



# **COMPETENCIES REQUIRED OF CLINICAL FACILITATORS**

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**A research report submitted to the Gordon Institute of Business Science,  
University of Pretoria, in partial fulfilment of the requirements for the  
degree of Master of Business Administration**

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## **ABSTRACT**

Clinical facilitation is a central function considered indispensable for achieving the integration of theory to practice for nursing students and staff.

The aim of this study was to identify and prioritize the competencies required for clinical facilitators in acute care, private sector environments as well as identify the gaps that arise between the importance of the competency and the evidence that the competency exists in current practice.

A structured questionnaire was administered by central collection method and e-mail to seven designations of nurses who were directly or indirectly involved with the function of clinical facilitation from three geographical regions in South Africa. Returns were analysed from 212 responses received. The results of the survey rank ordered the list of the importance of competencies as well as the evidence that the competency exists. The gap variables showed there is a definite need for training in all competencies.

## DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university.

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**SHANNON NELL**

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**DATE**

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## ABBREVIATIONS AND GLOSSARY

CF	Clinical facilitator
ETQA	Education and Training Qualifications Authority
NQF	National Qualifications Framework
RN	Registered nurse
SAQA	South African Qualifications Authority
SANC	South African Nursing Council

# **CHAPTER 1: BACKGROUND AND INTRODUCTION TO THE RESEARCH TOPIC**

## **INTRODUCTION**

The clinical facilitation of nursing staff and nursing students is a critical component of workplace-based experiential learning in the practice environment.

The role of clinical facilitation exists to partner hospital management and education in the provision, development and continuous improvement of clinical nursing skills, nursing standards and general nursing care by providing up-to-date practical nursing education to permanent staff and students. It bridges the gap between theory and practice, and focuses on facilitating and evaluating the practical application of clinical theory in the day-to-day working hospital environment so as to reinforce the learning process. This ensures, firstly, that hospitals are able to provide excellent and safe patient care and, secondly, enhances the quality of the education and training programmes offered.

On a global basis, with few exceptions, the delivery of healthcare is plagued by a shortage of skills, particularly those of nursing staff. South Africa, with significant skills shortages in both the public and private sectors, is no exception.

## **DESCRIPTION OF THE PROBLEM AND BACKGROUND**

The topic of this research paper focuses on the healthcare industry and more specifically, on the field of nursing and nursing education. It concentrates on clinical facilitators and the competencies they require to perform their duties competently.

The central problem that this paper deals with is defining the competencies required by clinical facilitators. Stakeholders in the healthcare industry are quick to acknowledge the need for clinical facilitators, but seldom give them the support and/or recognition they need to be effective. As a result, there is a high turnover of staff in these positions. Minimum competency requirements have yet to be defined and there is a general lack of standardisation of practice, all of which have led to dissatisfaction at the level of the hospital and among training providers, staff and students.

## **NURSING SHORTAGE**

Booth (2002) asserts that the global nursing shortage in both practice and education is multifaceted. Fewer people are choosing to enter the profession, women are increasingly being attracted to other professions, the market demand for nurses has increased dramatically, the nursing

profession is aging and nurses are retiring in large numbers. This is also true of the South African nursing profession. Woolard, Kneebone and Lee quote statistics issued by the Human Sciences Research Council HRD Review (2003) and state that 8.3% (12 025) of nurses will be retiring between 2001 and 2006, that an uncalculated number will succumb to HIV/Aids and that 35 461 registered nurses (RNs) will be required to meet new and replacement demand during this period.

The demand for nurses is increasing. This can be attributed to an aging population which suffers from more chronic diseases and which requires more pharmaceuticals, equipment, supplies and healthcare workers. These points are supported by the finding that the RN labour supply appears to be fairly unresponsive to wage changes. As a result, even large wage increases are unlikely to successfully tackle current and predicted nurse shortages. Shields (2004) believes that this finding points to the importance of non-monetary elements, such as the creation of a positive environment that leads to improved training and promotion opportunities, better workload management and improved relations with colleagues.

The impact this has on the quality of care, adherence to policies and procedures, and clinical governance cannot be underestimated. Although the factors influencing current nursing skills shortages are multifactorial and complex, it is possible to identify systemic issues and address these

by, for example, increasing the number of candidates on formal nursing education programmes and training other nursing staff.

## **EDUCATION AND TRAINING**

All nursing education in South Africa falls directly under the regulatory body, the South African Nursing Council (hereinafter referred to as the SANC). Currently, the SANC is also the Education and Training Quality Assurance (ETQA) body for nursing education and training programmes which are governed by various regulations relating to minimum requirements for registration at different occupational levels.

Nursing Education Institutions (NEIs) must meet certain SANC requirements and the requirements of section 45(1) of the Nursing Act, 1978 (Act No. 50/1978 as amended) before being accredited as a clinical facility, before being able to offer education programmes and before being able to place students.

Private sector nursing education institutions function under the direct auspices of the SANC. In other words, their basic nursing programmes must be accredited so that student nurses may register as registered nurses. This implies that all student nurses write national examinations which are set and marked by SANC. This is, however, in contravention of

the SAQA Act, as the Act states that the function of ETQA and those of the examining body must be separated. The SANC is in the process of addressing this issue, but may need to wait until the regulations of the new Nursing Act (Act No. 33 of 2005) have been passed.

