the Management of Information System (MIS) to ensure timeous accreditation of all the new nursing qualifications. The qualitative findings assisted the researcher to develop the structured questionnaire for the quantitative phase of the study.

## 6.3 OVERVIEW OF QUANTITATIVE FINDINGS

Phase 2 answered the question: What is the level of preparedness of the PNCs with regard to implementation of the new qualifications? To responding to the question, quantitative data was collected by the researcher to describe nurse educators' perspectives on the preparedness of PNCs for implementation of the new qualifications. Data was collected by means of a structured questionnaire with closed questions based on a 5-point Likert scale. The researcher based the questionnaire on Rogers (1989) perspective transformative learning theory and the SANC and CHE accreditation criteria. The objective was to investigate the participant nurse educators' views on the PNCs' preparedness for implementation of the new qualifications.

The main quantitative findings are discussed under four headings:

- Perceived factors significant to the preparation for implementing the new qualifications.
- Perceived measurement of institutional support.
- Perceived challenges encountered.
- Perceived factors that contributed to process operations.

### 6.3.1 Perceived factors significant to the preparation for implementing the new qualifications

According to the respondents, the following factors were significant in preparations for implementing the new programmes: consistent involvement with college management and curriculum development committee in formulation and endorsement of functional committees of the new qualifications' development implementation plan; engagement in designing programme curricula that fulfil accreditation requirements; recruitment, appointment and placement of qualified personnel conducted on time for preparations for the new qualifications; development of the Quality Management Systems (QMS); consistent engagement with relevant stakeholders such as the SANC, CHE and the DoH.

Of the respondents, (0.863) indicated that there was consistent involvement with the PNCs management and curriculum development committees in formulation and endorsement of functional committees in development of the new qualifications which had a large positive loading on factor 1. Of the respondents, (0.741) indicated that there was engagement in designing programme curricula that fulfilled accreditation requirements which had a large positive loading under factor 1. The respondents indicated that there was consistent engagement with relevant stakeholders such as the SANC, CHE and DoH) (loading=0.568 on factor loading 1). Of the respondents, (0.828) indicated that there was mobilisation of material resources for teaching and learning and (0.640) indicated that recruitment, appointment and placement of qualified personnel was conducted on time for preparations of new qualifications loaded under factor 2.

The respondents indicated the development of the Quality Management Systems (QMS) (loading=0.584). This factor showed positive engagement from the curriculum development committee and the formulation and endorsement of functional committees. The respondents indicated that they were engaged in designing programme curricula that fulfilled accreditation requirements and Quality Management Systems (QMS). This indicated preparations executed for the new programmes which capacitated the implementation of the new qualifications. The factors accounted for 0.704 or 70.4% of the variation in the data.

### 6.3.2 Perceived measurement of institutional support

The variable with the highest contribution in measurement of institutional support indicated that there was sufficient guidance regarding compliance with norms and standards for clinical practice; adequate involvement and support for inspection by bodies involved in programme accreditation, and some partnership in sharing of resources with universities where programmes were located. The respondents indicated that there was sufficient guidance regarding compliance with norms and standards for clinical practice (loading=0.850); adequate involvement and support for inspections by bodies involved in programmes accreditation (loading=0.645), and some form of partnership on sharing of resources with universities where programmes were located (loading=0.623) which accounted for a total of 0.706 or 70.6% of the three factors.

### 6.3.3 Perceived challenges encountered

The challenges encountered were budget constraints for procurement of resource materials for the facilitation of teaching and clinical support; lack of communication between clinical and academic setting; uncooperative and limited commitment by key role players; weak leadership and governance in planning and oversight; ineffective implementation of staff development programmes, and inadequate funding, limiting capacity for admission of students.

The respondents indicated budget constraints for procurement of resource materials for the facilitation of teaching and clinical support (loading=0.798) under factor 2; uncooperative and limited commitment by key role players (loading=0.778); lack of communication between clinical and academic settings (loading=0.787); weak leadership and governance in planning and oversight (loading=0.710); ineffective implementation of staff development programmes and inadequate funding limiting capacity for admission of students (loading=0.614). These factors indicated challenges encountered during the preparations for implementation of the new qualifications. The five factors accounted for 0.737 or 73.7% of the variation in the data.

### 6.3.4 Perceived factors that contributed to process operations

The factors that contributed to process operations were available and effective utilisation of efficient mechanisms for learner support services; consistent involvement of external stakeholders in formal quality assurance processes; upgrading of Information Communication Technology infrastructure and collection, and use of data and information for performance review and improvement. The respondents indicated that there was available and effective utilisation of efficient mechanisms for learner support services (loading=0.746), consistent involvement of external stakeholders in formal quality assurance processes (loading=0.734), and upgrading of Information Communication Technology infrastructure (loading=0.655). These factors indicated a large factor loading 2 of a total of 0.711 or 71.1%.

## 6.4 MERGED QUALITATIVE AND QUALITATIVE RESULTS

The researcher summarised the main findings of phases 1 and 2 as preparations for implementing the new programmes, challenges experienced, and support needed and preparation process. Figure 6.3 summarises the main findings and anticipated activities to enhance the preparation for implementing the new programmes in PNCs.

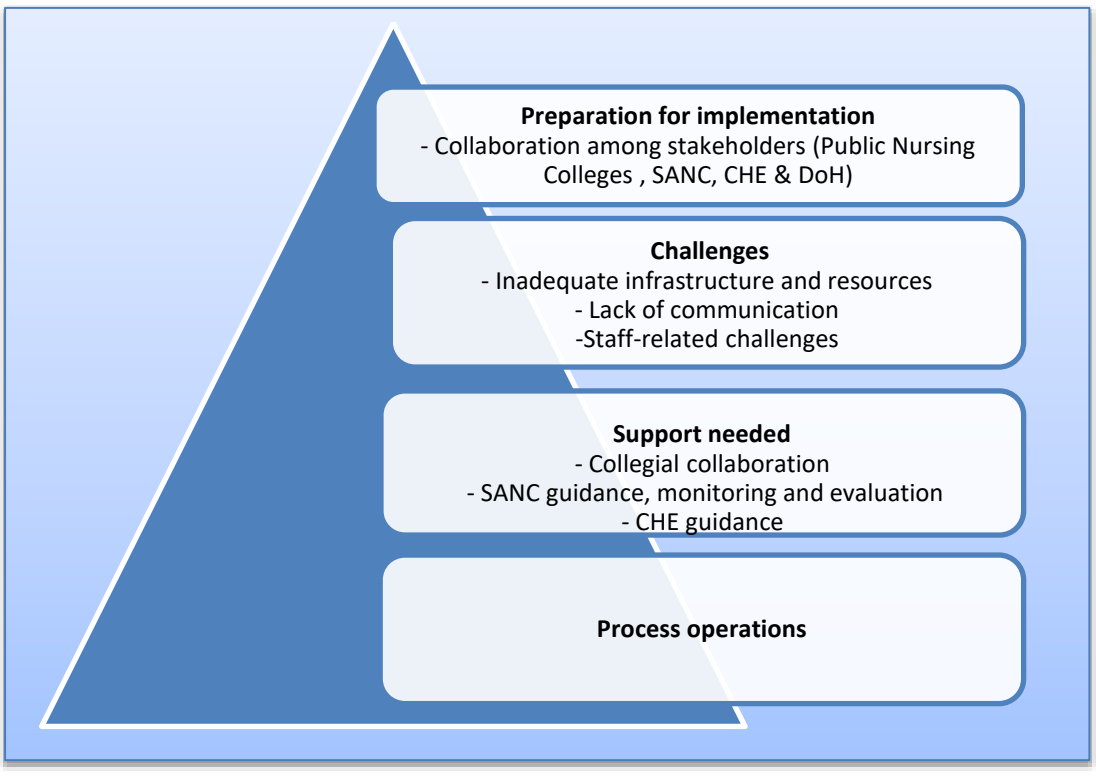


**Figure 6.3: Facilitating the preparations for implementing new programmes**

### 6.4.1 Merging the main themes

The previous sections summarised the qualitative (phase 1) and quantitative (phase 2) findings to enhance support for PNCs' preparation for implementing the new nursing programmes. The section discusses merging of the findings that assisted the researcher to develop the support model. Narrative approach was followed to integrate the quantitative and qualitative findings. This is informed by sections 6.2 and 6.3 which present summaries of findings. The researcher interpreted and summarised the key themes under the headings in Figure 6.3.

#### *6.4.1.1 Preparation for implementation*

The study found that the PNCs' status regarding preparations for the implementation of the new qualifications indicated some guidance on compliance with norms and standards for theory and clinical practice. The guidance was observed during different strategies and activities to prepare for the implementation of the new qualifications. There is some involvement and support in inspections by the SANC, CHE and DoH in programme accreditation and some form of partnership on sharing resources with the universities where the PNCs are located.

The South African Nursing Council (SANC), Council of Higher Education (CHE), and Department of Health (DoH) were consistently engaged and involved in the preparations. The qualitative findings indicate that staff development strategies are employed in practice for all staff to implement the new qualifications. The quantitative findings indicated that qualified personnel recruitment, appointment, and placement are conducted to prepare for the new qualifications. However, despite involvement and support from different stakeholders' participants from the qualitative phase indicated that some PNCs were ready for implementing the new qualifications, but others were still in the process of preparations for the implementation of the new qualifications.

#### *6.4.1.2 Challenges*

The findings indicated that despite constant involvement and support from different stakeholders, the participants found it inadequate and reported various challenges. Challenges included budget constraints for procurement of resource materials and

creation of posts and hiring staff for facilitation, teaching and clinical support; lack of support from different bodies responsible for programmes accreditation (DoH, SANC, CHE, NEPI, CNO); uncooperative and limited commitment by key role players; lack of communication between clinical and academic settings, weak leadership and governance in planning and oversight of the preparation process; ineffective implementation of staff development programmes; inadequate funding, limiting capacity for admission of students; inconsistent Management of Information System (MIS) practice, and infrastructure and technology-related problems such as lack of ICT facilities to realise 4IR.

#### *6.4.1.3 Support needs*

The findings indicated the need for various support systems to enhance the implementation of the new programmes in PNCs. The participants stated a need for available and effective mechanisms for learner support services in the PNCs and implementation of development programmes and capacity building for all staff members. Both phases indicated the need for consistent involvement or strengthening collaboration of external stakeholders in a formal quality assurance process and upgrading of Information Communication Technology (ICT) infrastructure. Phase 1 indicated the need for an improved Information Management system and upgraded storage and logistics for handling teaching and learning activities. Phase 2 indicated a need for common standards for lecturers to support the implementation of the new qualifications, and for leadership and governance weaknesses to be addressed to support the implementation process.

## 6.5 CONCLUSION

The researcher discussed and merged the qualitative (phase 1) and quantitative (phase 2) findings. The findings were discussed according to preparations executed, challenges encountered, and support received or needed to implement the new qualifications programmes. The researcher merged the findings to develop a central theme to guide the development of the model to support the implementation of the new qualification programmes in PNCs. Chapter 7 presents the support model developed.

# CHAPTER 7

# SUPPORT MODEL FOR THE IMPLEMENTATION OF THE NEW QUALIFICATIONS PROGRAMME IN PUBLIC NURSING COLLEGES IN SOUTH AFRICA

## 7.1 INTRODUCTION

Integrated findings were outlined and were from the qualitative data reflected the participant principals' and vice-principals' views and the quantitative findings presented the participant nurse educators' perspectives on the preparedness of PNCs to implement the new qualifications. These merged findings indicated that despite various stakeholders' constant involvement and support, the participants found it inadequate and reported various challenges. The findings indicated the need for various support systems in facilitating and enhancing the implementation of the new programmes in PNCs.

The initial part of the chapter discussed the support concept of analysis to clarify and distinguish its definition and examine its characteristics and attributes. The researcher adapted Walker and Avant's (2011:160) eight-step method of concept analysis for the concept support. The analysis of the concept will give clarity on the support model that could enhance support for PNCs in implementing the new nursing qualification in South Africa. The latter part of the chapter focused on model development. The latter section outlined the integration of concept analysis and the formation of the building blocks of the model according to (Dickhoff et al 1968). Walker and Avant's (2011:160) eight-step method of concept analysis was applied as follows:

## 7.2 CONCEPT ANALYSIS

This type of analysis is a strategy used to examine the characteristics or attributes of a concept, and includes a formal, linguistic application to determine the defining attributes (Walker & Avant 2011:157). Concept analysis assisted in identifying five concepts emerging from the findings. The concepts include human resource, infrastructure and material, service and technology, institution and support. The concept support was identified as the main concept for the model development. The definition of the concept is as follows:

- Selection of a concept
- Determining the analysis' purpose
- Identification of every concept's usage
- Determining the concept's defining attributes
- Identification of a model case
- Identification of borderline, related, and contrary cases
- Identification of antecedents and consequences
- The identification of important referents or ways to measure the concept

### 7.2.1 Selecting a concept

The starting point for developing a model is the selection of a concept for analysis by way of reflecting the area or topic of greatest interest (Walker & Avant 2011:150). The researcher selected a concept associated with the topic in nursing education and practice examined in the study. The study findings indicated that the PNCs experienced challenges in implementing the new nursing qualifications, which led to the development of a support model for the implementation of the new qualifications by the PNCs. The researcher selected "support" as the main concept in the study, because all the other concepts and factors were related to it (Chinn & Kramer 2011:46). The participants' statements indicated that they did not receive support when they wanted to implement the new qualification for nurses.

### 7.2.2 Determining the purpose of analysis

Determining the purpose of concept analysis enabled the researcher to concentrate on what she wished to achieve with the results. Walker and Avant (2011:160) point out that to define and clarify the meaning of the concept is the main purpose of concept analysis, as well as to develop the operational definition that will contribute to a better understanding of its application in the nursing education and practice context and how it is perceived and used. The researcher examined definitions from dictionaries and the literature reviewed in order to gain a deeper understanding of support and how to develop the model.

### 7.2.3 Identifying all the uses of the concept

Walker and Avant (2011:158) highlight that it is of paramount importance to identify all the uses of a concept during the collection of empirical data for analysis. Accordingly, the researcher consulted dictionaries, the literature reviewed, and colleagues to deepen her understanding of the concept. The researcher consulted relevant sources of various related disciplines in addition to nursing or medical literature to avoid bias and broaden her understanding of the use of this concept. Identifying all the uses of support involved examining the concept therefore the researcher utilised multiple sources, including dictionaries and academic literature (Walker & Avant 2011:159).

#### *7.2.3.1 Dictionary definitions*

The dictionary definitions described the various usages of "support". *Merriam Webster's Revised Unabridged Dictionary* (2021:online) defines "support" as a noun as "a thing that bears the weight of something or keeps it upright" which refers to an idea to encourage or agreement with an idea, group or person (helping/assisting), which includes practical or emotional help and to acceptance, which includes allowing something to happen or accepting it.

The *Oxford Advanced Learner's Dictionary* (2021) explains "support" as a verb as "to help by one's approval or sympathy". The *Concise Oxford English Dictionary* (2021:online) lists the following synonyms of support: "prop, pillar, post, underpinning, base, substructures, foundation". The *Cambridge English Learner's Dictionary* (2021:online) defines "support" as "to agree with and give encouragement to someone or something because you want him/ her or it to succeed".

#### *7.2.3.2 Contextual definition*

The concept of support is widely used and has many meanings. Jooste (2017:117), Marshall, Raynor and Nolte (2015:494) and Uys and Middleton (2014:95) state that social and emotional support lessens or decreases the negative effects of stress and enhances team productivity. Communication with employees, education, participation, negotiation, and teamwork enhance support (Robbins, Judge, Odendaal & Roodt 2009:487). Robbins et al (2009:490) emphasise that the following underlying support values should prevail

during organisational development: respecting people, trustworthy and supportive, equalising the power, confrontational, and participating. Curtin and Flaherty (1982:20) state that interpersonal support in times of decision making and stress provides an encouraging climate thereby eliminating anxiety.

Improved working conditions and a supportive environment with the necessary resources afford employees support that motivates them to grow and attain their goal (Jooste 2017:208). Jooste (2017:79) emphasises that the organisation must identify the needs of the employees and develop action plans to realise the goals. Leaders should provide a friendly, open environment and foster teamwork for the wellbeing of employees, which in turn will foster independency thus leading to high job performance and job satisfaction (Jooste 2017:58). Employees that support one another provide the basis for support in the environment and maintain therapeutic relations that contribute to job sustainability (Uys & Middleton 2014:269).

Supportive service or units form an important part of accreditation. Leaders from different departments within the institution need to work together and function optimally as the output is integrated into the healthcare structure to improve quality (Jooste 2017:221). In 2021, an HR manager of one private hospital group told the researcher in an interview that the main focus of Human Resources (HR) is the management of the human capital, which is achieved through HR support pillars, namely the application, delivery, recruitment, and engagement of employees and people management. Implementing the inclusive education in South Africa, teachers perceived that support structures included teacher support in curriculum and institutional transformation, sharing of resources and practice experience (Nel, Tlale, Engelbrecht & Nel 2016:3).

Bastable (2014:129) found that the availability and measure of support influenced emotional readiness and reduced anxiety. According to Bruce and Klopper (2017:239), administrative support includes supporting educators to disseminate a new curriculum effectively through the utilisation of information technology (IT). IT support enhances educator and student presentation thus building confidence and competence in computer skills Bruce and Klopper (2017:307) and Hughess and Quinn (2013:361) emphasise that qualified staff should provide support by acting as mentors, supervisors, and assessors.

### 7.2.4 Determining the concept's defining attributes

The "heart of concept analysis" is the determination of the concept's attributes (Walker & Avant 2011:162). This is to demonstrate attributes' cluster which might be associated to the concept in allowing the expert the broadest insight into the concept (Walker & Avant 2011:162). In this study the researcher identified attributes by means of literature control and then put together characteristics that appears frequently throughout the process of analysis. Identified characteristics of 'support" which were discovered repeatedly were categorised, reduced and later synthesised. The reduction process followed included the following:

#### *7.2.4.1 Reduction of the identified attributes*

The reduction process of the identified attributes commenced with the identification of the documented attributes of "support". The researcher indicated the contribution of each criterion to the conceptualisation of "support" in the dictionary and subject-related literature definitions. Criteria with the same meaning were grouped together to develop a list of essential and related criteria in "support". Table 7.1 lists the defining attributes of "support ".

**Table 7.1: Essential and related attributes of the verb "support"**

| Concept | Attributes of support | Essential attributes | Related attributes |
|---|---|---|---|
| Support | Accept<br>Agree<br>Allow something to happen<br>A means to maintain<br>Application<br>Assist<br>Bears<br>Carry out successfully<br>Competence<br>Confidence<br>Contribute<br>Delivery<br>Direct presence<br>Encourage<br>Enhances<br>Good base<br>Help<br>Implementing | Application<br>Implementing<br>Individual<br>Managing<br>Public nursing colleges<br>Recruitment<br>Students | A means to maintain<br>Assist/helping<br>Carry out successfully<br>Contribute/encourage<br>Good base/pillar/maintain<br>Provide |

| Concept | Attributes of support | Essential attributes | Related attributes |
|---|---|---|---|
| | Increase<br>Independent<br>Individual<br>Interaction<br>Keep it upright<br>Lessen stress, increase productivity<br>Maintain<br>Managing<br>Mentor<br>Motivate<br>Pillar<br>Planning<br>Post<br>Prop Up<br>Provide<br>Public nursing colleges<br>Realise goals<br>Recruitment<br>Resources<br>Students<br>Supervise<br>Underpinning | | |

Following the reduction process, the researcher formulated a final definition through combining and synthesising the essential attributes and related attributes of the definition. The researcher developed the final definition of the concept “support” with the assistance of the study's results as follows:

Support refers to a process of providing a good base of assistance to the Public Nursing Colleges to manage the process leading towards accreditation for the implementation of the new nursing qualifications.

With the assistance of the literature review the final choices of the defining attributes were identified, validated and provided the evidence base for the analysis of support. This section therefore identifies the characteristics without which support would not occur.

The researcher assessed “support” to form the critical attributes, develop the model, determine antecedents and consequences and defining the empirical referents. Figure 7.1 depicts the essential attributes of support derived from the data.

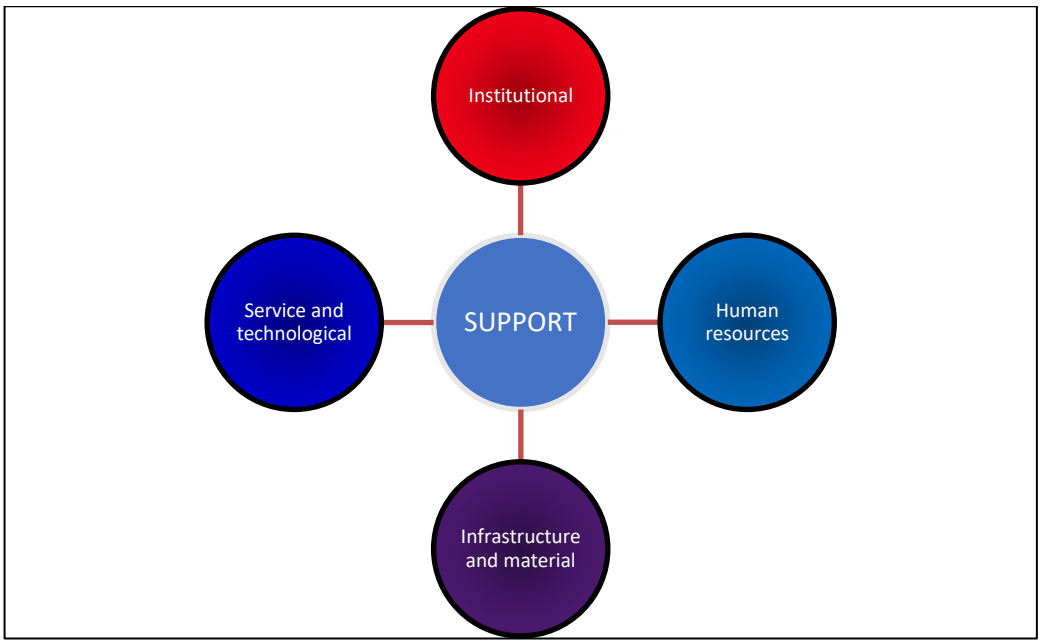


**Figure 7.1: Attributes of "support"**

Walker and Avant (2011:162) describe attributes as qualities or characteristics which associate with a core concept. In this study, the core concept was "support" and the attributes were defined contextually to the study. The support's defining attributes are discussed next according to the findings.

#### *7.2.4.1.1 Human resources*

The findings indicated budget constraints challenges experienced by nurse educators, principals and vice-principals that hindered accreditation for the new qualification programme (R174). The constraints included a lack of creation of positions, a moratorium which was not lifted, unattractive packages, and lack of further development. Support needed is in terms of creation of positions, offering attractive packages, employing suitable qualified nurse educators and enhancing development opportunities.

#### *7.2.4.1.2 Institutional resources*

The findings indicated lack of support from bodies responsible for programme accreditation (PDoH, SANC and CHE); uncooperative and limited commitment by key role players during the curriculation of the new qualifications; lack of communication between clinical and academic settings; weak leadership and governance in planning and oversight of the preparation process; inadequate funding that limited capacity for admission of students, and budget constraints in terms of teaching and clinical support.

Support is needed from accrediting bodies, key role players, enhancing communication between clinical and academic settings, enhancing good leadership and governance, admission of student as per accredited numbers, provision of teaching aids and clinical support.

#### *7.2.4.1.3 Infrastructure and material resources*

The findings indicated a need for infrastructure development to meet the accreditation requirements in terms of libraries, student accommodation, computer rooms and simulation laboratories, and for procurement of resource materials for teaching and learning, such as high-fidelity simulation manikins, computers and projectors. Support is needed for provision of infrastructure and material resources.

#### *7.2.4.1.4 Service and technological resources*

The findings indicated technology-related problems such as lack of ICT facilities to realise 4IR and inconsistent Management of Information System (MIS) practice. Support is needed for provision of service and technological resources.

### 7.2.5 Identifying a model case

Walker and Avant (2011:163) highlight that a model case provides an example of the use of the concept that demonstrates the defining attributes of the concept and should be a pure case of the concept, pure exemplar or a paradigmatic example. In this study the researcher developed a model case that represented a real-life example through utilising the critical attributes of the concept (Walker & Avant 2011:163). Therefore, the real-life scenario on how the concept were utilised composed of all the concept.

There is a need for the PNC's support in the implementation of the new qualifications. The support will lead to the transformation of our nursing education system and thus SA will be able to compete globally. We need support in rolling out projects in time, to allow adjustment and through preparations, for everything to be accomplished in time. The development of managerial skills in terms of the curriculation process, devotion from the PNC programme coordinators and staff involvement and others, namely CHE, SANC, DOH, and universities, will serve as a good base of support. Management workshops on

leading the new curriculation may equip us with the support we need and we will gain confidence and more understanding of the needs required.

I believe that we need to be supported to sharpen our skills in terms of more open communication, utilization of an open-door communication system, transparency, and following processes such as performance management to identify developmental needs and incorporate them into the skills plan. In that way the DOH may be able to provide support though provision of workshops, in service programme, and seminars. We also need support from the DOH on issues of filling up of vacant positions, developing staff, sourcing of material and infrastructure and upgrading of service and technology systems.

Collaboration with stakeholders such as SANC and CHE may provide support in the implementation of the new qualifications. We need guidance in establishing the curriculum task team, accreditation task team, situational analysis task team and committee on “WIL to manage matters pertaining to clinical placement. We need support from expert peers from the Universities to assist during troubleshooting and guide through the process. The overall support will equip us to manage the process leading to the accreditation for the implementation of the new nursing qualification namely R174.

#### *7.2.5.1 Discussion*

The model case provides a blueprint for the usage of concepts whose defining attributes of “support” are demonstrated. The “support” model for the implementation of the new qualifications should enhance the PNCs being accredited to offer the R174, thus lead to an increase in producing professional nurses to meet growing patient needs.

### 7.2.6 Identifying borderline, related and contrary cases

“Analysis cannot be completed until there are no overlapping attributes and no contradictions between the defining attributes and the model case” (Walker & Avant 2011:164). Contrasting additional cases are separated into related, borderline, invented contrary and illegitimate cases (Walker & Avant 2011:164). Furthermore, comparison of defining attributes and identified related cases was done by the researcher. Related cases are instances related to the concept being studied (Walker & Avant 2011:165). The

researcher used related cases in developing a support model for the implementation of the new qualifications programmes in PNCs guided by the central theme.

The definition of support included all three central concepts, thus indicating the relationship among the central concepts. The provision of a good base of assistance:

- Is an act of providing PNCs with a model of support to refer to for guidance on the process to be followed by the PNC's to be accredited to offer a R174 programme.
- Public Nursing Colleges are Nursing Education Institutions (NEIs) which need to be accredited for the implementation of the new nursing qualification.
- Manage the process leading to accreditation for the implementation of the new nursing qualification will be realised by reference to the support model for provision of guidance to the PNC to manage the process of implementing the new nursing qualification.

### 7.2.7 Identifying antecedents and consequences

According to Walker and Avant (2011:167), to identify antecedents and consequences assist in further refinement of critical attributes. The researcher identified the antecedents and consequences from the analysis.

#### *7.2.7.1 Antecedents*

Preceding events that transpire prior to the concept are referred to as antecedents and they comprise of organisational and personal factors that influence the action of the concept. Following is the concept "support", which has to adhere to the following:

- Available/adequate human resources through lifting the moratorium to facilitate the creation of positions, adjustment in salaries in order to recruit and appoint educators to implement the new nursing qualifications.
- Development programme structures in place to assist educators to develop themselves in order to academically qualify to implement the new nursing qualifications.
- Enhanced guidance from different bodies responsible for accreditation, namely the SANC, CHE, and NDoH, during the curriculation of the new programmes and PNC

managers should have continuous assistance to educators throughout to motivate and encourage them during the process of the implementation of the new qualification.

- Discussion between the PNC and DoH to ensure provision of infrastructure and material resources required for the implementation of the new qualification.
- Discussion between the PNC and DoH to ensure the availability of consistent service and technological systems needed in implementing the new qualification.

#### *7.2.7.2 Consequences*

Walker and Avant (2011:167) refer to consequences as incidents which occur due to the occurrence of activities. Furthermore, the researcher utilised consequences to determine often-neglected ideas, variables, or relationships that may direct new research fruitful (Walker & Avant 2011:167). Positive examples include some evidence of the impact on PNC leading to the implementation of the new qualification. Consequences include the following:

- Appointment of required staff with necessary qualifications, adjusted salaries enabling recruitment and appointment of educators to implement the new nursing qualifications.
- Developed educators qualifying to implement the new nursing qualifications.
- Enhanced guidance from different bodies responsible for accreditation, namely the SANC, CHE, and NDoH, during the curriculation of the new programmes and PNC managers supporting educators at all times thus motivating and encouraging them during the process of the implementation of the new qualification.
- Infrastructure and material resources provision for the implementation of the new qualification.
- Availability of consistent service and technological systems needed in implementing the new qualification.

### 7.2.8 Identifying empirical referents or ways to measure the concept

Walker and Avant (2011:168) proffer that empirical referents are referred to as categories of actual phenomena whose demonstration of the occurrence of the concept exist in itself. The final step in concept analysis answers the question: If we are to measure this concept

or determine its existence in the real world, how do we do so? Following are the measurements of the empirical referents:

- Enhanced guidance from the stakeholders, namely the SANC, CHE, NDoH and PNC managers, during the curriculation of the new programmes which would result in motivated and supported PNC staff being accredited to offer the new qualification.
- Availability of human resources and existence of training and development opportunities before commencement or accreditation of the new qualification.
- Availability of material and infrastructure resources which should be sourced and be in place prior to accreditation of the new qualification.
- Availability of consistent service and technological systems which should be sourced and be in place prior to accreditation of the new qualification.

The above section discussed concept analysis using Walker and Avant's (2011) eight-step concept and that helped to clarify the concept "support". The integrated concept analysis results shaped the development of the model. Furthermore, this assisted in clarifying on the support model needed for the implementation of the new qualification namely R174 programme in PNCs in South Africa. The latter section focuses on model development.

## 7.3 MODEL DEVELOPMENT

### 7.3.1 Overview of the model

This section outlines the integration of the results of the concept analysis as well as construction of the model's building blocks (Dickoff et al 1968:422). Furthermore, the concepts classified were applied and the results from the empirical data and conceptualised a support model by Dickoff et al. (1968:422) six (6) areas to classify the concepts of the model as follows:

### 7.3.2 Six areas

(1) The context is the PNCs that are to be accredited to offer the new nursing qualifications. In this study, the context envisioned the interaction between the PNCs and the support model, through the application of the procedures inherent in it.

(2) An agent of change in implementing change in education refers to the help in the form of PNCs principals who provide technical support to the institutions as they implement change. The PNCs principals will guide the PNCs through utilisation of the support model aimed at assisting the PNCs to realise the accreditation of the R174 programme.

(3) The recipient refers to the PNCs seeking accreditation to implement the new nursing qualifications. The programme will, in turn, benefit the potential students who will qualify as professional nurses and the DoH will be able to produce sufficient nurses to the meet needs of the country and thus professionalise nursing to a global competitive state.

(4) The dynamics are the determinants of the power to reach the goal of the study and represent the success or failure of the envisaged change. The success of the model intended to support the PNCs towards accreditation for implementation of the new qualification lies in these determinants of power. The determinants are mainly challenges vested within institutional leadership, human resources, material and infrastructure, and consistent service and technological systems.

(5) The procedure refers to the processes to be promoted, and participation and collaboration from all stakeholders within the NE system to realise accreditation for the R174 programme.

(6) The terminus or health outcome refers to the PNCs that are accredited for offering the R174 programme.

The concepts are interrelated as depicted in Figure 7.2 which illustrates the dynamic relationships amongst the individuals, groups, environments, and constructs.

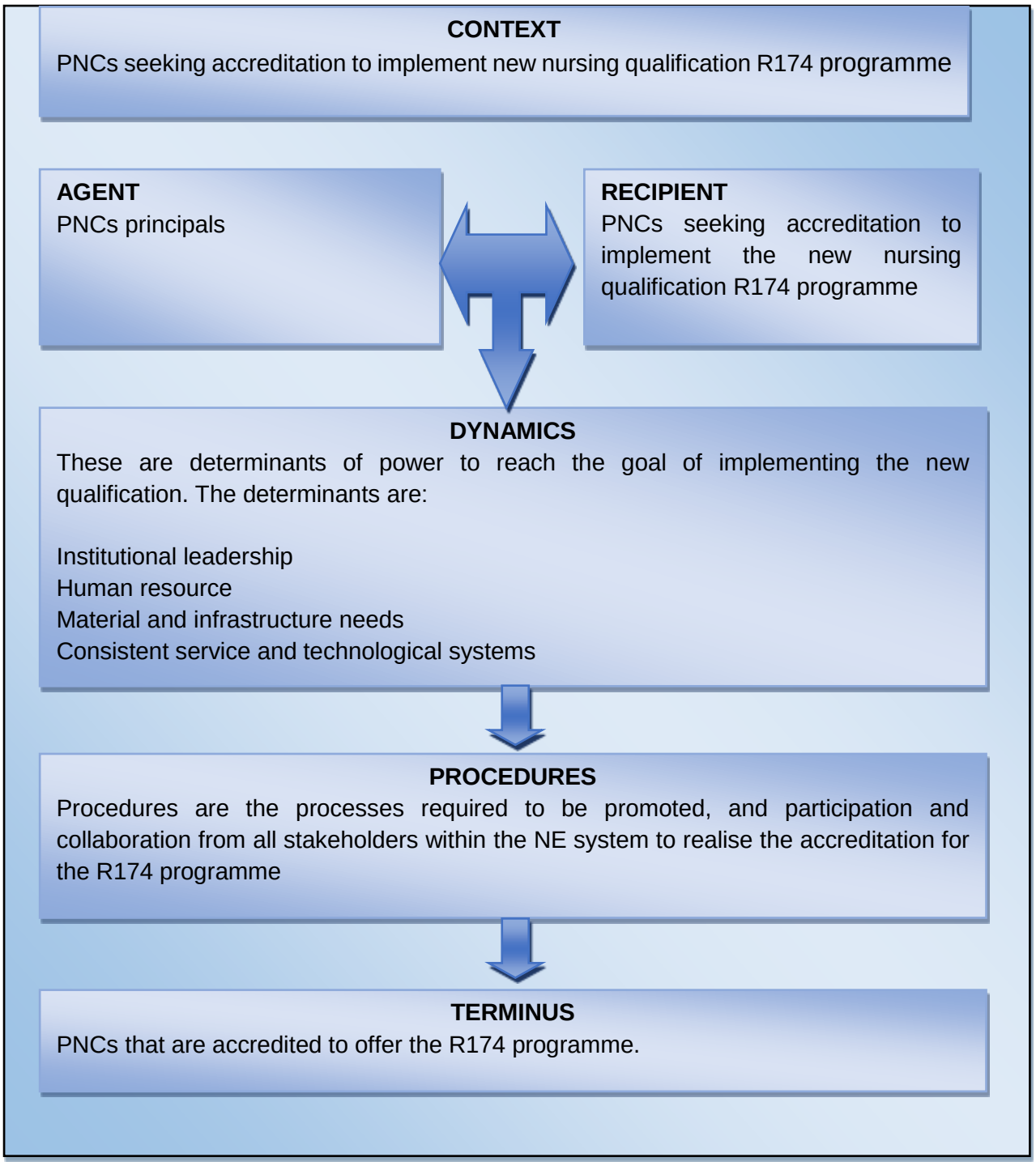


**Figure 7.2: Representation of the concepts**

(Adapted from: Dickoff et al 1968:425)

#### *7.3.2.1 Context (where the activity is performed): micro-, meso- and macro-level)*

The context refers to viewing the activity from the matrix in terms of its relations to other things and reflecting on the interrelation of these other factors in setting up a unit

(Sechabe, Mothiba & Bastiaens 2020:8). In this instance, the context means the PNCs that are to be accredited to offer the new nursing qualifications guided by the South African nursing education transformation regulatory framework in observance of the global trend in transforming NE towards a Bachelor degree in nursing as an entry towards professionalism. This transformation occurs within the macro-, meso- and micro-levels.

**Macro-level**

The macro-level context refers to the global nursing education transformation towards professionalisation. The professionalisation of nursing mandate that the entrance level is a Bachelor Degree informed the change. The macro-level is depicted by the yellow outside border. Yellow depicts a sense of optimism and determination to succeed; positivity, strength and opportunities, confidence and sunshine, which indicate looking at things from the bright side.

**Meso-level**

The meso-level refers to the South African NE transformation which was informed by historical and political developments and changes, the need to professionalise nursing education, and the health needs of the population. The meso- or middle-level is indicated in light grey, which symbolises security, reliability and knowledge. This level operates in accordance with the prescripts from the SAQA Act, National strategic planning, NQF, CHE and SANC.

**Micro-level**

The micro-level is the area where the process of accreditation for the new qualification is supposed to take place, which is at the PNCs. PNCs in South Africa have to comply with accreditation criteria in order to offer the new qualification. Figure 7.3 depicts the context.