All basic and postgraduate additional qualifications can only be offered by a nursing school if it is a department or sub-department of nursing at a university; alternatively, the nursing school must have a liaison agreement with a university's nursing department which takes primary responsibility for the quality assurance of the programmes.

## **CLINICAL FACILITATORS**

The workplace-based clinical facilitation of students has to be carried out by an appropriately qualified registered nurse (hereinafter referred to as an RN). This is currently carried out by clinical facilitators (CFs), who are also registered nurses (RNs), who fulfil this role usually because they have good technical nursing skills and are highly competent. It is important to note that South Africa offers no formally-recognised post-basic or postgraduate qualifications for this position.

Competent clinical facilitators must have a range of skills, knowledge and understanding which can be applied in a variety of contexts. The role of the clinical facilitator is poorly defined, as is the contribution a

clinical facilitator can make. Much, therefore, needs to be done to raise awareness of their services in the healthcare sector.

## **MOTIVATION FOR THE STUDY**

The motivation for doing this research was to make a practical contribution to the nursing fraternity and to clinical facilitators, specifically in terms of identifying and clarifying the competencies required by clinical facilitators and in terms of recognising the value of this role.

## **AIM OF THE RESEARCH**

In light of the points made above, the main aim of this research was to define the prioritised importance of competencies that are essential for a clinical facilitator (CF) working in an acute care, private hospital setting, using a multiplicity of nurses from different designations so as to view the competencies required from diverse angles. These core competencies, which are the minimum requirements for excellence for anyone wishing to do clinical facilitation of nursing staff and students, are seen as fundamental for future job analyses.

The research was further designed to evaluate the gaps between prioritised competencies and the perceived current level of competencies of clinical facilitators. This will help to establish specific training



interventions if required and to minimise the perception that there are many inconsistencies and variations in the competencies of clinical facilitators.

## **ADDITIONAL BENEFITS**

An investigation of the competencies required of clinical facilitators could also provide other benefits, such as

- an outline for the recruitment and selection of clinical facilitators
- a performance management structure based on work standards that have been identified by means of a work analysis
- a framework for the evaluation of key clinical facilitation areas
- support for innovative approaches to clinical facilitation services
- enhanced cooperation between healthcare providers and education institutions, as well as the possible development of seminars and workshops for continuing professional development

## **ASSUMPTIONS**

The following assumption was made to improve the validity of the results, namely, that any nurse currently undergoing or who has undergone basic nursing training will have been exposed to clinical facilitation in some

form during their training and will, therefore, have knowledge and experience of what can be expected in terms of competencies required of clinical facilitators in hospital settings.

## **LIMITATIONS AND DELIMITATIONS**

This research looked at identifying the prioritised competencies of clinical facilitators in a private sector healthcare group in South Africa over a period of approximately five months. Competencies were reviewed so that the focus was on tasks and cross-functional skills required for the job rather than on a static job analysis, job classification or job family (Nel, Van Dyk, Haasbroek, Schultz, Sono and Werner, 2004).

The work did not consider the inputs and views of all clinical facilitators and related practitioners in all healthcare settings, because their views would vary depending on the level of work being done, the clinical situation and the resources that may or may not have been available.

The aim of this research was not to appraise public or primary healthcare settings. Rather, the work looked at the discipline of nursing and, specifically, at the competencies of people whose primary job function is that of clinical facilitation (as opposed to those where clinical facilitation forms only one element of their overall job).

## **STRUCTURE OF CHAPTER OVERVIEWS**

The first chapter has introduced the rationale for conducting the research. Chapter 2 reviewed the academic knowledge base of the literature that contributed to informing which competencies for clinical facilitators should be considered. It allowed for the generation of the research questions of chapter 3 that were then researched, analysed and interpreted in chapters 5, 6 and 7 respectively.

The methodology employed to operationalise the research is described in chapter 4. The results of the data analysis are clustered around the research questions and reported in chapter 5. The interpretations of the results are detailed in chapter 6 and the conclusions from the research are detailed in chapter 7. These chapters are followed by the reference list and primary and secondary data are attached as appendices at the end of the report.

## CHAPTER 2: THEORY AND LITERATURE REVIEW

### INTRODUCTION

Being a technical expert does not mean you know how to transfer that knowledge to other people (Meyer, 2004). The competencies needed to be a dynamic and progressive clinical facilitator will lead to education and training achieving maximum impact and being stimulating, fun and meaningful. The need to adapt current models of care and education to the demands and realities of the present-day and the continually-evolving healthcare environment are paramount. Fessey (2002) stresses that nurse educators must consider and attend to these aspects within the complexity of the student learning environment.

### CONTEXT AND THEORY

Detailed literature has been reviewed in the following main areas:

- Informal learning
- Learning in the workplace
- Facilitation skills
- Competence and competency
  - Definition

- Identification
- Role definition
  - Job analysis
- Workplace-based learning
  - Development of workplace competencies
  - Practice-based teaching
  - Problem-based learning
  - Patient-focused practice
- Theory-practice gap
- Theory-practice similarities

## **INFORMAL LEARNING**

Many people still equate learning with formal education and training, and assume that working and learning are two quite separate activities that never overlap. Eraut (2004) argues, however, that most workplace learning occurs on the job rather than off the job.

Informal learning combines learning from other people and learning from personal experience. It is largely invisible, because it is often taken for granted or not recognised as learning; it may also be tacit or recognised as part of someone's general capability rather than something that has been learned.