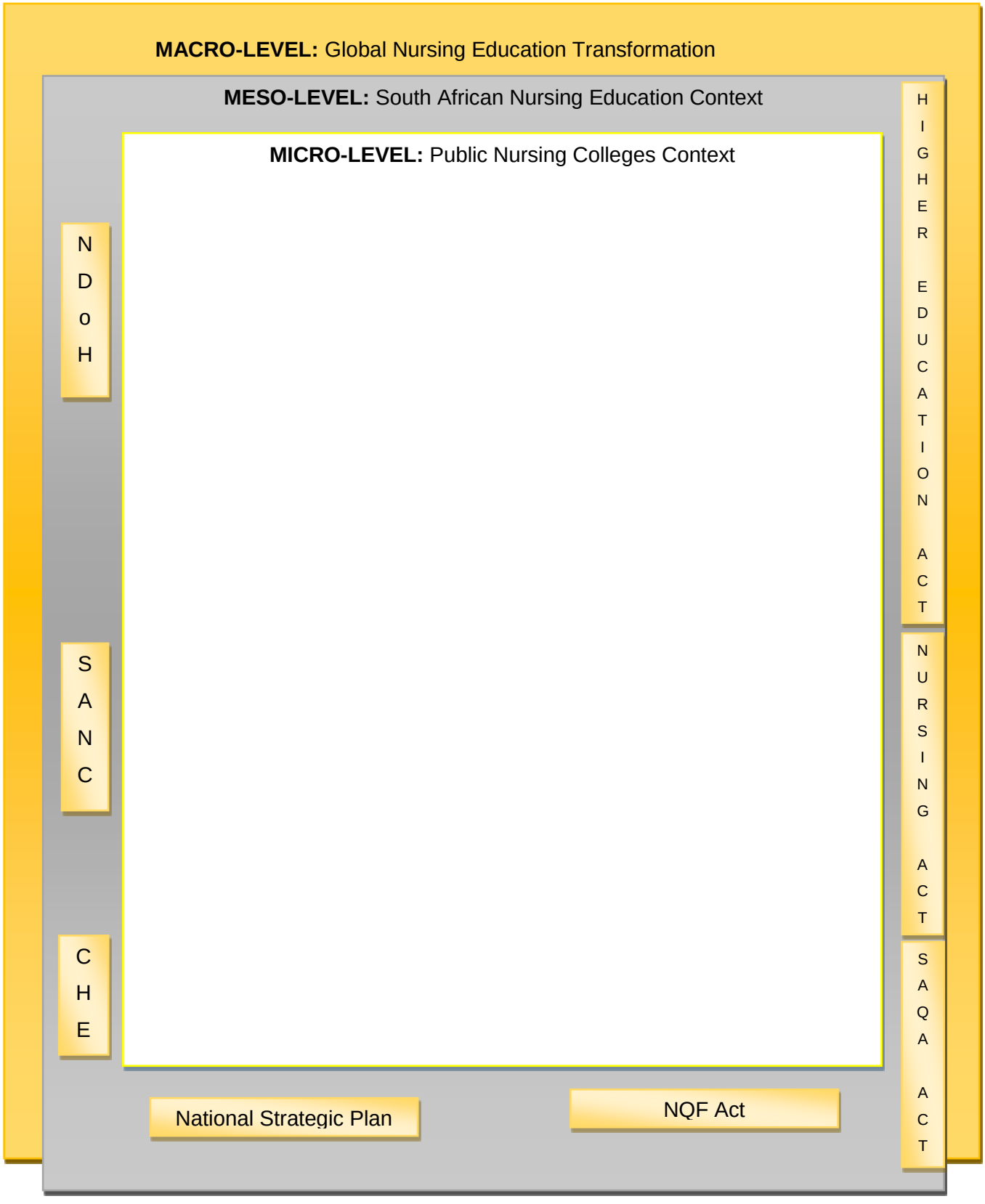


**Figure 7.3 The context**

#### *7.3.2.2 Agent (who or what performs the activity)*

An agent refers to a person who serves as a facilitator, who is deemed capable to perform an activity towards achieving an ultimate goal. In this model, the agent refers to the PNCs principals who provide technical support to the institutions as they implement change. The PNCs principals will guide the PNC through the utilisation of the support model to realise accreditation for the R174.

In Figure 7.4, the agent is represented by a circle ending with an arrow in light grey outlined in green. The circle with an arrow symbolises the continuous support that the agent provides in the use and application of the model by the PNCs towards the implementation of the new qualifications. Light grey symbolises security, reliability and knowledge, while green outlines the growth, new knowledge, and experience that the agent will provide to the recipient. Figure 7.4 depicts the agent.

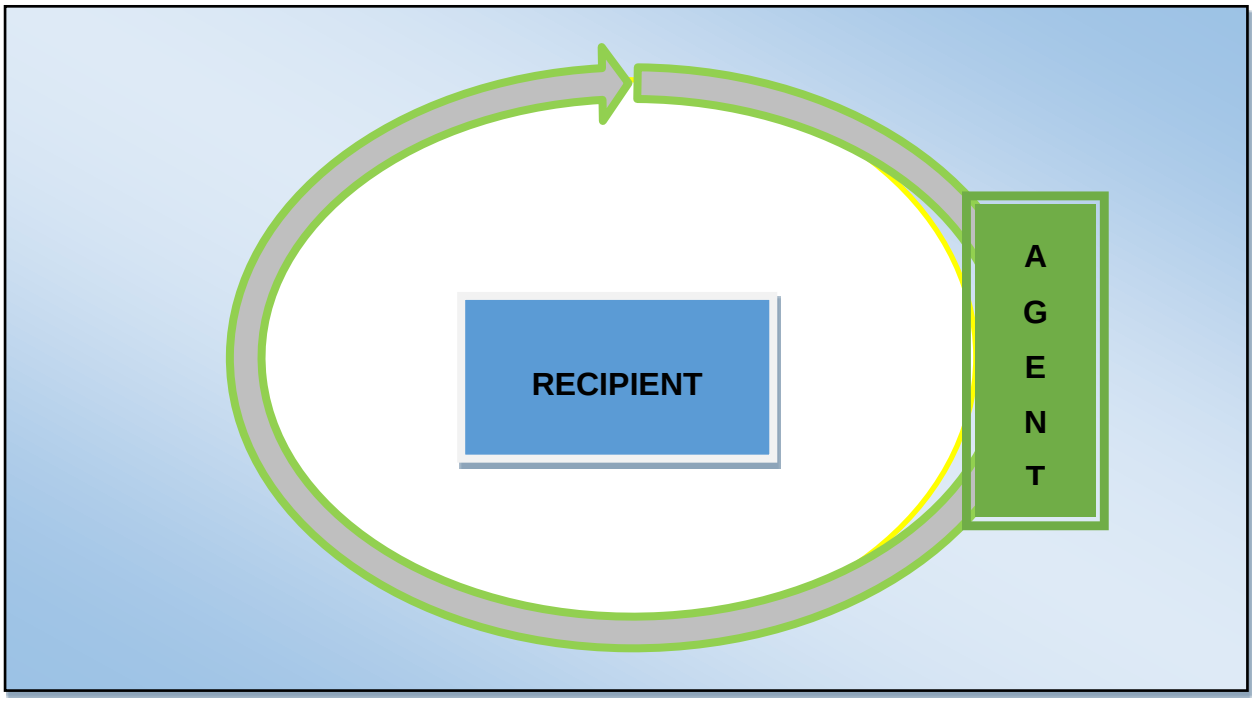


**Figure 7.4: The agent and the recipient**

#### *7.3.2.3 Recipient (who is the recipient of the activity)*

Recipient refers to organisation receiving an assistance of an agent whose activity contributes to the nursing goal (Dickhoff et al 1968:427). In this case, the recipient is the PNC who is seeking accreditation to implement the new nursing qualifications. The programme will, in turn, benefit the potential students who will qualify as professional

nurses and enable the DoH to produce sufficient nurses to meet the needs of the country and thus professionalize nursing to a global competitive state.

Dickhoff et al (1968:427) state that the recipients should possess certain qualities or appropriate characteristics for them to participate efficiently during the activity and benefit from the programme. Those qualities and characteristics should be inherent in the PNCs to meet the accreditation standards. The findings of this study indicated a need to enhance the institutional leadership capabilities in the curriculation process, human resources establishment, material and infrastructure capacity and consistent service and technology systems. The recipient is represented by white, which indicates new beginnings, clarity and readiness to de-clutter (see Figure 7.4).

#### *7.3.2.4 Dynamics (what the energy source for the activity is)*

This section is about the power sources for the activity vested in individual's or the internal motivation's factors for successful implementation of the programme (Sechabe et al 2020:9). In this regard, the collaboration of individual's activities is important to achieve the implementation of the new qualification, including institutional leadership, human resources, material and infrastructure needs and consistent service and technological systems. Figure 7.5 depicts the dynamics.

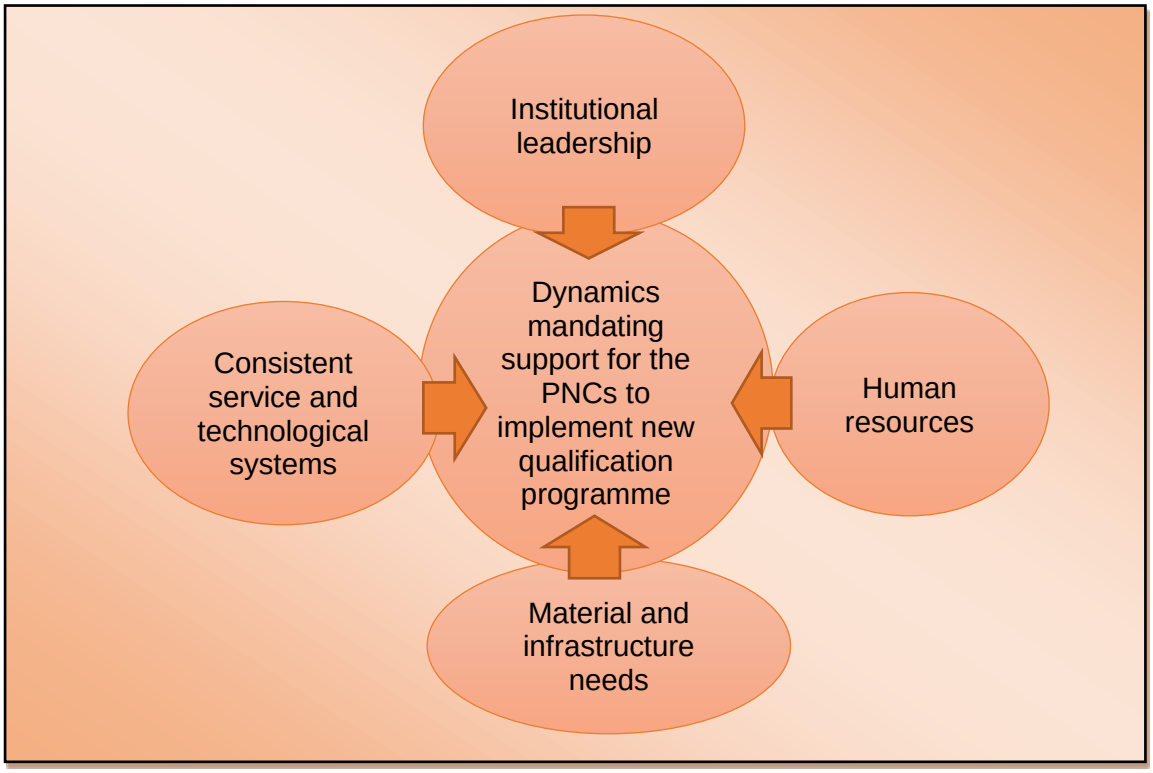


**Figure 7.5: The dynamics**

**Institutional leadership**

Institutional leadership includes cooperation and commitment of key role players; strong leadership and governance in planning and organisation; communication between clinical and academic settings, and adequate academically qualified staff to facilitate the programme.

**Material resources and infrastructure needs**

This includes adequate classrooms, simulation rooms and libraries, and teaching aids.
Consistent service and technological systems.
Programme implementation requires consistent technological and service systems.

#### *7.3.2.5 Procedures (what the guiding protocol/activity is)*

Procedures refer the principles, rules, routines or protocols governing activities are based on emphasising the route, steps, and patterns according to which the activity is performed. Procedures serve as guiding principles which encompass the process in the implementation of the programme (Dickhoff et al 1968:430).

However, procedures were the legislation and guidelines informing nursing education transformation as well as the implementation of the new qualifications. The procedures were utilised in the three phases in the model development: conducting situational analysis, developing action plans, and implementation of the model. Figure 7.6 illustrates the procedures encompassing the three phases that should be followed for effective support.

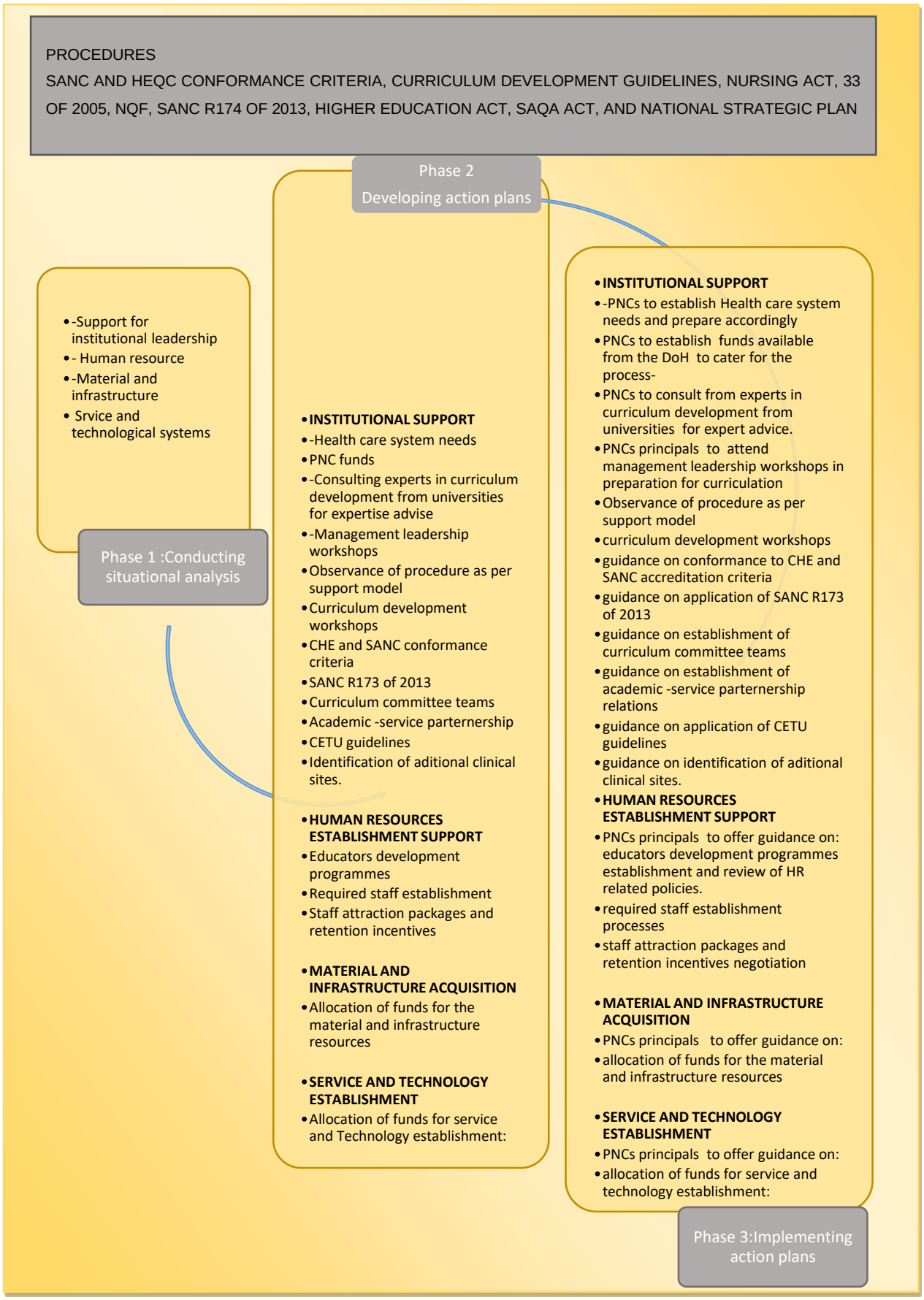


**Figure 7.6: The procedures encompassing the three phases**

The procedures encompassed the three phases of the model development. Walker and Avant (2011) refer to a model description process as an articulation of broad frameworks applicable in practice to reflect the core values inherent in nursing as a profession, which has extrinsic value that transmits the science of nursing as a profession. Processes which could measure competency is referred as empirical referents can be measured (Walker & Avant 2011).

The researcher categorised activities according to guidelines informing nursing education transformation, namely the SANC and HEQC conformance criteria; curriculum development guidelines; the Nursing Act, 33 of 2005; SANC R.174 of 2013, the SAQA Act, the NQF, the DOH national strategic plan, MOA on academic-service partnership relations, and institutional policies.

*7.3.2.5.1 SANC and HEQC conformance criteria*

The SANC and HEQC conformance criteria provide the parameters with which NEIs should comply with in order to be accredited for a programme. Therefore, the PNCs need to understand the conformance criteria when preparing their institutions for accreditation. For the PNCs to prepare for programme accreditation, they need to adhere to both SANC and HEQC conformance criteria. Moreover, PNCs compliance with the conformance criteria should be a norm as this promotes the quality of graduates. Therefore, the model emphasises the conformance criteria as depicted in Table 7.2 below.

**Table 7.2: SANC and HEQC conformance criteria**

| SANC conformance criteria | HEQC conformance criteria |
|---|---|
| General information<br>Status of the organisation within the SANC sector<br>Ability to achieve learning outcomes<br>Physical, administrative and financial resources<br>Learner entry, guidance and support<br>Staff selection, appraisal and development<br>Learning programmes<br>Management of clinical practice learning<br>Management of assessment and moderation<br>Appeal process<br>Record keeping and reporting<br>Quality management system | Programme design<br>Student recruitment, admission and selection<br>Staffing<br>Teaching and learning strategy<br>Student assessment and procedures<br>Infrastructure and library resources<br>Programme administrative services<br>Postgraduate policies, regulations and procedures<br>Programme coordination<br>Academic development for student success<br>Teaching and learning interactions<br>Student assessment practices<br>Coordination of work-based learning<br>Delivery of post-basic programmes<br>Student retention and throughput rates<br>Programme impact |

*7.3.2.5.2 Guidelines for curriculum development in nursing education*

When designing a curriculum, it is helpful to follow a formal structure in order to benefit from what is known about learning and to provide a framework for decision making (Tractenberg, Lidvall, Attwood & Via 2020:14). The principals would take the PNCs through the curriculum development process. Understanding the need and process to be followed instils a sense of hope and direction and leads to cooperation to reach the goal. Hence the support model recommends this procedure. Figure 7.7 illustrates the process to be followed. The researcher used Rani and Hemavathy's (2015) curriculum development model. However, facilitators may consult various sources should they wish.

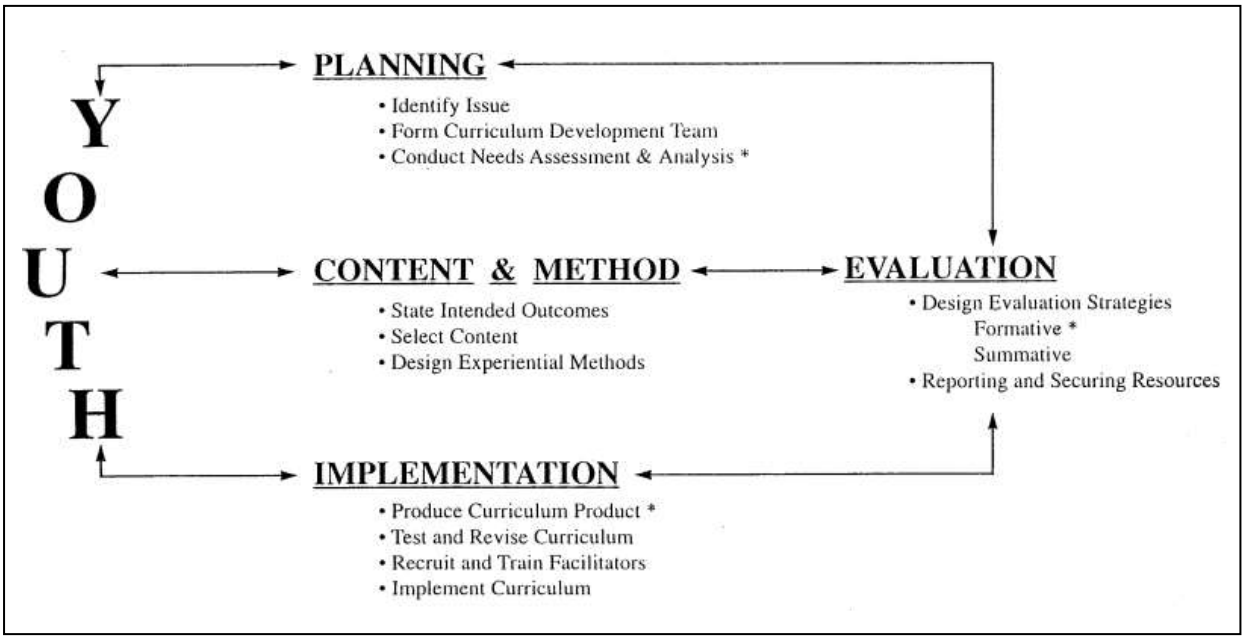


**Figure 7.7: Curriculum development steps**
(Source: Rani & Hemavathy 2015:38)

*7.3.2.5.3 Nursing Act, 33 of 2005, and the National Qualifications Framework (NQF)*

The implementation of the Nursing Act, 33 of 2005, had an impact on directing nursing qualifications to comply with the stipulations of the National Qualifications Framework (NQF). In terms of Section 58(1) of the Nursing Act, the Minister may, after consultation with the Council, make regulations relating to the scope of practitioners. The most important change brought about by the Act was the new scope of practice which required the re-categorising of nurses based on new nursing qualifications categories. The new qualifications provided by the Nursing Act are Auxiliary nurse, general nurse, midwife, professional nurse and midwife, and nurse specialist and midwife specialist. This transformation mandated that the nursing qualifications move from the Further Education and Training sub-framework (FETSF) to the Higher Education and Training sub-framework (HEQSF). In that regard, NQF had to be revised and comprised of ten (10) levels which replaced the previous NQF with eight (8) levels, whereby each level provides a broad indication of the types of learning outcomes and assessment criteria that are appropriate to a qualification at that level (Blaauw et al 2014:3).