Eraut (2004) furthermore argues that the distinguishing feature of an expert is not how much he or she knows, but rather his or her ability to use his or her knowledge. In other words, an expert's knowledge is organised implicitly as a result of considerable experience for rapid, efficient and effective use.

Relationships play a critical role in workplace learning and the emotional dimension of professional work is much more significant than normally recognised. This compounds the complexity around the transfer of knowledge from education to the workplace setting which typically involves five interrelated stages:

- 1 The extraction of potentially relevant knowledge.
- 2 Understanding the new situation.
- 3 Recognising what level of knowledge and skills are relevant.
- 4 Transforming knowledge and skills to fit the new situation.
- 5 Integrating the new knowledge and skills with other knowledge and skills to think/act/communicate in the new situation.

## **LEARNING IN THE WORKPLACE**

Eraut (2004) looks at complementary and interrelated factors which affect learning directly or indirectly in the workplace, and concludes that learning is impacted significantly by confidence. He states that this confidence arises from being able to successfully meet the challenges in one's work, while the

confidence to take on such challenges depends on the extent to which learners feel supported in their endeavours. He adds that in order for a person to seek out or respond to a challenge there must be sufficient support otherwise confidence declines and with it the motivation to learn. There is, therefore, a triangular relationship between challenge, support and confidence. Additionally, commitment is generated through the social inclusion in teams and by appreciating the value of the work for clients and for the workers themselves.

According to Eraut (2004), the allocation and structuring of work is seen as important in terms of people's progress, because it affects the challenge of the work; the extent to which it was individual or collaborative; the opportunities for meeting, observing and working alongside people who have expertise; and for forming relationships that might provide feedback, support and advice.

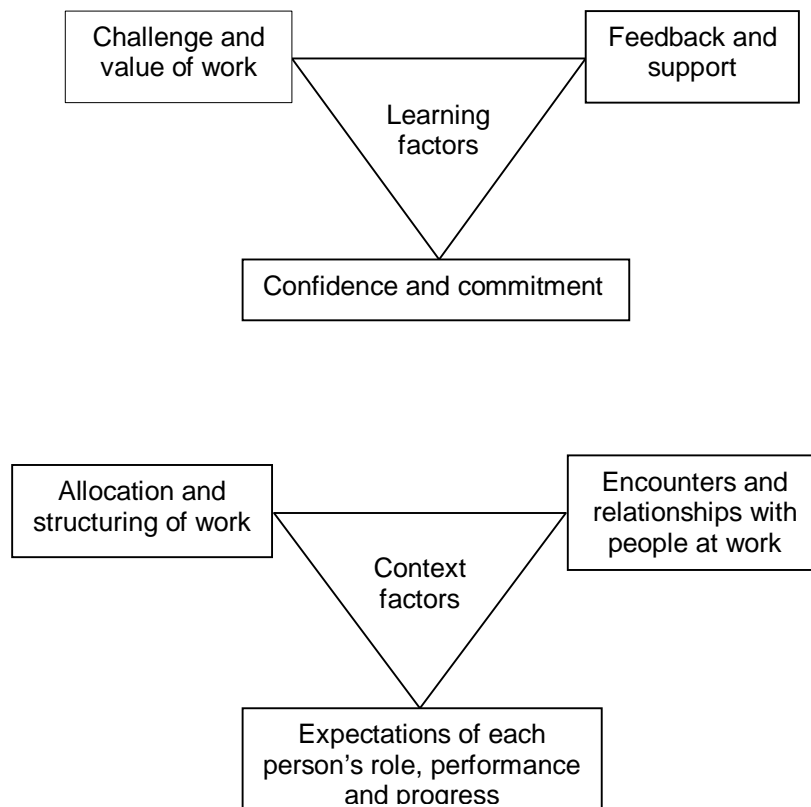
This is illustrated in figure 1. The triangles depict the work itself on the left apex, the right apex reflects the relationships at work, while the bottom apex relates to the individual worker.

Fessey (2002) found that technical work requires, amongst other things, dexterity and confidence, along with fluency and deliberation. She recognised that problem solving is a dominant aspect of nursing practice; unexpected situations may, for example, cause some deviation from the

anticipated routine course of events. This requires the capability to recognise the boundaries between the normal manifestations and departures from it. It was found that if a nurse can do this effectively, she will be "consulted" as an expert. Nurses whose knowledge exceeds capability are generally consulted and receive acknowledgement.

Self-confidence is a component which must be developed in order to gain self-control, recognise legitimate boundaries and be able to handle conflict situations. Novice nurses often find it difficult to find connections between old and new knowledge/experiences and may, consequently, suspend their previously contextually-embedded knowledge so as to cope in the new setting.