*7.3.2.5.4 National Qualifications Framework Act, 67 of 2008*

The National Qualifications Framework Act, 67 of 2008 makes provision for better governance, development, and governance of the NQF. Like other sectors, nursing has to ensure that the nursing programmes are aligned accordingly.

*7.3.2.5.5 SANC R174 of 2013*

The inclusion of this regulation in the support model ensures that the PNCs prepare in accordance with regulations on approving the elementary requirements for a learner's education and training that leads to registration a professional nurse or midwife.

*7.3.2.5.6 South African Qualifications Authority (SAQA) Act, 58 of 1995*

The South African Qualifications Authority (SAQA) is responsible for the accreditation, certification and maintenance of national standards in education and training and also provides counselling and guidance to the nursing profession regarding the execution of nursing education and training policies (Mekwa 2000:272). The SAQA Act, 58 of 1995, stipulates cross-field outcomes that are critical in directing the views of those designing curriculum and facilitating learning in meeting requirements for proper facilitation. Accordingly, PNCs should receive the necessary support for the implementation of the new qualifications to ensure that the nursing programmes are aligned accordingly.

*7.3.2.5.7 Higher Education Act, 101 of 1997*

The Higher Education Act, 101 of 1997, assures quality in higher education programmes through its structures, namely the CHE, HEQC and ETQA. The Council on Higher Education is approved by SAQA as the higher education and training quality assurance body (Tsimane 2018:127). The CHE regulates nursing education and training in terms of the South African Higher Education Sub-Framework (HEQSF). The three phases in the implementation of the procedures are described next.

**Phase 1: Conducting situational analysis**

Situational analysis refers to a phase in a model which involves setting the context and foundation of the curriculum (Bruce & Klopper 2017:234). In this study, the agent being the principals of the PNCs will clarify with the recipient the roles in facilitating the process through utilising the support model. PNCs management and educators have to reflect on their views on the process of accreditation and give details, reasons and outcomes of the interaction based on the identified needs to embrace implementing the new curriculum. The inherent dynamics that are identified as the power source, such as institutional leadership support, human resources, material and infrastructure needs and consistent service and technology, will inform the procedures needed to facilitate the process of accreditation for the new programme.

**Phase 2: Developing action plans**

Phase 2 involves the PNCs developing action plans for the process of accreditation for the new qualification. The action plans will ensure the relevance of the programme and graduates produced. During this phase the level of engagement is high, the agent through the support model engages in a meaningful interactive, integrative and collaborative process with the recipients to commence the process of support for the implementation of the new nursing qualification. This process is characterized by the agent facilitating the PNCs through the support model to construct their institution's plan of action. The action plan consists of the needed institutional and leadership support, human resources support, material and infrastructure support, and consistent service and technology support, which will be met through planning (see table 7.3). The information from the empirical data is shared with the agent and recipients to promote openness and trust.

**Phase 3: Implementation of the action plans**

In phase 3, the engagement of the agent with the recipient through the support model may forge further assistance and guidance to speed up the process of the implementation of the new qualifications.

Table 7.3 lists the application of the three phases, namely situational analysis, development of action plans, and implementation of the action plans.

**Table 7.3: Application of the three phases**

| Phase 1: Conducting situational analysis (Findings) | Phase 2: Development of action plans | Phase 3: Implementation of the action plans |
|---|---|---|
| 1. Institutional leadership | 1.1 PNCs to plan for the implementation of the new qualifications as informed by the needs of the health care system.<br>1.2 PNCs to plan for funds needed for the implementation of the new qualifications.<br>1.3 PNC to plan for expert advice from the university experts in curriculation to advice on the process.<br>1.4 PNCs principals to plan for attending management leadership workshops on the process of curriculation.<br>1.5 PNCs principals to familiarise PNC management to observe the procedure according to the support model<br>1.6 PNCs principals to guide the PNCs to plan for formation of curriculum team and subcommittees for the process.<br>1.7 PNCs principals to plan for curriculation workshops for PNC staff.<br>1.8 PNCs principals to plan for guidance on establishment of academic-service partnership relations.<br>1.9 PNCs principals to plan for PNCs to apply CETU guidelines to foster healthy collaboration between the NEI and clinical site.<br>1.10 PNCs principals to plan for PNCs to identify additional clinical sites.<br>1.11 PNCs principals to plan fostering healthy relations between management and educators during the curriculation process. | 1.1.1 PNCs to determine that the implementation of the new qualifications is informed by the needs of the health care system.<br>1.1.2 PNCs to determine that there are funds for the implementation of the new qualifications.<br>1.1.3 PNCs to source the services of an expert advice from the university experts in curriculation to advice on the process.<br>1.1.4 PNCs principals to facilitate management leadership workshops on the process of curriculation.<br>1.1.5 PNCs principals to guide and assist PNC management to observe the procedure according to the support model<br>1.1.6 PNCs principals to guide the PNCs on formation of curriculum team and PNCs principals committees for the process.<br>1.1.7 PNCs principals to facilitate curriculation workshops for PNC staff.<br>1.1.8 PNCs principals to guide the PNCs on establishment of academic-service partnership relations<br>1.1.9 PNCs principals to guide the PNCs to apply CETU guidelines to foster healthy collaboration between the NEI and clinical site.<br>1.1.10 PNCs principals to guide the PNCs on the process of identifying additional clinical sites.<br>1.1.11 PNCs principals to foster healthy relations between management and educators during the curriculation process. |

| Phase 1: Conducting situational analysis (Findings) | Phase 2: Development of action plans | Phase 3: Implementation of the action plans |
|---|---|---|
| 2. Human resource | 2.1 PNCs principals to plan guidance for PNCs on establishing educator development programmes<br>2.2 PNCs principals to plan guidance for PNCs on establishing required staff, staff attraction packages, and retention incentives.<br>2.3 PNCs principals to plan facilitation sessions for PNCs to discuss lifting of moratorium with the DoH to fill required positions, sessions plans for the provision of attractive packages and incentives to retain staff, bargaining for favourable workplace conditions, such as recognition of speciality allowance for staff such as OSD, and continuous development. | 2.1.1 PNCs principals to guide PNCs on establishing educator development programmes.<br>2.1.2 PNCs principals to guide the PNC on acquiring required staff, retaining them through staff attraction packages and retention incentives.<br>2.1.3 PNCs principals to facilitate sessions for PNCs to discuss allocation of funds with the DoH and PNCs to collaborate with the DoH in lifting the moratorium to fill required positions, plans for the provision of attractive packages and incentives to retain staff, bargaining for favourable workplace conditions, such as recognition of speciality allowance for staff, such as OSD, and continuous development. |
| 3. Material and infrastructure needs | 3.1 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with the DoH for the provision of suitable classrooms in terms of space, ventilation, lighting and necessary furniture, to meet the needs of the programme.<br>3.2 PNCs principals to plan facilitation sessions for PNCs to discuss to allocation of funds with the DoH for provision of adequately equipped computer laboratories for the new programme students.<br>3.3 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with the DoH for equipping skills laboratories with required simulation models for the new programme.<br>3.4 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with the DoH for provision of suitable libraries equipped with required learning resources to complement the curriculum. | 3.1.1 PNCs principals to facilitate sessions for PNCs to discuss allocation of funds with the DoH for provision of suitable classrooms in terms of space, ventilation, and lighting and equipped with necessary furniture, to meet the needs of the programme.<br>3.1.2 PNCs principals to facilitate sessions for PNCs to discuss the allocation of funds with the DoH to increase adequately equipped computer laboratories for the new programme students.<br>3.1.3 PNCs principals to facilitate sessions for PNCs to discuss the allocation of funds with the DoH for the provision of skills laboratories and models required for the new programme.<br>3.1.4 PNCs principals to facilitate sessions for PNCs to discuss allocation of funds with the DoH for provision of suitable libraries equipped with required learning resources to complement the curriculum. |

| Phase 1: Conducting situational analysis (Findings) | Phase 2: Development of action plans | Phase 3: Implementation of the action plans |
|---|---|---|
| | 3.5 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with DoH for the establishment of well-equipped staff offices to enable educators to prepare for facilitation of the new programme.<br>3.6 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with the DoH for securing library support on and off the campus and staff development of library staff.<br>3.7 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with DoH for the implementation of policy on provision of transport for educators and students to clinical areas.<br>3.8 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with DoH for securing student accommodation areas with necessary furniture, study areas, laundry services and relaxation areas, kitchens and dining facilities, enhancing student counselling, financial support, health services, and wellness programmes.<br>3.9 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with DoH for unforeseen circumstances, such as Covid-19, to ensure continuation of the programme with minimal interruption.<br>3.10 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with DoH for consistent and effective administrative services for provision of information. | 3.1.5 PNCs principals to facilitate sessions for PNCs to discuss allocation of funds with DoH for the establishment of well-equipped staff offices to enable educators to prepare for facilitation of the new programme.<br>3.1.6 PNCs principals to facilitate sessions where PNCs discuss with DoH to allocate funds for library support existence on and off the campus and staff development of library staff.<br>3.1.7 PNCs principals facilitate sessions where PNCs discuss with DoH to allocate funds for the provision of policy /review on transport for educators and students for clinical areas.<br>3.1.8 PNCs principals facilitate sessions where PNCs discuss with DoH to allocate funds for the provision student accommodation areas with necessary furniture, study areas, laundry services and relaxation areas, student kitchens and dining facilities, securing funds for enhancing student counselling, financial support, health services, wellness programmes.<br>3.1.9 PNCs principals facilitate sessions where PNCs discuss with DoH to allocate funds for the provision for unforeseen circumstances e.g Covid-19 to ensure continuation of the programme with minimal interruptions.<br>3.1.10 PNCs principals facilitate sessions where PNCs discuss with DoH to allocate funds for the provision of consistent and effective administrative services for provision of information. |

| **Phase 1: Conducting situational analysis (Findings)** | **Phase 2: Development of action plans** | **Phase 3: Implementation of the action plans** |
|---|---|---|
| 4. Consistent service and technological systems | 4.1 PNCs principals to plan facilitation sessions for PNCs to discuss allocation of funds with DoH for provision of structured processes to access information technology systems in terms of computers and software telecommunication, Web-based and e-learning to enhance realisation of 4IR. | 4.1.1 PNCs principals facilitate sessions for PNCs to discuss allocation of funds with DoH for provision of structured processes to access information technology systems in terms of computers and software, telecommunication, Web-based and e learning to enhance realisation of 4IR. |

#### *7.3.2.6 Terminus (What is the end point of the activity?)*

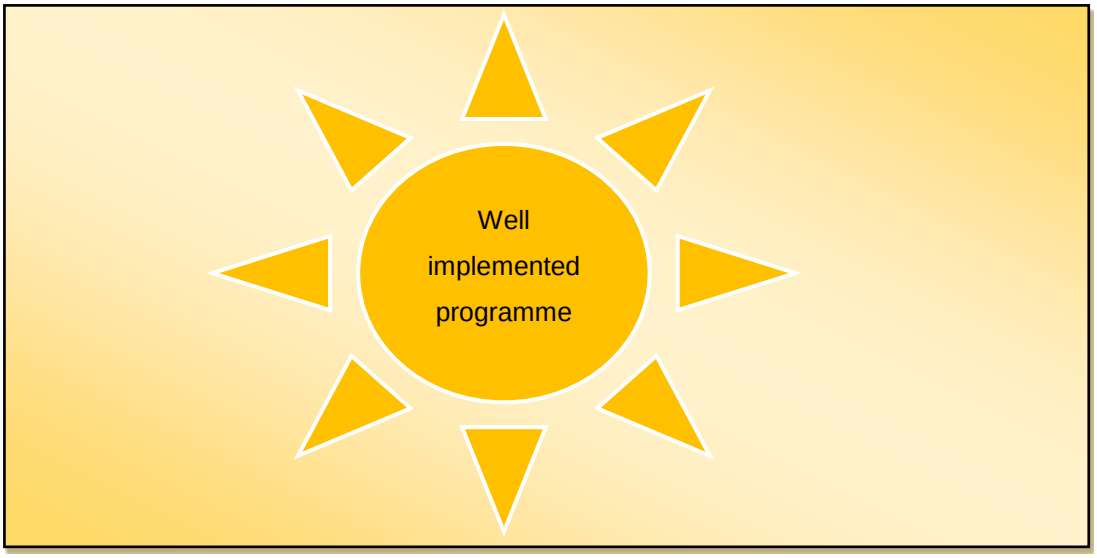


**Figure 7.8: Terminus**

The terminus refers to the end point of the activity (Dickoff et al 1968 cited in Sechabe et al 2020:2). The terminus is a way of assessing the achievement of evaluated goals by the agent and the enablement of the PNCs implement the new nursing programme well. The application of the procedures will provide support and a well-implemented nursing programme will be realised. The outcome of the support model will be:

- PNC being accredited for the new qualification. As the PNC becomes accredited there may be an increase in the output of the professional nurses who will be able to think critically and function in diverse settings.
- The health needs of the country will be met.
- South African nursing education will be placed on a global competitive level.

##### *7.3.2.6.1 PNC being accredited for the new qualification.*

The researcher identified the provision of support to the PNCs who have the potential to produce more professional nurses to augment the output of other NEIs, such as universities and private NEIs.

##### *7.3.2.6.2 The health needs of the country will be met*

The researcher identified that the increased production of professional nurses will enable PNCs to direct and provide the health care needed.

*7.3.2.6.3 South African nursing education will be placed on a global competitive level*

The researcher identified that PNC accreditation to offer the R174 programmes for a Bachelor in Nursing degree as the entrance level to professional nursing would place South African nursing education on a global competitive level.

### 7.3.3 Description of the model

The model description by Chinn and Kramer (2018:189) constitute of the context, purpose, structure, assumptions and process of the model. Model is referred to as a symbolic representation or an empiric experience in the form of concepts or variables and interrelationship amongst them (Chinn & Kramer 2018:186; Polit & Beck 2017:735). In this study the researcher applied Chinn and Kramer (1999) steps as explained in Chinn and Kramer (2018:190) as follows:

- Purpose/goal
- Concepts
- Relationships
- Assumptions
- Structures
- Process/procedures

#### *7.3.3.1 Purpose/goal*

The support model's purpose was to provide a blueprint for PNCs in South Africa to be accredited for offering the new nursing qualification, namely Bachelor of Nursing degree (R174). Alligold (2018:21) describes a model as representation that symbolises perceptual phenomena which differ in abstraction that assists in shaping the how to think and the provision of a framework for practice.

#### *7.3.3.2 Concepts*

Chinn and Kramer (2018:193) indicate that identification of concepts by looking for words or groups of words that represent objects, events or properties within the theory. It is further indicated that concepts have to be cautiously assessed for quantity, character,

emerging relationships and structure so as to form an understanding of the theory. In this study concepts were identified during concept analysis.

#### *7.3.3.3 Relationships*

Relationships are the linkage between and amongst concepts (Chinn & Kramer 2018:193). The researcher discussed the nature of relationship amongst the attributes, antecedents, consequences and clarified the link amongst concepts (see concept analysis.

#### *7.3.3.4 Assumption*

Principles accepted as a fact due to logic or reason, with no proof, is an assumption (Polit & Beck 2017:720). In theories and models, assumptions are related to structural components or variables in a linear relationship (Chinn & Kramer 2015:287). The researcher developed the model for support for the implementation of the new nursing qualification based on the WHO (2013) guidelines for transforming and scaling up health professional education and training. The assumptions of the model are as follows:

- Transformation and up-scaling of nursing education should be based on addressing the health needs of society in order to promote universal coverage.
- National and institutional innovative leadership and commitment drives positive transformation when implemented with a collaborative approach.
- Accredited PNCs that are well equipped with teaching and learning processes will be able to prepare graduates able to address patients' health needs. Nurse graduates who can think critically and are able to attend to patients' diverse will uplift nursing standards.

#### *7.3.3.5 Structures*

Chinn and Kramer (2018:194) indicate that the overall form to conceptualise relationships is the structure. On the other hand, the structures of the model are derived from the identified concepts and relationships between the concepts (Chinn & Kramer 2018:159). The nature of the structure refers to the context (macro-, meso- and micro-levels); agent; recipient; dynamics, and procedures.

In this study, the researcher used diagrams, arrows and colours to describe and present the structures of the model schematically and describe the concepts and relationships between them schematically. Figure 7.9 depicts the model to support the implementation of the new nursing qualification in Public Nursing Colleges.