**Figure 1: Factors affecting learning in the workplace (Eraut, 2004)**

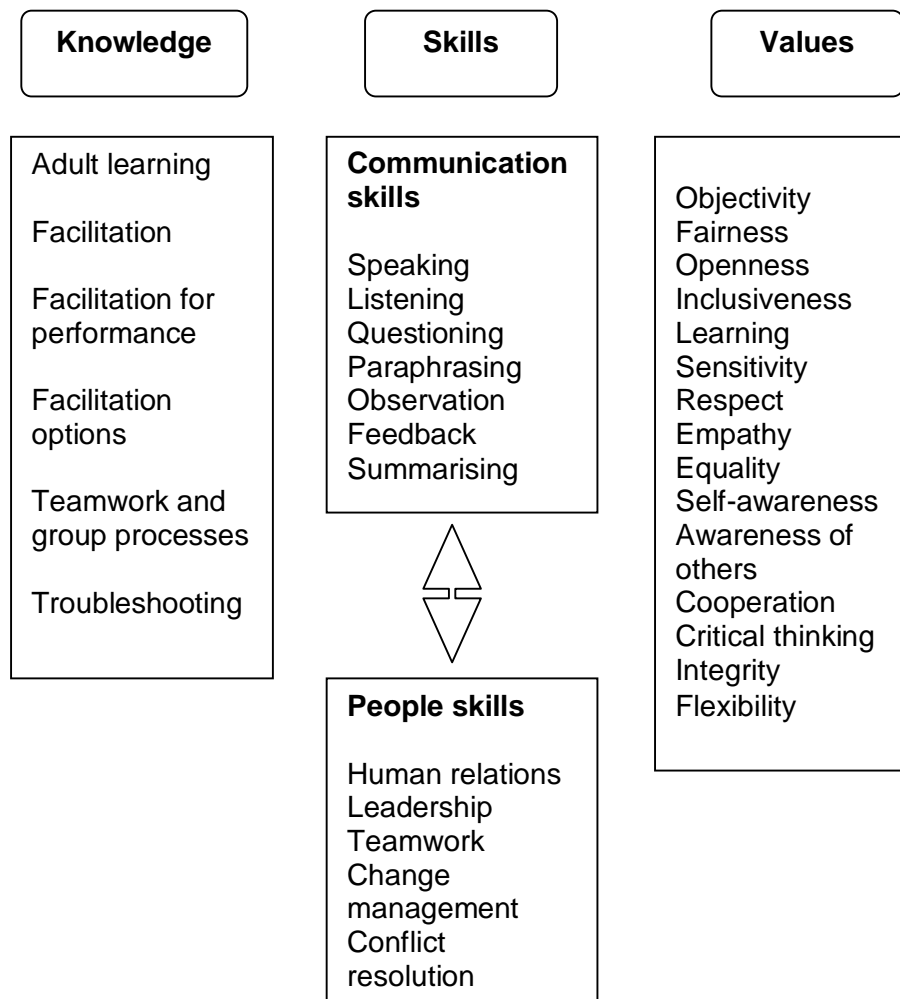




## FACILITATION SKILLS

Drawing on the broader definition of facilitation as described by Meyer (2004), where he describes the facilitation skills required to be an effective facilitator, figure 2 gives an outline of some of the skills that can be learned and practised to improve facilitation skills.

**Figure 2: Knowledge, skills and values required for facilitation (Meyer, 2004)**



Facilitation knowledge includes both the theory and practice of facilitation, that is, how the facilitation process works, what the facilitation framework of the phases and related elements are, how the role of facilitation can be used to improve performance, the various methods that can be applied to achieve this, as well as the different options for facilitation and how to prevent or deal with problems as they arise. Meyer (2004) emphasises the fact that an understanding of the theory and the principles of adult learning forms the core of the knowledge base of a facilitator.

## **COMPETENCE AND COMPETENCY**

Meyer (1996) refers to the fact that competence will become the "currency of competitiveness" of individuals, organisations and of nations, and that in a world characterised by rapid and continuous change, it must become a conscious component of individual, organisational and national strategy.

The definition of competency which can be applied to a variety of contexts or situations, as given by Meyer (1996), is offered as it is simple to understand and apply in a working situation. "Competency is the integration of knowledge, skill and value orientation, demonstrated to a defined standard in a specific context."

Knowledge is seen as "what we know, understand and think". Skills are defined as the "ability to do" on a cognitive and affective level, while value orientation is seen to underpin both these components. The research will consider individual competency within a work-related context.

In contrast to this positive view, Watson (2002) regards the issue of clinical competence as a controversial one. He argues that the concept of competence assessment arose in opposition to intelligence testing. Instead of testing general cognitive ability, tests for specific aspects of people's abilities have been introduced where they are matched to jobs they undertake. This has had a negative impact on nursing and on nursing education, as the perception has been created that nurses need only learn a series of tasks which address the basic needs of patients. The issues of higher levels of thinking and decision making being necessary to underpin safe and effective practice appear to be ignored. This idea is often expressed in the South African environment as well.

It is clear, therefore, that the concept of clinical competence needs to be more rigorously defined.

## **ROLE DEFINITION**

With the shortages in the nursing workforce, it has become increasingly important to maximise existing resources in nursing education and clinical practice.

No job exists in a vacuum; it exists as part of the total organisational system. The stability of any job, from what it is presently to what it may be in the future, is based on change. In other words, factors such as the macro environment and strategic redirection need to be constantly taken into account.

Anecdotal evidence from forum meetings with key stakeholders in acute care hospitals state that the very fact that there are large variations in the level at which CFs function, the competencies and skills they have, the contribution they make to the hospital and the general role they play all contribute to how they are perceived in the hospital and whether or not they are accepted as adding value.

Brady, Leuner, Bellack, Loquist, Cipriano and O'Neil (2001) argue that many of the skills and attributes of registered nurse are not adequately used or valued by the healthcare system, because the profession is fragmented and poorly differentiated and articulated. The researcher agrees and asserts that knowledge and learning must be seen as a strategic asset of an organisation.

## **JOB ANALYSIS**

Nel *et al.* (2004) suggest that one of the ways to address this is to do a job analysis. Job analysis is seen as a systematic process whereby the job is broken down into its component parts and then arranged in a hierarchy of work activities (from element to task to duty to responsibility to position to job to occupation and to job family).

The terms "job analysis", "job review" and "job classification" are often used interchangeably in that the skills, duties, knowledge and experience required for various jobs are essential for making decisions in the workplace (Nel *et al.* 2004).

According to Grobler, Wörnich, Carrell, Elbert and Hatfield (2006), a job analysis investigates the employee's level of decision making within a job category, the skills he or she needs to do a job adequately, the autonomy of the job in question and the mental effort required to perform the job. It includes examining the working conditions of the job as well as the ergonomic factors.

Nel *et al.* (2004) propose that a job analysis can be done using either a job-orientated method or a worker-orientated method. It can be done as a "work" analysis, which focuses on the tasks and cross-functional skills

of the worker as required by the NQF, rather than as a "job" analysis where the focus is on static jobs.

The role of the CF falls into the category of a work analysis as it has evolved to reflect the new reality of the hospital environment with its multiplicity of management issues. It is, therefore, imperative to shift the perception of the role of the CF from one of cost to one of value; in other words, the CF is a valued partner who supports education and hospital management teams in their efforts to implement and maintain best practices, and to raise the standard and quality of nursing care provided in the hospital wards.

## **WORKPLACE-BASED LEARNING**

Mercer and Dal Poz (2006) argue in the World Health Report for the integration of the following components to ensure the effectiveness of workplace-based learning:

### **Develop relevant workplace competencies**

New educational trends aim to improve the health of the public by implementing the idea that training methods ensure the development of relevant workplace competencies. This will yield greater

improvements in skills, attitudes and behaviours of health professionals than programmes that do not employ this strategy.

### **Practice-based teaching**

Practice-based teaching aims to bridge the gap between academia and practice and to benefit students, schools, agencies and communities. It involves developing critical thinking and problem-solving skills. It is also interdisciplinary, multidisciplinary and multidimensional. It aims to develop learning partnerships among academic staff, practitioners and students; to educate teachers, practitioners and researchers; and to incorporate experiential education, including critical reflection, observation and learning by doing.

### **Problem-based learning**

Problem-based learning complements problem-based teaching through identifying the problem, exploring pre-existing knowledge, identifying learning issues and objectives, self-study and group learning, the re-evaluation and application of new knowledge to the problem, and the assessment of and reflection on the learning.

## **Patient-focused practice**

Patient-focused practice integrates teaching and learning with clinical practice. It aims to share experiences of illness, disease and recovery, and to understand varying needs for care. The focus is on how the different service providers work together to meet the needs of patients.

## **THEORY – PRACTICE GAP**

The theory-practice gap is not only experienced in nursing. There will be varying degrees of the gap in any job where theory is taught in a university or college-type environment and where the application of the theory occurs as workplace-based experiential learning.

Uneasy tensions exist between theory and practice in professional education due to the trade-off that has to be made between the costs of education and the overall profit motives of the organisation, especially where education and training are not the explicit prime purpose of the organisation.

Higgs and McAlister (2005) looked at the field of speech therapy and discussed the fact that clinical educators often have to juggle the needs of their students and their patients against the availability of time. The



facilitators also assume legal, ethical and moral responsibility for their clients, which requires them to adopt a number of roles including that of educator, counsellor, mentor, role model and evaluator.

Kelly, Simpson and Brown (2002) found that ward teaching is perceived by RNs and ward managers as the one factor most likely to positively influence the development of clinical practice. The reason for this is that there is a definite perception that classroom-based lecturers have little or no influence on practice or practice development.

They further identified a number of issues which clinical practice facilitators (hereinafter referred to as CPFs) have to deal with on a regular basis. These include low staffing levels in certain areas, a lack of support for the role of professional/practice development, insufficient time to develop teaching resources in clinical areas, difficulties in providing time for clinical supervision and reflection, and low morale among nurses in some areas. Despite this, though, senior nurses appear to expect the following of CFs: to help junior staff members develop their clinical skills, to teach on a regular basis, and to facilitate individual support and supervision.

One of the simplest ways of dealing with the much talked-about theory-practice gap was applied in an action research approach as outlined by Kelly *et al.* (2002). These authors sought to support the transition from student nurse to RN at the point of care delivery through a goal orientated,

dynamic process which would develop their professional competence and knowledge while coping with workload demands.

Some of the key issues CPFs have to deal include developing effective working relationships with unit managers, coping with other people's expectations, developing teaching programmes which develop clinical skills, finding the most appropriate ways to support students, establishing communication channels and establishing a profile for the job within the hospital. These issues are almost identically mirrored in the South African acute care setting.

## **THEORY – PRACTICE SIMILARITIES**

Theory-practice gaps are managed in different ways, but the perception is that there is a significant relationship between education and work and between off-the-job and on-the-job learning. According to Hodkinson (2005), the link between education and workplace learning in the United Kingdom is seen as the key to employability and social inclusion. He holds the view that a linear relationship exists between education and work, that is, that education exists as preparation for and progression to the other.