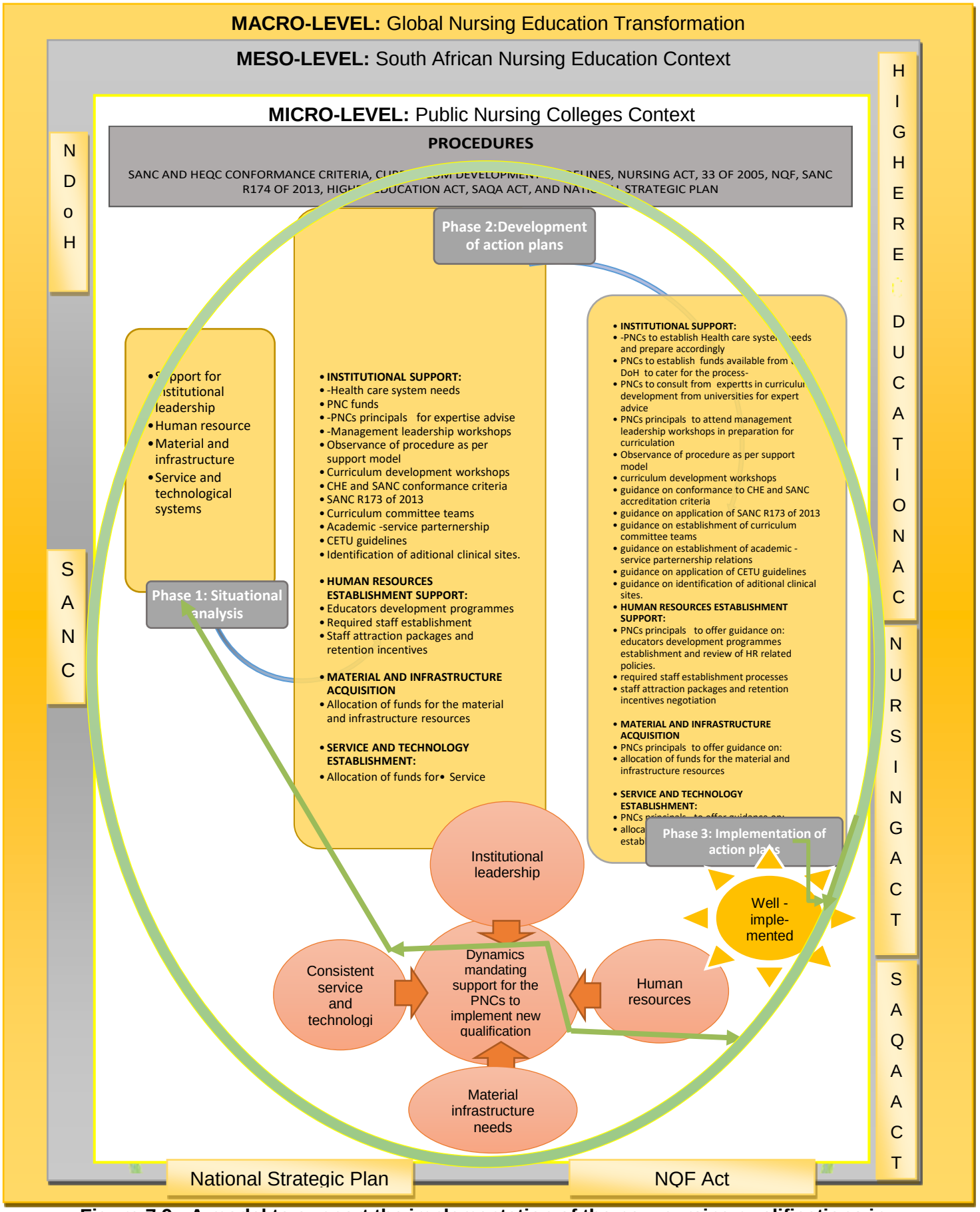


**Figure 7.9: A model to support the implementation of the new nursing qualifications in Public Nursing Colleges**

## 7.4 CONCLUSION

This chapter outlined the development of the model. The researcher selected “support” as the main concept in the study, because all the other concepts and factors were related to it (Chinn & Kramer 2011:46). The participants’ statements indicated lack of support in the implementation of the new nursing qualification. The model and its structures were described in diagrams and tables. Chapter 8 discusses the validation of the model.

# CHAPTER 8

# MODEL VALIDATION, JUSTIFICATION OF ORIGINAL CONTRIBUTION TO THE BODY OF KNOWLEDGE

## 8.1 INTRODUCTION

Chapter 7 discussed the development of the model. The model and its structures as well as its operationalisation were described. The study purpose is to explore the preparedness of Public Nursing Colleges (PNCs) for the implementation of the new nursing qualification and develop a support model to provide a blueprint for the implementation of a R174 programme at PNCs in South Africa. The application of objectives in achieving purpose of the study included the following:

- Identify principals' and vice-principals' perspectives on the preparedness of PNCs to implement the new qualifications.
- Explore the strategies and activities utilised by the principals and vice-principals for the implementation of the new qualifications.
- Describe and explore nurse educators' perspectives on the preparedness of PNCs to implement the new qualifications.
- Determine the strategies and activities utilised by the nurse educators for the implementation of the new qualifications.
- Developing a support model to implement R174 programme at PNCs.

Chapter 8 discusses the validation and justification of the model to achieve the objectives of this study. Validation refers to a process of evaluating the appropriateness of the model according to the model's knowledge and satisfactory basis for decision making of results (Chinn & Kramer 2015:210). Validation focuses on the methodological features of empirical research that will result in strong, reliable and valid empirical evidence to inform nursing practice therefore the researcher has the responsibility to produce such evidence. The researcher used Chinn and Kramer's (2018) method in validating the model by asking the following questions:

- How clear is the model?
- How simple is the model?
- How general is the model?

- How accessible is the model?
- How important is the model?

The researcher answered these questions using Chinn and Kramer's (2018) critical reflection process, which contributed to critical insight and provided direction for developing the model.

### 8.1.1 How clear is the model?

The model's clarity rests in its logical description of thoughts, concepts, and ideas inherent in the model. According to Chinn and Kramer (2018:203), model clarity is inclusive of semantic clarity and consistency, as well as structural clarity and consistency. All these were considered in the research study's determination of the model's clarity.

#### *8.1.1.1 Semantic clarity*

Concepts are defined by means of similar context in the health profession.

#### *8.1.1.2 Semantic consistency*

The researcher used the consistent concepts with its definitions. Fundamental assumptions to clarify the components' meaning of the model.

#### *8.1.1.3 Structural clarity*

The description of the structures' elements in the model and the provision of relationships to clarity and understanding of how the structures integrated with each other.

#### *8.1.1.4 Structural consistency*

Different structures were used as the guidance of the topic's discussion. The structure also served as a conceptual map that enhanced the clarity of the model.

### 8.1.2 How simple is the model?

Chinn and Kramer (2018:208) define simplicity as a concrete description of phenomena and their relationship, intended to eliminate ambiguity. In this study, major concepts such as support, defining attributes, identification of the model case, contrasting additional cases, such as related cases and consequences, antecedents identified, and empirical factors were explicated. The procedure and the three phases involved in operationalising the model were described. The procedure included the following:

- SANC and HEQC conformance criteria
- Curriculum development guidelines
- Nursing Act, 33 of 2005
- SANC R174 of 2013
- SAQA Act
- NQF
- National strategic plan
- Institutional policies were used

The three phases of operationalising the model were:

- Phase 1: Situational analysis
- Phase 2: Development of action plans
- Phase 3: Implementation of the action plans

### 8.1.3 How general is the model?

Theory's model generally signifies the extent of purpose and scope that allows the model to be utilised in a variety of contexts (Chinn & Kramer 2018:208). This support model provides a blueprint for the implementation of the new qualifications.

### 8.1.4 How accessible is the model?

Accessibility refers to the extent to which empirical indicators for the concepts can be identified and the extent to which the purpose of the model can be achieved (Chinn & Kramer 2018:209). Concepts' definition became the model's accessibility.

### 8.1.5 How important is the model?

The importance of the model is its significance to clinical practice, education and research. The developed model should guide PNCs to attain accreditation for the implementation of the new qualification. The more PNCs that are accredited to offer the R174 programme, the greater the output of professional nurses able to deliver healthcare service in a responsive, ethical, intelligent and knowledgeable manner of meeting the country's increasing and diverse health service needs. The implementation of the R174 programme should enhance the transformation of nursing thus professionalise nursing in South Africa.

## 8.2 METHODOLOGY FOR VALIDATION

### 8.2.1 Overview

The study was conducted at thirteen selected PNCs in four (4) provinces of South Africa, which are: Free State, North-West, Gauteng and Limpopo on progress in the implementation of the new qualification. The aim of the study was the exploration and preparedness of Public Nursing Colleges (PNCs) for the implementation of the new nursing qualification and develop a support model to provide a blueprint for the implementation of a R174 programme at PNCs in South Africa.

The study focused on identifying principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications and describe and explore nurse educators' perceptions of the preparedness of PNCs for implementation of the new qualifications. The model was validated in order to verify whether it would be ideal and feasible for PNC managers in the context of the study to utilise the model for the implementation of the new nursing qualification. The validation process is discussed next.

#### *8.2.1.1 Validation report*

The study was conducted under the supervision and promoted by a professor with a doctorate, an expert in health science education with extensive knowledge of qualitative and quantitative research, theory generating and model development. Consultation with

supervisor was done during the model development. The researcher adjusted the model, description and structure as advised. The supervisor's feedback indicated that the model was acceptable and achieved the objectives.

The model was then submitted to a panel of experts for validation. The panel consisted of three expert professors in the nursing education and research field:

Professor [redacted]
Deputy Vice Chancellor: Teaching and Learning
Durban University of Technology
Durban
KwaZulu-Natal Province
South Africa

Professor [redacted]
Academic Leader: Nursing Discipline
School of Nursing and Public Health
College of Health Sciences
Durban
KwaZulu-Natal Province
South Africa

Professor [redacted]
Researcher: School of Health Science
University of Venda
Sibasa
Limpopo Province
South Africa

The model was validated for its simplicity, clarity, generality, accessibility and importance. The validation report was guided by a questionnaire (see Annexure G). The validation report covered the concepts in the model; purpose; relevancy, and scope of application.

**SECTION A: Concepts involved in the model**

The feedback on the concepts was as follows:

**The agent**

The first validator recommended no changes; the second recommended that an agent should be in possession of extensive knowledge in curriculum development, and thus the PNCs principals will be the agent. The expert advice may be sort from the University experts in curriculum development as per need.

**The recipient**

The validators agreed that the PNCs is the recipient.

**The dynamics**

The validators agreed that the dynamics included all the power sources inherent in the PNCs namely: institutional leadership, human resources, material and infrastructure needs and consistent service and technological systems.

**The context**

The validators accepted the three levels (macro-, meso- and micro-level) and stated that they were well described.

**The procedures**

The validators stated that the procedures and three phases of the model were clearly described.

**Terminus**

The validators accepted well accredited PNCs to implement the new qualifications. The researcher modified the agent as recommended by the validators.

**SECTION B: Purpose of the model**

The first validator marked the purpose of the model as “user-friendly and will be invaluable in supporting the implementation of the new nursing qualification programmes”. The second validator stated that it was “an honour to participate in studies that contribute to improving nursing education”. The third validator agreed that the model would greatly assist accrediting the PNCs which may augment the throughput of the professional nurses through universities.

**SECTION C: Relevancy of the model**

The first validator clearly indicated the relevancy of the model. The second validator described the relevancy of the model as “an interesting and relevant study taking into consideration changes affecting nursing education in the country”. The third validator emphasised its relevancy in the period of nursing education changes that our country its going through.

**SECTION D: Scope of application**

The three evaluators validated that the model achieved the set objectives. It was recommended that the study be edited, and the model was sent to the language and technical editors for finalisation.

## 8.3 JUSTIFICATION OF ORIGINAL CONTRIBUTION OF THE STUDY TO THE BODY OF KNOWLEDGE

The originality of the study contributes to the knowledgeable body which, therefore, emphasises that accreditation of the PNCs to offer the new nursing qualifications should facilitate and enable provision of more qualified professional nurses able to deliver healthcare service in a responsive, ethical, intelligent and knowledgeable manner to meet the country’s increasing health service needs. This study is the first to explore the extent of the respondents/participants views and perceptions of the progress on the implementation of the new nursing qualification.

The study also explored factors that hampered PNCs’ implementation of the new qualification. The semi structured in-depth interviews with thirteen PNC principals and

vice-principals were analysed using Tesch's eight-step method and the nurse educators' perceptions of the PNCs preparedness for implementation of the new qualifications by using the SPSS version 26 as an analysing program. Data analysis was done sequentially, commencing with qualitative data and the themes that emerged provided a base for the development of a structured questionnaire. The two (2) phases' results were merged. The study discovered that the qualitative findings related to the quantitative findings and therefore both addressed the research questions.

Furthermore, the institutional, human, material and infrastructure and service and technology challenges contributed to the delay in the implementation of the new qualifications. The PNCs feel frustrated and confused and perceive the challenges as hampering the process of the implementation of the new qualifications. The concept "support" emerged for the implementation of the new qualifications programme in Public Nursing Colleges in South Africa.

## 8.4 CONCLUSION

The validation process was presented in this chapter followed in the study. The researcher's promoter supervised the model and experts evaluated and made recommendations in the model development. The model will be implemented and tested after the study.

# CHAPTER 9

# CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

## 9.1 INTRODUCTION

Chapter 8 discussed the validation of the model and justification of the study's original the body of knowledge with the support model support model for the implementation of the new qualifications. The present chapter highlights the conclusions and limitations of the study, as well as the proposed recommendations for practice, education, and further research.

## 9.2 CONCLUSIONS

The main aim of the study was to determine the preparedness of Public Nursing Colleges (PNCs) for the implementation of the new qualification namely the Bachelors programme from the principals and vice-principals views as well as the nurse educators' viewpoint. The empirical data collected resulted in the developed support model towards the implementation of the new nursing qualifications. Rogers' (1989) perspective transformation theory was adapted to understand the phases that the PNCs had to undergo for their perspective to be transformed. This process was achieved through the following objectives:

- Identifying principals' and vice-principals' perspectives on the preparedness of PNCs for implementation of the new qualifications.
- Exploring the strategies and activities utilised by the principals and vice-principals for the implementation of the new qualifications.
- Describing and exploring nurse educators' perspectives on the preparedness of PNCs for implementation of the new qualifications.
- Determining the strategies and activities utilised by the nurse educators for the implementation of the new qualifications.
- Developing a model to support the implementation of new qualifications programme in PNCs.

All study objectives were accomplished through an application of mixed method as the data source. Semi structured in depth interviews were conducted with 13 principals and vice-principals from the 13 PNCs of South Africa in the qualitative phase. Quantitative descriptive strategy was applied to collect data from 209 nurse educators of the 13 PNCs of South Africa. Data collection took place in a sequentially, interpreted independently and merged. Triangulation of the mixed methods was used to build a structured questionnaire which was utilised to collect quantitative data. The qualitative results were compared with the quantitative findings to advance and refine understanding of the level of preparedness of the PNC on the implementation of the new nursing qualifications. The study revealed that both the qualitative and the quantitative phase to an extent answered the research question. The development of a model through the use of evidence derived from analysis of data to develop “a model to support that will be utilized by the PNCs for the implementation of the new nursing qualifications”. The model was validated and justified to achieve the objectives of the study as articulated in sub-section 1.3.1 (see Annexure H for summary of the chapters of the study).

## 9.3 LIMITATIONS

The process of obtaining permission from one province delayed the progress of the study. Further delays were due to the COVID-19 restrictions on data collection from PNCs whereby the agreed data collection schedule had to be adapted according to availability of the educators according to the allowed numbers per days. The implementation tool for testing the model was not developed as the study focused on developing a model whose testing is reserved for post-doctoral research.

## 9.4 RECOMMENDATIONS

The model for support for the implementation of the new qualifications programme needs to be operationalised and tested. The study findings aided the researcher in proposing recommendations for nursing education, practice, and further research. The implementation of the new qualifications programme should increase PNCs’ output of professional nurses to meet and cater for the country’s increasing and diverse patient needs.

### 9.4.1 Nursing education

The recommendations for nursing education focus on PNC management in collaboration with the DoH, CHE and SANC. Figure 9.1 depicts the role players, challenges, and support needed.

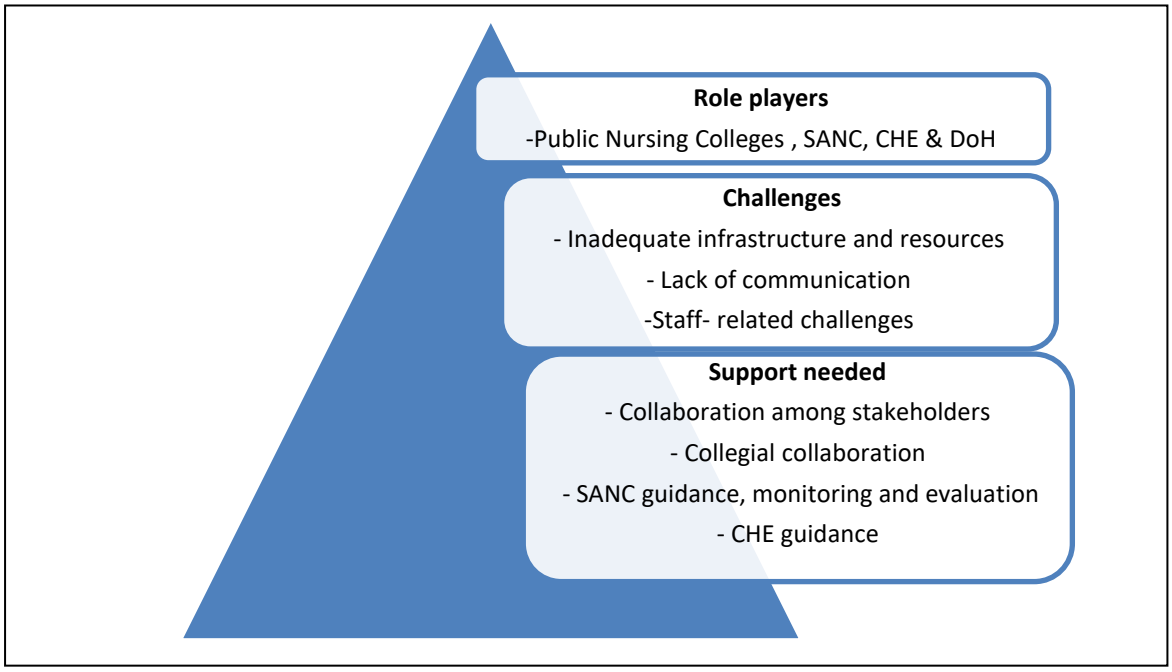


**Figure 9.1: Role players, challenges and support needed**

Figure 9.2 illustrates the PNCs' challenges.

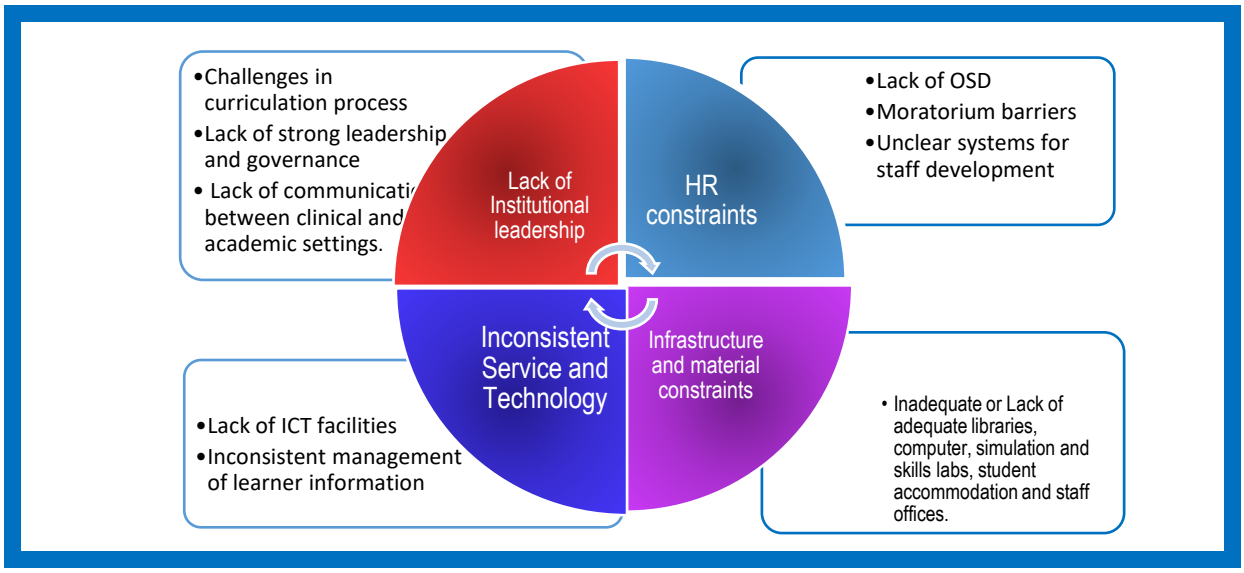


**Figure 9.2: Challenges experienced by PNCs**

The researcher makes the following recommendations for Public Nursing Colleges (PNCs).