The relationship between college learning and workplace learning is often made more problematic that it needs to be. It is important to understand that there are differences between college learning and workplace learning, but there are also a number of similarities that are worth noting:

- Learning is related to particular practices found at the college and the hospital.
- Learning entails attributes of both formality and informality.
- Individual participation may be full time or part time.
- That which is learned can be effective or ineffective, ethical or unethical, and more or less valuable.
- Learners and lecturers/work supervisors influence and are influenced by the culture, values and practices of the site where they participate.
- There are considerable inequalities in access to and outcomes of learning.
- The process and practices of learning may lead to success and a sense of belonging for some, and to failure and a sense of rejection for others.
- Social and organisational inequalities have a significant impact on learning.
- Learning can be usefully understood at different scales, namely, the processes and structures of the wider learning field, the processes and structures of the parent organisation, the practices of the local learning/working site, and the dispositions and actions of the individual learner.
- Learning and participation at all levels are influenced by and relate to wider issues of social and economic inequality in society and the field of power.

## SUMMARY AND CONCLUSION TO LITERATURE REVIEW

The literature has shown support for a competency-based analysis for clinical facilitators. Technical expertise needs to be learned and practised before one can reach excellence as a facilitator. The literature shows that greater clarity is needed in terms of what is meant by competence, competency, role definition and job analysis. It is also important to note that these are not static concepts, but rather concepts that are constantly evolving. Clinical facilitators play an important role in managing perceptions and the theory-practice gaps. The theory-practice similarities could be used as a point of commonality to start to bridge any theory-practice gaps.

The role of differentiating job descriptions by competency levels offers a cost-effective means to promote job satisfaction and improve outcomes, as the individual CF is neither under-prepared or over-prepared for the role. Workplace learning interventions need to be accompanied by a planned strategy that encourages collaboration on real workplace issues and problems that will have immediate benefit to staff and the organisation (Brady *et al.* 2001).

This chapter has provided a summary of the literature on clinical facilitation and has led to the formulation of research questions which may be answered by the research method as outlined in chapter four.

## **CHAPTER 3: RESEARCH QUESTIONS**

The literature review led to the formulation of the following research questions:

### **RESEARCH QUESTION 1**

What are the core competencies required for clinical facilitators?

### **RESEARCH QUESTION 2**

Which are the most important competencies?

### **RESEARCH QUESTION 3**

What evidence is there that these core competencies exist?

### **RESEARCH QUESTION 4**

What does the gap analysis reveal?

## RESEARCH QUESTION 5

Do the competencies differ between the groups defined by the designation of the respondent?

## **CHAPTER 4: RESEARCH METHODOLOGY**

### **INTRODUCTION**

The purpose of this chapter is to report on how the constructs in the research questions have been operationalised in the present research. The details of the research methods applied are reported in the following sections.

### **METHOD**

Exploratory research was conducted in an attempt to clarify what the competencies of a clinical facilitator are.

A sample survey technique (i.e. a questionnaire) was selected and utilised in phases to collect primary data. As detailed by Zikmund (2003), this research method allows data to be gathered specifically for the research project at hand and provides an inexpensive, efficient and accurate means of assessing information about clinical facilitators as a populace.

Although the quantification of information was the main component of the survey, a qualitative component was also included primarily to describe the demographic data.

The first phase surveyed literature to obtain a list of core competencies most accepted and applicable to clinical facilitators in hospital settings. The second phase pre-tested the questionnaire (pilot) with five people to improve the rigor and general clarity of the tool. The last phase included the collection, analysis and interpretation of the data. Conclusions were also reached during this phase of the study.

## **POPULATION**

The population for this study was registered nurses and more specifically unit managers and hospital nursing managers who have direct or indirect working relationships with clinical facilitators. Nurse educators were selected, as the researcher believed they would have a clear understanding of how to deal with students in a hospital setting. Clinical facilitators presently in the position were also included as they form the fundamental construct of the study.

Senior basic nursing students were also included in the population for this study. These students included third-year and fourth-year students (bridging course first-year learners and bridging course second-year learners) with at least two years exposure to clinical facilitation, as well as post-basic students doing an additional qualification in a specialist field.



First and second-year basic nursing students were excluded, as the researcher felt that they lacked experience in the level of work required of clinical facilitators.

## **SAMPLE**

The population sample comprised a convenience sample of registered nurses and students identified from the target population. Members of the sample population needed to either work directly with or be directly exposed to a CF in an education setting.

A non-probability, judgment/purposive sample was used where the nurses were selected as a quota per strata (defined below). The researcher recognises that by using this type of sample, that the projection and generalisation of the results obtained beyond this sample will not be appropriate (Zikmund, 2003).

The sampling frame was selected from the three large geographical regions, namely, Gauteng North/East, Gauteng South/West and KwaZulu-Natal. These areas were identified as the regions with the highest number of acute care private sector hospitals and the highest concentration of RNs and students.

A cross-sectional sample size was identified and separated into subgroups as follows:

Basic students (3<sup>rd</sup> and 4<sup>th</sup> year students) = (Bridging course first-year learners and Bridging course second-year learners) x 30

Clinical facilitators currently in the position x 50

Educators x 10

Nursing managers x 10

Post-basic students x 20

Unit managers x 30

## **DATA COLLECTION INSTRUMENT**

A research questionnaire was compiled using an Excel spreadsheet. This questionnaire included open-ended questions to probe for competency requirements specific to clinical facilitators in the acute care private hospital setting in the South African context.