**Table 9.1: Recommendations for PNCs**

| Findings | Recommendations |
|---|---|
| 1 Human resources constraints<br><br>1.1 Lack of OSD<br>1.2 Moratorium barriers<br>1.3 Unclear support systems for staff development | The DoH should:<br>• Lift the moratorium and advertise vacant positions to fill required positions.<br>PNC management should:<br>• Negotiate with the DoH for attractive packages and incentives and mechanisms, such as OSD, to retain staff.<br>• Encourage and guide nurse educator development in relation to the new programme and advocate for study leave and raise awareness of bursary opportunities for them to further their studies.<br>• Instill a culture of learning amongst staff through ongoing (on-the-job) training and educational sessions, and seminars.<br>• Develop policies and programmes to address staff needs.<br>• Promote educators' bargaining grounds for favourable workplace conditions, such as recognition of speciality allowance.<br>• Be knowledgeable about curriculation processes in order to provide guidance to educators.<br>• Management and educators should be actively involved in the curriculation process. |
| 2 Infrastructure and material<br><br>2.1 Constraints in libraries, computer and simulation labs, student accommodation, skills labs, teaching aids, staff offices | • Construction projects including infrastructure renovation should be completed.<br>• Suitable classrooms should be provided, with adequate space, ventilation, lighting and furniture to meet students' needs.<br>• Libraries should be equipped with required learning resources.<br>• Well-equipped and furnished staff offices should be provided to enable educators to prepare for facilitation of the new programme.<br>• Sufficiently equipped skills labs, with high and low fidelity simulation models should be provided for the new programme.<br>• Adequately equipped computer laboratories should be provided.<br>• Adequately furnished student accommodation, with laundry services, and study areas should be provided.<br>• Student kitchens and dining facilities should be provided. |

| Findings | Recommendations |
|---|---|
| | • Provision should also be made for garden and relaxation areas for students. |
| 3 Institutional challenges<br><br>3.1 Challenges in curriculation key role players<br>3.2 Lack of strong leadership and governance<br>3.3 Lack of communication between clinical and academic settings. | • PNC management should:<br>• Form academic-service partnerships and relationships with key stakeholders to organise and plan workshops, training and information sessions to deal with challenges during the curriculation process.<br>• Organise extra support from expert peers in curriculation.<br>• Organise management-academic leadership support to guide the curriculation process, allocate tasks, rotate tasks with proper feedback to all PNC staff.<br>• Establish active collaboration with the DoH Clinical Education Training Unit (CETU) for student clinical sites.<br>• Evaluate clinical sites to determine capacity for learning opportunities for students and identify additional sites and submit to the DoH for recommendation.<br>• Establish an effective mentorship programme according to guidelines.<br>• Arrange and provide transport for educators and students to clinical areas.<br>• Review funding norms for students to provide targeted funding for new qualifications.<br>• Plan for unforeseen circumstances (eg, Covid-19) to ensure continuation of the programme with minimal interruption.<br>• Provide student counselling, financial support, health services, and wellness programmes. |
| 4 Service and technology<br><br>4.1 Lack of ICT facilities<br>4.2 Inconsistent management of learner information | • Consistently implement Management of Information Systems (MIS).<br>• Ensure accessible infrastructure for WIFI.<br>• Implement computer-based learning programmes.<br>• Enhance web-based learning. |

### 9.4.2 CHE

The researcher recommends that the CHE provide guidance to PNCs.

**Table 9.2: Recommendations for the CHE**

| Findings | Recommendations |
|---|---|
| CHE guidance on the implementation of the new qualification | The CHE should:<br>• Offer guidance to PNCs for consistent implementation of Management of Information Systems (MIS).<br>• Provide experts from universities to assist PNCs during implementation of the new qualification.<br>• Schedule and facilitate workshops on curriculation of the programme and address challenges arising during the process. |

### 9.4.3 SANC

The researcher recommends that the SANC provide support, guidance, monitoring and evaluation to PNCs.

**Table 9.3: Recommendations for SANC**

| Findings | Recommendations |
|---|---|
| SANC support, guidance, monitoring and evaluation | The SANC should:<br>• Provide guidance to assist PNCs during implementation of the new qualification.<br>• Schedule and facilitate workshops on the curriculation of the programme and address any challenges arising during the process.<br>• Correspond timeously upon the receipt of accreditation documents and advise accordingly.<br>• Schedule and conduct validation visits to PNCs and clinical sites and provide prompt feedback on non-compliant areas. |

### 9.4.4 Policies

PNCs should review its own policies on human resources (HR), information technology, and infrastructure in order to accommodate the change desired.

### 9.4.5 Further research

Following are the propositions for further research:

- The outcomes of operationalising the support model at PNCs for accreditation to offer the new qualification, namely R174 programme.

- Nurse educators' perspectives on the support model for the implementation of a R174 programme.

The findings of this study will be shared through presentation at both conferences and seminars at local and international platforms. The research findings will be publicized through an article and a paper which will be published in the approved journal. Furthermore, provision for completed dissertation copies will be available to relevant institutions for implementation.

## 9.5 CONCLUSION

This chapter presented the conclusions and limitations of the study and made recommendations for further research.

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# ANNEXURES

**ANNEXURE A: Ethical Clearance Certificate: University of South Africa, Health and Research Ethics Committee (HSREC)**

UNISA

**RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES**

**REC-012714-039 (NHERC)**

1 November 2017

Mrs Magdeline Poto

**Decision: Ethics Approval**

**HSHDC/746/2017**
Mrs Magdeline Poto
Student No:32197187

Supervisor: Dr TE Masango
Qualification: PhD
Joint Supervisor: -

**Name:** Mrs Magdeline Poto

**Proposal** Development of a support model for implementation of new nursing qualifications in South Africa

**Qualification:** **DPCHSO4**

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 1 November 2017 to 1 November 2022.

*The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on 2 August 2017.*

*The proposed research may now commence with the proviso that:*

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*

2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

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3) *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

4) *[Stipulate any reporting requirements if applicable].*

*Note:*

*The reference numbers [top middle and right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the Research Ethics Committee: Department of Health Studies.*

Kind regards,

Prof JE Maritz
CHAIRPERSON
maritje@unisa.ac.za

Prof MM Molaki
ACADEMIC CHAIRPERSON
molekmm@unisa.ac.za

**ANNEXURE B1: Request Letter to Department of Health, Limpopo Province to Conduct the Study**

**Poto site (DoH) doc: Letter requesting permission to conduct research study in Public Nursing Colleges of Limpopo Province**

Mrs M Poto

PO BOX 330

Bendorpark

0713

Tel: 0152903909

0843255073/0647473783

POTO M
[32197187@mylife.unisa.ac.za]
Alternative email:
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Fax: 086 550 6932

10/04/2018

Department of Health Limpopo Province

Shamila Latif

18 College Street

Dept. of Health

Research Unit

Office D36 Old Building

Polokwane

0700

Telephone: 015 293 6650

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN PUBLIC NURSING COLLEGES OF LIMPOPO PROVINCE**

My name is Magdeline Poto, and I am a doctoral student at the University of South Africa in Tshwane. The research I wish to conduct for my doctoral thesis is entitled: Development of a support model for implementation of new nursing qualifications in South Africa.

The project is being conducted under the supervision of Dr TE Masango at the Department of Nursing Science at the UNISA.

The aim of the study will be to explore the preparedness of the public NEI's for implementation of the new qualifications in order to develop a support model for Nursing Education Institutions in South Africa for such a program.
I wish to interview all the nurse educators and principals/vice principals involved in development of the curriculum in the public Nursing Education Institutions in

Limpopo Province. Qualitative data will be collected by conducting a semi structured interview with each college principals and vice principal's .The grand tour question that will be asked is:
What is the level of preparedness by public Nursing Education Institutions with regard to offering new qualifications? A topic guide list will be utilised as a reference to facilitate probing during the interview. A structured questionnaire will be used to collect quantitative data from the nurse educators.

Participants will not be coerced and they may withdraw from participating in the study at any time. The information gathered will be managed confidentially. Quotes from interviews may be used in the research report or in an academic article. However, the actual names of the participants will be replaced with pseudonyms. There are no direct benefits for the participants, but the model developed from the study will be of benefit to their colleges.

I am hereby seeking your consent to do research at public nursing college and sub campuses of Limpopo province. I have attached a copy of my proposal, the ethical approval letter that I received from the University of South Africa's Department of Higher Degrees Committee. I have also included copies of the consent forms and confidentiality binding forms to be used in the research process. I undertake to provide your institution with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me.

Thank you for your time and consideration in this matter.

Yours sincerely, Mrs M Poto

**ANNEXURE B2: Permission Letter from Limpopo Department of Health**

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Stander SS (015 293 6650) Ref: LP_ 201804_003

**Poto M**
**UNISA**

Greetings,

**RE: Development of a support model for implementation of new nursing qualifications in South Africa**
The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
   - Research must be loaded on the NHRD site (http://nhrd.hst.org.za) by the researcher.
   - Further arrangement should be made with the targeted institutions, after consultation with the District Executive Manager.
   - In the course of your study there should be no action that disrupts the services, or incur any cost on the Department.
   - After completion of the study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
   - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
   - The above approval is valid for a 3 year period.
   - If the proposal has been amended, a new approval should be sought from the Department of Health.
   - Kindly note, that the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated.

Head of Department

Date 23/05/2018

Private Bag X9302 Polokwane
Fidel Castro Ruz House, 18 College Street, Polokwane 0700. Tel: 015 293 6000/12. Fax: 015 293 6211.
Website: http/www.limpopo.gov.za

*The heartland of Southern Africa – Development is about people!*

**ANNEXURE B3: Letter of Request to Limpopo College of Nursing, Giyani Campus**

**Poto site (DoH) doc: Letter requesting permission to conduct research study in Public Nursing Colleges Limpopo College of Nursing : Giyani Campus**

Mrs M Poto

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Fax: 086 550 6932

29/10/2018

Limpopo Province College of Nursing

Giyani Campus

Giyani Main Road, Giyani, 0826

Ms E T Rikhotso

015 812-0331 015 812-0330

rikhotsoet@webmail.co.za

Edith.Rikhotso@dhsd.limpopo.gov.zaPolokwane

015 812 0330

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN PUBLIC NURSING COLLEGES LIMPOPO COLLEGE OF NURSING : GIYANI CAMPUS**

My name is Magdeline Poto, and I am a doctoral student at the University of South Africa in Tshwane. The research I wish to conduct for my doctoral thesis is entitled: Development of a support model for implementation of new nursing qualifications in South Africa.

The project is being conducted under the supervision of Dr TE Masango at the Department of Nursing Science at the UNISA.

The aim of the study will be to explore the preparedness of the public NEI's for implementation of the new qualifications in order to develop a support model for Nursing Education Institutions in South Africa for such a program.
I wish to interview all the nurse educators and principals/vice principals or persons acting in the capacity of principal involved in development of the curriculum in the

public Nursing Education Institutions in Limpopo Province. Qualitative data will be collected by conducting a semi structured interview with each college principals and vice principal's .The grand tour question that will be asked is:
**"Please explain your views regarding the preparedness of your nursing college for implementation of the new qualifications in South Africa?"**

A topic guide list will be utilised as a reference to facilitate probing during the interview. A structured questionnaire will be used to collect quantitative data from the nurse educators.

Participants will not be coerced and they may withdraw from participating in the study at any time. The information gathered will be managed confidentially. Quotes from interviews may be used in the research report or in an academic article. However, the actual names of the participants will be replaced with pseudonyms. There are no direct benefits for the participants, but the model developed from the study will be of benefit to their colleges.

I am hereby seeking your consent to do research at public nursing college and sub campuses of Limpopo province. I have attached a copy of my proposal, the ethical approval letter that I received from the University of South Africa's Department of Higher Degrees Committee. I have also included copies of the consent forms and confidentiality binding forms to be used in the research process. I undertake to provide your institution with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me.

Thank you for your time and consideration in this matter.

Yours sincerely, Mrs M Poto

**ANNEXURE B4: Permission Letter from Limpopo College of Nursing, Giyane Campus**

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH
LIMPOPO COLLEGE OF NURSING: GIYANI CAMPUS

**02-11-2018**

**MRS. M. POTO**
**P.O BOX 330**
**BENORPARK**
**0713**

**PERMISSION TO CONDUCT RESEARCH: YOURSELF**

You are hereby granted permission to conduct research at Giyani Campus as requested in your letter dated 29-10-2018.

Ensure not to disrupt campus activities and to adhere to ethical considerations. Make appointments on time with your target population.

Yours Truly

Vice Principal

E.T Rikhotso

**ANNEXURE C1: Consent Information Leaflet to the Principal, Limpopo College of Nursing**

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0003

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**INFORMED CONSENT INFORMATION LEAFLET FOR PRINCIPALS AND VICE PRINCIPALS AT SELECTED NURSING EDUCATION INSTITUTION IN SOUTH AFRICA**

**Title of the research study**

Development of a support model for implementation of new nursing qualifications in South Africa

**Ethics Reference Number** : HSHDC/746/2017

**Chair of the University of South Africa, Department of Health Sciences, Research Ethics Committee** : Prof JE Maritz

**Telephone number** : 082 788 8703

**Email address** : maritje@unisa.ac.za

**Supervisor** : Prof TE Masango

**Telephone number** : (012) 429 3386

**Email address** : masante@unisa.ac.za

**Researchers name** : Mrs M Poto

**Address** : PO BOX 330 Bendorpark 0713

**Contact Number** : 0152903909/ 0843255073/0647473783 [32197187@mylife.unisa.ac.za]

**Fax Number** : 086 550 6932

## 1. Introduction

You are invited to participate in the research study that forms part of the Degree Philosophy Doctor (PhD). Please take some time to read through the information as presented in this leaflet. This information leaflet provides details of the study so that you fully understand what is involved and is also intended to assist you on deciding whether to participate or not. If you have any questions, which are not explained in this leaflet, or you do not clearly understand, do not hesitate to ask the researcher. It is of outmost importance that you clearly understand what the research is all about and how you might be involved.

## 2. What is the aim of the study?

We plan to develop a support model for Nursing Education Institutions in South Africa for the new nursing qualifications. In order to reach this objective we need to:

- To identify the preparedness of NEI`s for implementation of the new qualifications from the perspective of the principals and vice principals or persons acting in the capacity of principal according to SANC and CHE.
- To explore and describe the views of nurse educators regarding the preparedness of the NEI's for implementation of the new qualifications.

## 3. What is expected of you during this study?

The study will be conducted at your office or alternatively at the venue of your choice. You will be requested to sign an informed consent form indicating your willingness to participate in the study. A semi structured interview which may take approximately one hour will be conducted by an experienced health researcher trained in interviewing skills. Your confidentiality and anonymity will be ensured by allocating a code instead of your names during recordings. The information gathered during recordings will not be distributed or shared with anyone except the supervisors and independent coder who are directly involved in the study. The voice recorder will be erased and all the transcribed notes will only be made available to the independent coder.You will place your signed consent forms into the separate boxes that will be provided.

The interview will be guided by the grand tour question as follows: **"Kindly explain your views regarding the preparedness of your nursing college for implementation of the new qualifications in South Africa?"**

A topic guide list will be utilised as a reference to facilitate probing during the interview.

**4. Why have you been invited to participate in the study?**

- You are been invited to participate in the study because you are permanently employed as principals or vice principals at the public Nursing Institution of selected provinces in South Africa.
- You are fit to participate in the study as you are directly involved in the curriculum development which will enable you to contribute information that will add value to the study.
- You will not form part of the study if you are not principals or vice principals at the public Nursing Institution of selected provinces in South Africa.

**4. Does the study pose any risks or discomfort to you?**

The researcher envisage that there will be no risks associated with participating in the proposed study, however, necessary measures will be taken to monitor and intervene accordingly should the need arise.

**5. What are the benefits of the study?**

The researcher envisages that the study will generate a new body of knowledge and understanding the process .The study has a potential to generate data and results that will be key in addressing some of the complex issues arising during the transition process. The study might help in the realisation of academic programmes compliant with Higher Qualifications Framework stipulations. The study might assist in providing support to colleges with regard to offering the new qualification that will curb the shortage of professional nurses.

**6. What are your rights as a participant?**

Participation in the study is completely voluntary. The decision is entirely yours. You have the right to refuse to participate. There will be no penalties, judgement or discrimination against you. Your right to anonymity, privacy and confidentiality will be

respected at all times. It will not be possible to link your response to you. The findings of the study will be available to you on completion and upon your request.

**9. What about compensation for participation.**

As mentioned above, participation is voluntary. There is no compensation for participation. There will also be no costs to you as the interview will be conducted at the college campus during their working hours.

**7. Has the study received ethical approval?**

Ethical approval for the study is obtained from the Higher Degrees Committee in Health Sciences and the Research and Ethics Committee at UNISA and Gauteng Department of Health. Copies attached.

**8. Who should you contact for further information or queries?**

Should you have any questions regarding this study, please do not hesitate to contact the researcher, supervisor or chairperson on the contact details indicated on the first page of this information leaflet.

**INFORMED CONSENT TO PARTICPATE IN THE STUDY**

**Title of study:** Development of a support model for implementation of new nursing qualifications in South Africa.

**Declaration:**

I..... (Full names and surname) hereby consent to participate in the above mentioned study.

I confirm that I have been informed of the study's aim, processes and benefits and risks including my rights as a participant. I acknowledge that I may withdraw my consent and participation without any prejudice.

I have read and fully understand the contents of the participant information leaflet. I declare that my participation is of my own free will.

..... .....

Signature of participant Date

**ANNEXURE C2: Consent Information Leaflet to Educators at Limpopo College of Nursing, Giyani Campus**

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**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN PUBLIC NURSING COLLEGES OF LIMPOPO PROVINCE**

My name is Magdeline Poto, and I am a doctoral student at the University of South Africa in Tshwane. The research I wish to conduct for my doctoral thesis is entitled: Development of a support model for implementation of new nursing qualifications in South Africa.

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A topic guide list will be utilised as a reference to facilitate probing during the interview. A structured questionnaire will be used to collect quantitative data from the nurse educators.

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I am hereby seeking your consent to do research at public nursing college and sub campuses of Limpopo province. I have attached a copy of my proposal, the ethical approval letter that I received from the University of South Africa's Department of Higher Degrees Committee. I have also included copies of the consent forms and confidentiality binding forms to be used in the research process. I undertake to provide your institution with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me.

Thank you for your time and consideration in this matter.

Yours sincerely, Mrs M Poto

**ANNEXURE C3: Sample of Confidentiality Binding Document**

**Poto confidentiality binding. Doc**

**Research Title:**

Development of a support model for implementation of new nursing qualifications in South Africa

**The Researcher**

I have explained the measure of ensuring confidentiality in the study.

..... .....

**Researcher** **Date**

**The Participant**

I understand that the information gathered during recordings will not be distributed or shared with anyone except the supervisors and independent coder who are directly involved in the study. The voice recorder will be erased and all the transcribed notes will only be made available to the independent coder. I further understand that am not suppose to use my full names during the interviews but a code will be used as an identification.

..... .....

**Participant** **Date**

**ANNEXURE C4: Consent Letter from Principal of Limpopo College of Nursing, Giyani Campus**

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF HEALTH
## LIMPOPO COLLEGE OF NURSING: GIYANI CAMPUS

**02-11-2018**

**MRS. M. POTO**
**P.O BOX 330**
**BENORPARK**
**0713**

**PERMISSION TO CONDUCT RESEARCH: YOURSELF**

You are hereby granted permission to conduct research at Giyani Campus as requested in your letter dated 29-10-2018.

Ensure not to disrupt campus activities and to adhere to ethical considerations. Make appointments on time with your target population.

Yours Truly

Vice Principal

E.T Rikhotso

## ANNEXURE D1: Topic Guide List

**32197187 Poto Topic Guide List**

**DEVELOPMENT OF A SUPPORT MODEL FOR IMPLEMENTATION OF NEW NURSING QUALIFICATIONS IN SOUTH AFRICA**

The following central questions will be asked:

**"Please explain your views regarding the preparedness of your nursing college for implementation of the new qualifications in South Africa?"**

The use of follow-up probing questions will include the following:

**1. Staff establishment:**

- How many personnel with qualifications in relation to the job descriptions does the college employ and any challenges encountered regarding the recruitment of such personnel?
- Tell us about established staff development plan for your college.
- Please indicate the number of learners that the college can accommodate for all the programs.

**2. Program Design**

- Please elaborate on the progress made so far in relation to designed programs, completed study materials/guides, program coordinators, teaching and learning coordinator and quality assurance committee.
- What challenges have you encountered regarding curriculating the new program?
- What kind of support would you wish to receive in order to complete the new program?

**3. Infrastructure and Library facilities**

- Please elaborate on number of classrooms, simulation rooms, teaching aids, library and IT room facilities for teaching and learning.
- Please give a brief description of record keeping area, staff rooms for the personnel, electronic equipments and privacy for consultation
- Please describe the dining areas and the rest rooms for learner

- What challenges did you encounter regarding the Infrastructure and Library facilities

**4. Clinical placement**

- Please tell us about identified areas for clinical placement and the capacity that the area can accommodate according the programs
- Is there a signed Memorandum of Understanding (MOU) between the Nursing education Institutions and clinical facilities and If **No** what challenges did you encounter in obtaining the MOU
- Please elaborate on identified trained mentors and clinical accompanist for clinical accompaniment
- What challenges did you encounter regarding clinical accompaniment arrangement?

**ANNEXURE D2: Interview Transcript from Principals of a Public Nursing College**

DEVELOPMENT OF A SUPPORT MODEL FOR IMPLEMENTATION OF NURSING QUALIFICATION IN SOUTH AFRICA

Keywords: Interviewer (I)

Participant (P)

I **Please explain your views regarding the preparedness of your nursing college for implementation of the new qualification in South Africa**

P With regard to the new qualifications, we are at the moment prepared for R171 which is the Diploma in General Nursing. We are done with curriculum development, and it has been uploaded onto the CHE website and was also hand delivered to SANC.

I **Please inform us about the feedback received from the two bodies following submission**

P Hmm, I cant remember properly we may have submitted the curricula around July, August or even September last year , as it was a tedious process. Hmmm, there was acknowledgment indicating uploading successfully. But from SANC there was no indication or any form of feedback, so we are not in the light of when the accreditation will be done.The way things are, I don't think that we will be able to commence with training in 2019. I am saying so because the curriculum hasn't been approved, most likely 2020.

I **May you kindly take us through the process that the college took to develop the curriculum?**

P The college organized the workshops so that various experts in that field could be involved in developing the new programmes curricula. The experts were sort according to what they teach. The focus shifted to commencing with R171 after being called by the chief nursing officer [CNO], where she requested that all the colleges to at least be done with the R171, so that there should not be any void when we phase out the R425, so that general nurses should be continually trained.

I **Please explain the form of training or support received during the curriculation.**

P Like I have explained before, before we were addressed by the CNO it was the initiative of the college to develop these curricula. After the address by CNO, stating that champions should be identified, the R171 was championed. We only had the workshop as champions, for all provinces colleges whereby we brought curricula and were a presentation was done by a representative from CHE. CHErepresentative provided guidance on the compilation of the curricula. We then went back to our stations i.e. province colleges and the person from CHE who

presented made a follow-up and she asked us to present our curriculum of which we did and then a discussion was held, and corrections affected. During the discussion, there were issues that we did not agree upon like she was insisting of us to implement semester modules, but we as a college following the challenges that we experienced with the semester system as it was applied to R425 we would prefer a year module system. We remained full afterward working on it until it was completed. Then it was downloaded, and hand delivered at SANC.

I **If I understand you c,correctly there is a plan in place.**

P Yes the plan for the college is that we plan to commence from February to June to start preparing advanced midwifery to modify the earlier developed curricula and submit to SANC. The R169 (Auxiliary). The plan is to finish by June 2019.

I **I did not hear of the development of the Bachelor programme, is there any progress made towards its curriculation?**

P The bachelor programme was also developed, it was just set aside so that we can concentrate on the diploma R171 because we knew that we may not be accredited in time if we pursue more before the submission period.

I **Thank you how is the college preparing to take on the Bachelor's programme?**

P In terms of qualified staff, the college is at about 50% of the educators with master's degree qualification, and only a few in possession of a PhD. So, I forsee some challenge when it comes to staff. The infrastructure also pose as a challenge. The campus is old; it was earmarked in 2014 for renovation. The process did commence but unfortunately, it is not yet completed. This poses a lot of challenges in terms of accommodation for our students, whereby they are being renovated but still incomplete. These classrooms have been renovated, they are complete, although there are no aircons, blinds, windows, and furniture. We are still not having projectors or Internet. We are also in need of a well-developed and equipped library. We also need a model's gadget, computers, and have e-learning programmes. The classroom sizes that we have are small, the sizes were increased up to 70 capacities, and to convert another classroom to establish a computer laboratory for our students. In the admin block, we are in the process of buying the exchange machine, whereby we contacted the IT

person at the district who is willing to assist us, to ensure cabling of the whole admin block and have Wi-Fi connection as well as the computer lab for the students.The principal also phoned the librarian form the nearby university inviting him to assist in assessing the gaps in our library and make a recommendation. The assistant librarian also needs to attend workshops to update herself. So far, we had enough support from SANC, queries that we had were resolved and pertaining to CHE, the same, only hiccups regarding uploading but with further clarification, we managed.

I **So, with respect of other educators, how did the college ensure that they are well informed about the curriculum changes?**

P It is in the pipeline, we thought that the information sessions will be done during this year, but it was not possible, because the downloading took very long, i.e. the system. However, it will be done next year, and I think we will have more time to inform them as we won't be starting with the new qualifications in 2020.

I **Kindly tell us about staff establishment within your college?**

P The total personnel including those of satellite campuses amount to 66 and 79 vacant posts. The approved posts are 145 of all personnel including academic and supportive staff. My challenges are with the lectures.

I **What brings on this challenge?**

P The moratorium, on the appointment of personnel.

I **What has been done to address these challenge?**

P It's so challenging that there is nothing one can do as it comes directly from the DoH. Last year I was trying to transfer two people from clinical to the college as I lost two educators from retirement, but it was declined. These was a second attempt.

I **How is the PNCs planning to meeting the personnel recruitments?**

P Hmmm, I think we will simply motivate for sufficient personnel, hopefully the process of moving into Higher Education, CHE will force the DOH to consider lifting

off the moratorium. That may ensure that there is an appointment of personnel. Currently we are in the 5th year of not having a principal, vice principals taking turn on acting for that position. The critical position needs to be filled. I also need to have a deputy vice principal but since my appointment, I had never had any deputy. At one stage the deputy vice principal post was appearing on the organogram, but at a later stage it disappeared, so you do not know what is happening and this is frustrating to work without a deputy. It is tough.

I **Kindly elaborate on supportive staff establishment?**

P Support staff, Aaah there I am having more challenges . HR two personnel one with a diploma in HR and the other one only in possession of matric certification appointed some years ago. Finance no one, registry none, and we have only one typist that I trained to handle the student's records. She is just a typist with limited insights into the programme. She still needs assistance with transcripts, a compilation of completion.

I **What is the state of readiness on utilization of the e-records?**

P Hmmm, (shaking her head) we have been fighting for the e-records for more than ten years, with the DOH their key priority is patient care, we are not really acknowledgment with our burning issue nor be considered amongst the priority list. What hurts me most is the fact that we had a donation from Atlantic Philanthropies, we were hopeful because it was donated to the nursing education, we thought we will just write the motivation for the DOH to approve but we failed. We designed the e-records system, got quotation but the whole process stalled, I do not know whether it is the tender issues or?

I **What is the PNC plan about this?**

P We had money, we just wanted approval for people to come and install I do not know why? The DOH is not willing to comply and that is going to affect the Bachelors programme.

I **May you describe the designed programs, completed study materials/guides, program coordinators, teaching and learning coordinator, and quality assurance committee. Kindly elaborate on the progress of designed programmes and completed study material?**

P As I have indicated R171 curriculum is submitted, we will finalize advanced midwifery from February next year. Other post basic qualifications we are awaiting publishment of regulations by SANC. We did not start of the bachelor, we will do R169 first, later the Bachelor. The study guides and portfolios are not yet developed we are still awaiting feedback. The lecturesdoes that themselves, It is just for us to organize a week workshop and the educator of that specific subject meet and compile it according to the stipulations.The programme we envisage them to be coordinated the same way we are running the R425, it is the educators who set the examination. Once they are done, the examination committee meets, and it comprises of the HOD's of various subjects. They meet together with the head of campuses and supervisors to compile the exam paper. Then it is sent to the University for Moderation.

I **Please take us through the quality assurance committee.**

P The college is assured quality from the college council and the Senate all adheres to these responsibilities.

I **How equipped is the college in terms of law and high fidelity model?**

P We have more of the law fidelity teaching models, we do not have high fidelity teaching models, we still need to purchase such.

I **Please describe the student eating place and rest areas**

P There was a dining hall earlier, but now it is no more, the students are cooking in their rooms, although it is against the nurse's home rules you will find them doing that as there are no kitchenette nor demarcated places. There are a few shades with solid concrete chairs and tables. But unfortunately, our student vandalized them.We have adequate restrooms given the number of classrooms and students.

I **Take us through the process of obtaining the MOU with the clinical facilities?**

P Yes, we managed to obtain MOU from 6 hospitals and no challenges with obtaining that.

I **Tell us about mentorship in your clinical institutions?**

P There are challenges ranging from a shortage of nursing personnel. The registered nurses cannot cope with the mentoring function, so the educators do accompaniment whilst they are also understaffed. So, it not easy for them. Remember after block they have scripts to mark and they are also expected to go for accompaniment. The students are scattered in many hospitals.

I **Where are the students residing and how do they access the clinical site?**

P They reside at the nurse's home and there are two buses 65-seater & one 35, one kombi 15-seater for transporting the students.

I **How are students represented?**

P The students are represented in every committee. The only area excluded is the examination committee.

I **Thank you very much is there any other information you would like to share?**

P Not really thanks.

I **This marks the end of the interviews thank you very much.**

**ANNEXURE D3: Coding Certificate for the Researcher**

**Qualitative data analysis**

Doctor of Philosophy in Nursing

**M Poto**

THIS IS TO CERTIFY THAT:

Prof Maria Sonto Maputle has co-coded the following qualitative data:

**Unstructured one-to-one interviews conducted**

For the study:

**DEVELOPMENT OF A SUPPORT MODEL FOR IMPLEMENTATION OF THE NEW NURSING QUALIFICATION IN SOUTH AFRICA**

I declare that the candidate and I have reached consensus on the major themes reflected by the data. I further declare that adequate data saturation was achieved as evidenced by repeating themes.

Prof MS Maputle

August 2019

**ANNEXURE D4: Coding Report for Researcher**

## CODING REPORT

FOR: Ms. Rapudi

DATE: 2019/08/17th

STUDY: DEVELOPMENT OF A SUPPORT MODEL FOR IMPLEMENTATION OF NURSING COLLEGES IN SOUTH AFRICA

INDEPENDENT CODING BY PROF MS MAPUTLE

DATA ANALYSIS METHOD: 8 Steps of Tesch's Inductive, descriptive open coding technique Creswell (2014) was used by following the steps below:

*Step 1* – Reading through the data

The researcher got a sense of the whole by reading all the verbatim transcripts carefully. This gave ideas about the data segments and how they meant. The meaning emerged during reading were written down and all ideas as they come to mind. The researcher carefully and repeatedly read the transcripts of all the participants and understood them.

An uninterrupted period of time to digest and thought about the data in totality was created. The researcher engaged in data analysis and wrote notes and impressions as they come to mind.

*Step 2* – Reduction of the collected

The researcher scaled-down the data collected to codes based on the existence or frequency of concepts used in the verbatim transcriptions. The researcher then listed all topics that emerged during the scaling down. The researcher grouped similar topics together, and those that did not have association were clustered separately. Notes were written on margins and the researcher started recording thoughts about the data on the margins of the paper were the verbatim transcripts appears.

*Step 3* – Asking questions about the meaning of the collected data

The researcher read through the transcriptions again and analyse them. This time the researcher asked herself questions about the transcriptions of interview,

based on the codes (mental picture codes when reading through) which existed from the frequency of the concepts. The questions were "Which words describe it?" "What is this about?" and "What is the underlying meaning?"

*Step 4* – Abbreviation of topics to codes

The researcher started to abbreviate the topics that have emerged as codes. These codes needed to be written next to the appropriate segments of the transcription. Differentiation of the codes by including all meaningful instances of a specific code's data were done. All these codes were written on the margins of the paper against the data they represent with a different pen colour as to the one in Step 3.

*Step 5 – Development of themes and sub-themes*

The researcher developed themes and sub-themes from coded data and the associated texts and reduced the total list by grouping topics that relate to one another to create meaning of the themes and sub-themes.

*Step 6 – Compare the codes, topics, and themes for duplication*

The researcher in this step reworks from the beginning to check the work for duplication and to refined codes, topics and themes where necessary. Using the list of all codes she checked for duplication. The researcher grouped similar codes and recoded others were necessary so that they fit in the description.

*Step 7 – Initial grouping of all themes and sub-themes*

The data belonging to each theme were assembled in one column and preliminary analysis was performed, which was followed by the meeting between the researcher and co-coder to reach consensus on themes and sub-themes that each one has come up with independently.

Table 1: Central storyline, Themes, and sub-themes reflecting exploration of preparedness of the public NEI's for the implementation of the new qualification

| Central Storyline | Nursing colleges received support during recurriculation of the new programs from different bodies that govern accreditation of study programs though challenges were experienced which differed from one college to the other |
|---|---|
| Main themes | Sub-themes |
| 1. **Explanations of the preparations executed towards readiness of implementation of qualifications** (These covers views and experiences on preparedness) | 1.1 An explanation of different strategies in preparations for the implementation of new qualifications (workshop attendance, meetings held, division of activities, curriculum team, paper drafts, dissemination of information, consultation with different national bodies that governs accreditation of programs) by Nursing<br>1.2 Specific activities done towards preparations to implement new qualifications mentioned<br>1.3 Composition of different committees and requirements for inclusion outlined<br>1.4 Readiness, still in process of preparation versus lack of colleges on various programs which are to be implemented (including time frames set, filling of posts, qualifications of personnel, recruitment, selection, and placement, curriculum uploaded)<br>1.5 Staff development strategies employed in preparation for all staff towards readiness to implement new qualifications outlined (acting in positions, mentorship programs how long, remuneration, workshops and training, etc.)<br>1.6 Existence of program coordinators highlighted geared towards guiding staff members<br>1.7 Existence of resources and relevant infrastructure to implement the new programs in some NEIs mentioned (existing skills lab, laptops, data projectors, staff offices, libraries, computer labs) |
| 2. **Existing support provided to nursing colleges in preparation for implementation for readiness to implement new qualifications** (In addition it covers experiences) | 2.1 Existence versus minimal or lack of support experienced from different bodies responsible for programs accreditation (support include or not include or to limited extent development of study guides, curriculating, increasing different staff categories, development of staff, etc.)<br>2.2 Existence versus lack of support experienced by NEIs on a wide range of issues mentioned<br>2.3 Collegial and management support exists encouraged at various levels (including colleges assisting on another during curriculation and other related aspects, campus managers, PDoN, SANC, CHE, NDPP, CNO, etc.)<br>2.4 Planned mentorship programs for lecturers and students (blocks, clinical practice) geared towards the achievement of set goals exist<br>2.5 Plan to increase material and human resources for assisting colleges' readiness to implement new qualifications outlined<br>2.6 Support exists through staff development programs (which include |

| | |
|---|---|
| | various types of training and workshops) implemented to address identified training gaps<br>2.7 Obtained feedback from national bodies that governs accreditation of programs experienced on submitted programs reflecting support |
| 3. **Challenges experienced by Nursing colleges during preparations to implement new programs** (In addition it covers experiences) | 3.1 Lack versus limited qualified lecturers and support staff to implement new qualification (mostly have honours, to a limited extent master, some still enrolled for masters and few PhDs – some provinces don't have PhDs)<br>3.2 Challenges experienced at an initial and working stage of recurriculation of new programs resulting from various aspects<br>3.3 Lack of feedback from national bodies that governs accreditation experienced on submitted programs<br>3.4 Creation and application of old and new posts problematic resulting from the existing moratorium and lack of funds outlined<br>3.5 Lack versus the existence of technology-related problems to realise 4IR (4th industrial revolution) experienced (existence or none e-learning, ICT, emails, telephone, WIFI, Student information system)<br>3.6 Existence of student and staff related problems which are anticipated to affect the implementation of new qualifications outlined<br>3.7 Existence of service and logistical related problems which might affect implementation, (lack of mentors in the clinical areas, lack of deliveries for midwives, lack of high fidelity models, retiring staff not replaced, lack of readiness with other programs, etc.)<br>3.8 Existence of infrastructural and material resources problems anticipated to affect the implementation of new qualifications (lack of transport to clinical practice, small libraries, few spaces at computer labs, lack of kitchen for students and other related spaces, shortage of mentors)<br>3.9 Lack of OSD at NEIs problematic leading to poor interest by nurse educators to work in this space outlined<br>3.10 Availability versus minimal students accommodation which depends on a NEI outlined |
| 4. **Existence of various processes related to existing operations to run activities during the implementation of new programs** | 4.1 Existence of procedures for managing the setting, storing, writing and providing feedback on tests and examinations outlined<br>4.2 Current practices on Management of Information System (MIS) outlined (which includes records management)<br>4.3 Existing and identified institutions/facilities (Universities of affiliation, clinical areas) for clinical placement and MOU's signed outlined<br>4.4 Plan for accommodating certain numbers of students in the new qualifications outlined<br>4.5 An explanation of established Quality Assurance System differ from one NEI to the other and commendable<br>4.6 Communication channels and procedures to follow during the |

| | |
|---|---|
| | implementation of the new qualifications outlined<br>4.7 A plan to recover the lost graduate programs outlined |

**SUMMARY OF OBSERVATIONS MADE DURING ANALYSIS OF DATA**

**The following observations were made:**

- Data saturation was reached for all themes and sub-themes. Saturation was based on the verbatim excerpts from the transcriptions and voice recordings provided because all themes had four and more sub-themes.
- The researcher displayed the skill of probing to get adequate depth and scope of data.
- Reflective summaries were provided to participants to confirm what they have described
- The highlighted points in red reflects some of the data which will serve as reminders to the researcher during discussions and they are not all included.

Compiled by Prof MS Maputle
22 August 2019

**ANNEXURE E: Research Questionnaire**

UNISA university of south africa

College of Human Sciences
School of Social Sciences
Department of Health Sciences

**RESEARCH QUESTIONNAIRE**

Dear Research Participant

This self-administered structured questionnaire aims to gather information pertaining to the preparedness of public Nursing Education Institutions (NEIs) for the implementation of new qualifications in South Africa. Your input will greatly contribute towards the development of a support model for implementation of new qualifications at NEIs in South Africa.

Please note that your participation in completing this questionnaire is entirely voluntary, and the anonymity of your identity is strictly observed and guaranteed. Furthermore, no part of your personal information as a participant will be disclosed to anyone, and all the information you provide will remain strictly confidential. Your integrity will not be compromised in any way whatsoever, and you are completely guaranteed of your right to withdraw from participating in this study at any point in time, should you feel so.