## **QUESTIONNAIRE CONSTRUCTION**

A preliminary research approach was applied, which made use of a non-standardised schedule for interviews. Five randomly-selected registered nurses were requested to complete the draft questionnaire. The data obtained from these responses was used to further support the literature findings of competencies required of facilitators. These questionnaires

were self-administered and returned to the researcher. The researcher then contacted each respondent and conducted a telephonic interview with the respondent to ensure that the questions were unambiguous. Minor structural changes were made and all open-ended inputs were analysed. Themes of competencies were identified and included in the final questionnaire.

The final questionnaire included a covering letter to the respondents which invited them to participate in the identification and clarification of competencies required of clinical facilitators. The respondents were invited to complete a separate "report request form" to be returned separately from the questionnaire if they wished to receive a summary of the research findings.

The questionnaire was divided into the following sections:

### **Section 1**

The respondents were required to provide biographical data, such as geographical region, designation, number of years in current position, gender, and whether or not they have an additional post-basic or postgraduate qualification in nursing education.

The questionnaire contained three unstructured questions in the biographical section. Only the clinical facilitators were

required to answer these questions. They were required to identify, using the list provided, where they spent the majority of their time and then provide a percentage allocation for each selection (the percentage allocations needed to make up a hundred percent). Further open-ended questions were asked and the clinical facilitators were required to list what they felt their main duties and responsibilities were. They were also required to provide a percentage allocation for each duty and responsibility.

## **Section 2**

In section 2, part 1, the respondents were required to rate each competency listed and to indicate how evident that competency is in the profession. A separate five-point Likert scale graded from "very high" to "very low" so that respondents could identify the possible "gap" between the level at which a competency was required (importance) and the level at which it was actually perceived to occur (evidence in the profession) was put in tabular format. The Likert scale, which was easily understood by the respondents, was used to measure opinions, beliefs and attitudes. Section 2, part 3 of the questionnaire required the respondents to indicate which clinical

facilitation competencies they felt would be the same or different in general wards versus specialist units.

Respondents were given the option of including any additional competencies which they believed to be relevant to the role of clinical facilitation.

## **ETHICS**

As the questionnaires were completed anonymously, the collection of data and the presentation of this report cannot harm the respondents or their employing organisations in any way.

## **DATA COLLECTION**

The final questionnaire was distributed using parallel methods: The questionnaire was e-mailed to those who had access to e-mail facilities (e.g. nursing managers, unit managers and educators), while the central venue method was used for the other respondents (e.g. current CFs, basic and post-basic students) to try and increase response rates.

The questionnaires distributed via e-mail were sent via the regional nursing manager's office to the hospital level nursing managers and unit managers. A reminder e-mail was sent out three weeks later; the

respondents were requested to reply within a maximum period of four weeks. The questionnaires returned via e-mailed were forwarded to the researcher either directly or via the regional office.

The central venue method was utilised during this same four-week period. A facilitator, who had been briefed by the researcher, facilitated the distribution and collection of questionnaires and the return of the questionnaires to the researcher on the same day that they were administered.

This method allowed the researcher to broadly identify the geographic region and designation of the respondents without being able to identify the individual at all. This provided for a somewhat more objective means of analysis with a high level of anonymity. This, however, prevented the researcher from being able to determine exactly how many nurses actually received the questionnaire and how many submitted a return for analysis.

## **DATA ANALYSIS**

Responses were copied from each questionnaire into a single Microsoft Excel spreadsheet and analysed using a Number Crunching Statistical Software (NCSS) package. The SAS Enterprise Guide package was used for the hypothesis testing and factor analysis.

### **Demographic profile**

An analysis of the nominal demographic data provided in section one of the questionnaire was done using descriptive statistics to summarise and explain the sample.

### **Importance ratings**

Descriptive, quantitative statistics of the mean values and standard deviations were calculated of the importance ratings of the competencies. These ratings were sorted in descending order so that it was possible to see which competencies were considered to be the most important and which were considered to be the least important.

### **Evidence ratings**

The same statistics of the mean values and standard deviations were calculated of the evidence ratings of the competencies. These ratings were sorted in descending order so that it was possible to see which competencies were considered to be the most evident to the least evident competencies seen in practice.

## **Importance and evidence means**

The average evidence and importance means were plotted on a scatter plot with labels for each competency showing two rating scales plotted in four quadrants on a two-dimensional table.

## **SAME VERSUS DIFFERENT RATINGS**

In an effort to further analyse whether or not respondents found the competencies to be the same or different for CFs working in general wards versus CFs working in specialist units, two sample t-tests were performed for each competency.

The null hypothesis suggested that the mean importance rating of group 1 (those that considered the competencies to be the same in specialty and general nursing units) was no different to the mean importance rating of group 2 (those that considered the competencies to be different in specialty and general nursing units).

In cases where the null hypothesis could not be rejected, it implied that on average, the two groups agreed on how important the competency was.



The alternative hypothesis implied that there was a difference in how important these two groups considered the particular competency in question to be.

## **GAP ANALYSIS**

A gap analysis was done to find evidence that the competencies exist. A gap variable was calculated for each competency by subtracting the evidence rating from the importance rating for each competency.