If you do not want to participate in the study, neither complete nor return the questionnaire. If you decide to participate, the questionnaire may take you about twenty minutes to complete. Please answer **ALL** questions as per instructions given. Try to honestly complete questions at the time you are most unlikely to be disturbed, and avoid spending too long on a question. There are no costs associated with completing the questionnaire other than your time.

**Upon completing the questionnaire, please return it to me in the box provided or via my email as soon as you can and no later than 31 January 2020**

If you have any queries or would like further information about this study, please contact me during office hours on 0843255073 or email: magdeline.rapudi@mediclinic.co.za. Should you have questions regarding ethical aspects of the study, please contact my supervisor, Prof TE Masango, during office hours at 012 429 3386 or e-mail: masante@unisa.ac.za.

I, the researcher, appreciate your commitment in completing this questionnaire and your contribution to the successful completion of the study. Should you need to know findings of the study, a copy of my completed research report can be made available to you on request.

Ms. Magdeline Poto Professor TE Masango

Researcher Supervisor

**SECTION A: DEMOGRAPHIC INFORMATION**

This section aims to obtain information on your general demographic profile. Please indicate your response by placing an **X** on the relevant code corresponding to your chosen answer.

| Qn. # | Question | Response | Code |
|---|---|---|---|
| A101 | Sex (gender) | Male | 1 |
| | | Female | 2 |
| A102 | Age group in which your age falls under | 20-29 years | 1 |
| | | 30-39 years | 2 |
| | | 40-49 years | 3 |
| | | 50-59 years | 4 |
| | | 60 years and above | 5 |
| A103 | Select the province in which your Nursing College is located | Gauteng (GP) | 1 |
| | | Free State (FS) | 2 |
| | | Limpopo (LP) | 3 |
| | | North West (NW) | 4 |
| A104 | Please select the range of your period of experience as a nurse educator | 1-3 years | 1 |
| | | 4-6 years | 2 |
| | | 7-9 years | 3 |
| | | 10-12 years | 4 |
| | | 13 years and above | 5 |
| A105 | Please indicate your latest qualification | Diploma in Nursing | 1 |
| | | Bachelor of Arts in Nursing | 2 |
| | | Honours Degree | 3 |
| | | Masters Degree | 4 |
| | | PhD | 5 |

**SECTION B: PREPARATIONS EXECUTED (PE)**

Questions in this section determine the preparations made towards implementation of the new qualifications. Please show your response to each question based on a 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Agree.

**Example**: Procurement of resources. If you consider "**Agree**" as your best answer, then you place an X in the box labelled 4 as shown herein below.

| 1 | 2 | 3 | X | 5 |
|---|---|---|---|---|

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| B101 | There is consistent engagements with all relevant stakeholders such as South African Nursing Council (SANC), Council of Higher Education (CHE) and the Department of Health (DoH) | 1 | 2 | 3 | 4 | 5 |
| B102 | There is consistent involvement with the College management and curriculum development committee in formulation and endorsement of functional committees in the development of the new qualifications implementation plan | 1 | 2 | 3 | 4 | 5 |
| B103 | There is consistent engagement in designing programmes curricula that fulfil accreditation requirements | 1 | 2 | 3 | 4 | 5 |
| B104 | There is minimal improvement of infrastructure for teaching and learning | 1 | 2 | 3 | 4 | 5 |
| B105 | Recruitment, appointment and placement of qualified personnel is conducted on time towards preparations of the new qualifications. | 1 | 2 | 3 | 4 | 5 |
| B106 | There is mobilization of material resources for teaching and learning | 1 | 2 | 3 | 4 | 5 |
| B107 | There is development of the Quality Management Systems (QMS) | 1 | 2 | 3 | 4 | 5 |

**SECTION C: INSTITUTIONAL SUPPORT (IS)**

This section's questions determine institutional support from stakeholders and management towards implementation of new qualifications. Please show your response to each question based on 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Agree. **Example**: Material resources provision. If you consider "**Agree**" as your best answer, then you place an X in the box labelled 4 as shown herein below.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | | X | |

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| C101 | There was adequate involvement and support towards inspections by bodies involved in programmes accreditation | 1 | 2 | 3 | 4 | 5 |
| C102 | There was sufficient guidance regarding compliance to norms and standards for clinical practice | 1 | 2 | 3 | 4 | 5 |
| C103 | There was some form of partnership on sharing of resources with university where programmes are located | 1 | 2 | 3 | 4 | 5 |

**SECTION D: CHALLENGES ENCOUNTERED (CE)**

This section's questions determine challenges encountered towards implementation of new qualifications. Please show your response to each question based on 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Agree. **Example**: Incompetent staff. If you consider "**Agree**" as your best answer, then you place an **X** in the box labelled 4 as shown herein below.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | | X | |

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| D101 | There is lack of adequate qualified staff to implement the new qualifications. | 1 | 2 | 3 | 4 | 5 |
| D102 | There is inadequate feedback from relevant national bodies that govern accreditation of programmes | 1 | 2 | 3 | 4 | 5 |
| D103 | There is poor information technology, clinical laboratory infrastructure and library resources. | 1 | 2 | 3 | 4 | 5 |
| D104 | There are budget constraints for procurement of resource materials for the | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | facilitation of teaching and clinical support | | | | | |
| D105 | There is weak leadership and governance in planning and oversight | 1 | 2 | 3 | 4 | 5 |
| D106 | There is lack of harmonized support from national bodies responsible for quality assurance | 1 | 2 | 3 | 4 | 5 |
| D107 | There is inadequate funding limiting capacity for admission of students | 1 | 2 | 3 | 4 | 5 |
| D108 | There is limited understanding of the legislation pertaining to transitioning of nursing education to the higher education and training sector | 1 | 2 | 3 | 4 | 5 |
| D109 | There is ineffective implementation of staff development programmes | 1 | 2 | 3 | 4 | 5 |
| D110 | There is lack of communication between clinical and academic settings | 1 | 2 | 3 | 4 | 5 |
| D111 | There is uncooperative and limited commitment by key role players | 1 | 2 | 3 | 4 | 5 |
| D112 | There is limited space for use with regards to libraries, computer, catering, laboratories and sports | 1 | 2 | 3 | 4 | 5 |

**SECTION E: PROCESS OPERATIONS (PO)**

This section's questions aims to determine process operations relating to the implementation of new qualifications. Please show your response to each question based on a 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Agree.
**Example:** Incompetent staff. If you consider "**Agree**" as your best answer, then you place an **X** in the box labelled 4 as shown herein below.

| 1 | 2 | 3 | X | 5 |
|---|---|---|---|---|

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| E101 | There is lack in implementation of the Quality Management System (QMS) of the nursing education institution | 1 | 2 | 3 | 4 | 5 |
| E102 | Staff participates in continuous quality assurance improvement processes, monitoring and regular review of internal quality assurance structures and processes, e.g. teaching and learning, research | 1 | 2 | 3 | 4 | 5 |
| E103 | There is adequate student support services and community engagement | 1 | 2 | 3 | 4 | 5 |
| E104 | There is available and effective utilization of efficient mechanisms for learner support services | 1 | 2 | 3 | 4 | 5 |
| E105 | There is consistent involvement of external stakeholders in formal quality | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | assurance processes | | | | | |
| E106 | There is collection and use of data and information for performance review and improvement | 1 | 2 | 3 | 4 | 5 |
| E107 | There is upgrading of Information Communication Technology infrastructure | 1 | 2 | 3 | 4 | 5 |
| E108 | There is academic planning and curriculum review and development of programmes qualifications | 1 | 2 | 3 | 4 | 5 |

**SECTION F: SUGGESTIONS TO IMPROVE READINESS FOR IMPLEMENTATION**

Questions in this section aim to determine the extent to which you agree with the suggestions to improve colleges' readiness to implement of new qualifications. Please show your answer to each question based on a 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree and 5 = Strongly Agree. **Example**: Alliance. If you consider "**Agree**" as your best answer, then you place an **X** in the box labelled 4 as shown herein below.

| 1 | 2 | 3 | X | 5 |
|---|---|---|---|---|

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Dsagree | Dsagree | Neutral | Agree | Strongly Agree |
| F101 | There should be constant improvement of educator capacity through systematic review such as reviews of salary structure and analysis | 1 | 2 | 3 | 4 | 5 |
| F102 | There should be a review of funding norms for students to provide targeted funding for new qualifications | 1 | 2 | 3 | 4 | 5 |
| F103 | There should be an establishment of common standards for lecturers to support the implementation of new qualifications | 1 | 2 | 3 | 4 | 5 |
| F104 | There should be maintenance and strengthening collaborations and engagements with stakeholders in the system | 1 | 2 | 3 | 4 | 5 |
| F105 | Leadership and governance weaknesses should be addressed to support the improvement in efficiencies | 1 | 2 | 3 | 4 | 5 |
| F106 | Appointment of ample qualified staff required for implementation of new qualifications should be done. | 1 | 2 | 3 | 4 | 5 |
| F107 | There should be an Increase in material and human resources and college capacity for admission of students | 1 | 2 | 3 | 4 | 5 |
| F108 | Consistent and effective implementation of the Management of Information System (MIS) should be in place. | 1 | 2 | 3 | 4 | 5 |
| F109 | There should be implementation of development programs and capacity building for all staff members. | 1 | 2 | 3 | 4 | 5 |

Thank you for your time and participation

**ANNEXURE F: Request Letter for Expert Validation of the Developed Model**

P O BOX 330

BENDORPARK

POLOKWANE

0713

01/09/2021

Good day Prof

REQUEST FOR VALIDATION OF THE MODEL

I trust you are well. I am Magdeline Poto registered Doctoral student at Unisa. My student number is -------- under the supervision of Prof T Masango. I humbly request your expert skills to look into the developed model: **A MODEL TO SUPPORT THE IMPLEMENTATION OF THE NEW QUALIFICATIONS PROGRAMME IN PUBLIC NURSING COLLEGES IN SOUTH AFRICA.**

Attached please find the validation template to be completed.

Your comments and suggestions will assist in deeper understanding and strengthening of the model.

Thank you for availing time to share your expertise.

Respectfully yours

M Poto

**ANNEXURE G: An Example of a Model Validation Template**

| M POT0 : MODEL VALIDATION TEMPLATE AS SENT TO THE EXPERTS |
|---|
| **SECTION A: Concepts involved in the model** |
| ❖ The Agent--- |
| ❖ The recipient--- |
| ❖ The dynamics--- |
| ❖ The context--- |
| ❖ The strategies---- |
| ❖ Terminus--- |
| |
| **SECTION B: Purpose of the model** |
| |
| **SECTION C: Relevancy of the model** |
| **SECTION D: Scope of application** |
| |
| **SECTION E: Additions or subtraction** |

## ANNEXURE H: Summary of Chapters

<table>
<tr><th>Chapter</th><th>Description</th></tr>
<tr><td>Chapter 1</td><td>Orientation to the study<br>This chapter discusses the background, research problem, aim, objectives and research question, significance of the study, definition of key terms, conceptual foundation of the study, theoretical framework, research design and methodology, data collection, data analysis, ethical considerations, scope, and layout of the study.</td></tr>
<tr><td>Chapter 2</td><td>Literature review<br>This chapter is based on the conducted literature review on the topic the implementation of the new nursing qualifications as follows:<br>• Nursing education transformation<br>• Global indications for nursing education transformation: the United States of America (USA), Australia, the United Kingdom (UK), Lebanon and Pakistan, China, Nigeria and Malawi, Lesotho and Botswana<br>• Nursing education transformation in South Africa<br>• Roles of the NDoH, SANC and CHE, and legislation in nursing education transformation<br>• Role of the National Department of Health (NDOH) in regulating nursing education<br>• Role of the South African Qualifications Authority (SAQA) in setting standards of education<br>• National Qualifications Framework Act, 67 of 2008<br>• Higher Education Act, 101 of 1997<br>• Council on Higher Education (CHE)<br>• South African Nursing Council (SANC) and implementation of the new nursing qualifications registered on the National Qualifications Framework (NQF)<br>• The NQF-aligned new nursing qualifications<br>• SANC and CHE steps to be followed for a programme to be accredited<br>• Legislation applicable in the transformation of nursing education (Nursing Act, 33 of 2005, National Health Act, 63 of 2003, South African Nursing Council (SANC) Draft Charter of Nursing Practice, 2004, South African Qualification Authority (SAQA) Act, 9 of 1995, National Qualifications Framework Act, 67 of 2008, Further Education and Training Colleges Act, 2006 as amended, Council on Higher Education (CHE) 2013, Revised Higher Education Qualifications Sub-Framework (HEQSF), Higher Education Amendment Act 101 of 1997, South African Nursing Council (SANC). 2004, Draft charter of nursing practice, National Education Policy Act, 27 of 1996, Skills Development Levies Act, 24 of 2010, and SAQA Refined Level Descriptors for a 1- to 10-Level NQF</td></tr>
<tr><td>Chapter 3</td><td>Theoretical framework<br>This chapter discussed the application of Rogers' (1989) perspective transformation theory based on Mezirow's (1975, 1978) transformative learning as the theoretical framework for the study.</td></tr>
<tr><td>Chapter 4</td><td>Research design and methodology<br>The research design and methodology of the study including the research paradigm and assumptions, data collection and analysis, and validity and reliability are discussed in this chapter.</td></tr>
<tr><td>Chapter 5</td><td>Data analysis and interpretation of the qualitative and quantitative phases<br>This chapter discussed the analysis of data and interpretation of the results of the qualitative and quantitative phases, with reference to the literature review.<br><br>Qualitative findings<br>Central storyline, themes, and sub-themes of PNCs' preparedness for implementation of the new qualifications:<br><br>
<table>
<tr><td>Central storyline</td><td>Public Nursing colleges received support during the curriculation of the new programmes from different bodies that govern accreditation of study programmes and experienced challenges.</td></tr>
<tr><td>Theme</td><td>Sub-theme</td></tr>
<tr><td>1 Preparations for the implementation of the new qualifications</td><td>1.1 Strategies and activities in preparation for the implementation of the new qualifications<br>1.2 Level of readiness and preparation for implementation of the new qualifications<br>1.3 Staff development strategies to implement new qualifications</td></tr>
</table>
</td></tr>
</table>

| | | | |
|---|---|---|---|
| | | 1.4 | Programme coordinators for guiding staff members |
| | 2 Support provided to PNCs in preparation for implementation of the new qualifications | 2.1 | Support from programme accreditation bodies (DOH, SANC, CHE, NEPI, CNO) |
| | | 2.2 | Collegial and management support at various levels of the PNCs |
| | 3 Challenges experienced during preparations to implement the new qualification programmes | 3.1 | Human resource challenges to implementing new qualifications |
| | | 3.2 | Infrastructural and material constraints expected to affect the implementation |
| | | 3.3 | Service and logistical problems which might affect implementation |
| | | 3.4 | Institutional challenges at initial and working stage of re-curriculation of new programmes |
| | 4 Explanation of processes required during preparations to implement the new qualification programmes | 4.1 | Procedures for managing the setting, storing, writing and providing feedback on tests and examinations |
| | | 4.2 | Situational analysis and memorandums of understanding (MOU's) of identified clinical areas for clinical placement |
| | | 4.3 | Established quality assurance systems of PNCs |
| | | 4.4 | Communication channels and procedures during implementation |

**Quantitative findings**

The educators perceived the process positively although challenges were encountered:

- Budget constraints for procurement of resource materials for the facilitation of teaching and clinical support
- Lack of communication between clinical and academic settings
- Uncooperative and limited commitment by key role players
- Weak leadership and governance in planning and oversight
- Ineffective implementation of staff development programmes and inadequate funding, limiting capacity for admission of students

**Chapter 6**

**Integration and interpretation of the qualitative and quantitative findings**

This chapter discussed the integration and interpretation of the qualitative and quantitative results, based on the literature reviewed.

**Challenges**

The findings revealed that despite constant involvement and support from different stakeholders, the participants found it inadequate and reported various challenges. The challenges included budget constraints for procurement of resource materials and creation of posts and hiring staff for facilitation, teaching and clinical support; lack of support from different bodies responsible for programme accreditation (PDoH, SANC, CHE, NEPI, CNO); uncooperative and limited commitment by key role players; lack of communication between clinical and academic settings; weak leadership and governance in planning and oversight of the preparation process; ineffective implementation of staff development programmes; inadequate funding, limited capacity for admission of students; inconsistent Management of Information System (MIS) practice, and infrastructure and technology-related problems such as lack of IT facilities to realise 4IR.

**Chapter 7**

**Concept analysis, model development and description of model**

Chapter 7 discussed concept analysis, model development and description.

**Concept analysis**

The main concepts were as follows:

- Selecting a concept
- Determining the purpose of analysis
- Identifying all the uses of concept that can be revealed
- Determining the defining attributes
- Identify the model case
- Contrasting additional, borderline, related, and contrary cases
- Identify antecedents and consequences
- Defining empirical referents

| | |
|---|---|
| | **Model development**<br>Model development and validation focused on the justification of knowledge contributed by the study. The researcher conceptualised the model to support PNCs for the implementation of the new qualifications, using Dickhoff et al's (1968) six aspects of practice theory as follows:<br>• Agent: Public Nursing College (PNCs) principals<br>• Recipient: Public Nursing College (PNCs)<br>• Dynamics: Institutional challenges, human resource, infrastructure and material, and service and technology resources<br><br>Procedures: Procedure referred to the processes required to be promoted, and participation and collaboration from all stakeholders within the NE system to realise the accreditation of the R174 programme using:<br>• SANC and HEQC conformance criteria<br>• Curriculum development guidelines<br>• Nursing Act, 33 of 2005<br>• SANC R174 of 2013<br>• SAQA Act<br>• NQF<br>• National strategic plan<br>• Institutional policies<br>Three phases were followed to operationalise the model, namely:<br>• Phase 1: Conducting situational analysis<br>• Phase 2: Development of action plans<br>• Phase 3: Implementation of action plans<br>• Context: Public Nursing Colleges in South Africa<br>• Terminus: Accredited PNCs to offer the new qualification programme |
| **Chapter 8** | **Model validation**<br>Chapter 8 described the validation of the model against its rationale, aims and objectives, and justification of the original contribution of the study to development of a support model for the implementation of the new qualifications. The model was validated and justified as an original contribution to the body of knowledge. The model validation followed Chinn and Kramer's (2018:203) five questions for critical reflection as follows:<br>• How clear is the model?<br>• How simple is the model?<br>• How general is the model?<br>• How accessible is the model?<br>• How important is the model?<br><br>The model's contribution to the body of knowledge was discussed. The study was justified as contributing to the body of knowledge through the process and progress leading to the implementation of the R174 programme, namely a Bachelor's degree in Nursing. |
| **Chapter 9** | **Conclusion, limitations and recommendations**<br>The conclusion of the study was provided on the last chapter, which briefly explained the limitations, and made recommendations for education, practice and future research. |

**ANNEXURE I: Language Editor's Letter**

53 Glover Avenue
Doringkloof
0157 Centurion
17 November 2021

Cell/ Mobile: 073-782-3923

**TO WHOM IT MAY CONCERN**

I hereby certify that I have edited Magdeline Poto's doctoral dissertation,

**Development of a support model for the implementation of the new nursing qualifications in South Africa**, for language and content.

*IM Cooper*

Iauma M Cooper
192-290-4

**ANNEXURE J: Turnitin Originality Report**

turnitin

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DEVELOPMENT OF A SUPPORT MODEL FOR THE IMPLEMENTATION OF THE NEW NURSING QUALIFICATIONS IN SOUTH AFRICA

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