One sample t-test was performed for each competency, where the null hypothesis suggested that there was no gap between the mean importance and the mean evidence rating (i.e. that the mean of the gap variable is zero). The alternative hypothesis implied that there was a gap and that a training need therefore existed for the particular competency.

Competencies were sorted in descending order according to the level of significance, thus indicating for which competencies the greatest gap existed.

## ANOVA

It was further thought necessary to compare the competencies considered important by the seven groups identified by their designation: (1) clinical facilitators; (2) unit managers; (3) nursing managers; (4) educators; (5) bridging course first-year learners; (6) bridging course second-year learners; and (7) post-basic learners.

This was done by way of a one-way analysis of variance (ANOVA) that was performed for each competency so as to be able to test the difference between three or more populations.

The null hypothesis suggested that there was no difference between the mean importance ratings of the seven groups (the number of categories within the factor of interest). The alternative hypothesis implied that the means of at least two of the groups differed for the particular competency in question.

In cases where the ANOVA was significant, multiple comparison tests were done in order to detect where the differences lay.

## FACTOR ANALYSIS

A factor analysis was performed to answer the question of what the core competencies of clinical facilitators are. As there were a number of variables that needed to be encapsulated into a few summarising variables, a dimension reduction technique was applied. There are two main methods that may be applied, namely, the principal component analysis and factor analysis.

The  $a_{ij}$  are called the factor loadings. It is assumed that the (common) factors are independent of each other and of the specific (individual) factors. The  $a_{ij}$  are estimated using the scores each of the  $n$  respondents obtained for each of the  $p$  variables. The aim was to reduce, for example, 30 variables to 3 or 4 factors.

In order to determine what each factor consists of, the loadings were examined to observe which of the loadings were "large" relative to the others. These defined the variables that made up the factor.

The issue of whether to use the raw data or standardised data is also of great importance in factor analysis. If it is significant that one variable

has a smaller spread (variance) than the other variables, then the covariance matrix should be used; otherwise, the correlation matrix should be used. The covariance matrix analyses the set of questions where all the scores are on the same scale, so that the fact that one question has lower variance implies that the respondents do not differ much in their answers to that question.

The covariance matrix was used in this analysis.

Orthogonal rotation methods are generally used. This results in factors that are uncorrelated with each other. The most common method used is "varimax" rotation. This attempts to "rotate" the factors so as to get as many large loadings (that is, large  $a_{ij}'s$ ) and as many small loadings as possible. The ideal is to maximise the variance of the loadings.

Orthogonal varimax rotation was used in this analysis.

The method of factor analysis chosen was common factor analysis (and not principal component analysis), since it is recommended that this method be used when the primary concern is to identify the underlying dimensions in the data (Galpin, 2002).

A number of procedures could be used to determine the number of factors to extract. The factor solution could be chosen based on the

percentage of the variability explained, where it is recommended that the factors extracted should account for at least 60% of the variance. All the eigenvalues that are greater than one could be looked at --- one of the suggested rules for choice of number of factors. (The motivation for that is that if all the variables were equally important, all the eigenvalues would be one, as each variable would explain an equal amount of the variability. Thus eigenvalues above one explain an "above average" amount of variability.)

Another suggestion is that the eigenvalues be plotted versus the number of the eigenvalue (plotting the largest eigenvalue against 1, the second largest against 2, etc). The scree plot was examined and took as the number of factors that number where the plot formed an elbow; in other words, it stopped decreasing rapidly and started decreasing more slowly.

The final step in factor analysis involved the determination that the model fit was good.

The research results are presented in the next chapter.

## **CHAPTER 5: RESEARCH RESULTS**

This chapter begins with the responses received. The results are discussed in the same format as the questionnaire. Section one deals with the demographic profile of the respondents. Section two covers the findings from the frequency tables. The data pertaining to each of the research questions is then discussed.

### **RESPONSES TO QUESTIONNAIRE**

A total of 234 questionnaire responses were returned during the four week period of data collection. Of these, 212 (90.6%) were eligible for analysis. A planned total of 150 returns were initially proposed, but a final number of 212 were included in the analysis. The current clinical facilitator group comprised 40 (18.9%) of the total number of returns.

See figure 3 below.

**Figure 3: Number planned versus number of usable responses returned**

<b>Designation</b>	<b>Planned number of respondents</b>	<b>Actual number of responses returned and usable</b>	<b>Percentage of the total number of responses</b>
1. Current clinical facilitator	50	40	18.9%
2. Unit manager	30	53	25%
3. Nursing manager	10	19	8.9%
4. Educator	10	19	8.9%
5. Bridging course first-year learner	15	28	13.2%
6. Bridging course second-year learner	15	33	15.5%
7. Post-basic learner	20	20	9.4%
<b>TOTAL</b>	<b>150</b>	<b>212</b>	<b>100%</b>

Data analysis was done by an independent statistician who used the Number Crunching Statistical Software (NCSS) package for some of the descriptive statistics. The SAS Enterprise Guide package was used for the hypothesis testing and factor analysis.

### **MISSING VALUES**

Missing values resulting in gaps in responses are unavoidable. There was no practical way of getting respondents to fill in any gaps, as they responded anonymously to the questionnaire. Omitted values were found

to be minor and the researcher opted to exclude all the missing values in the analysis schedule.

## SECTION ONE

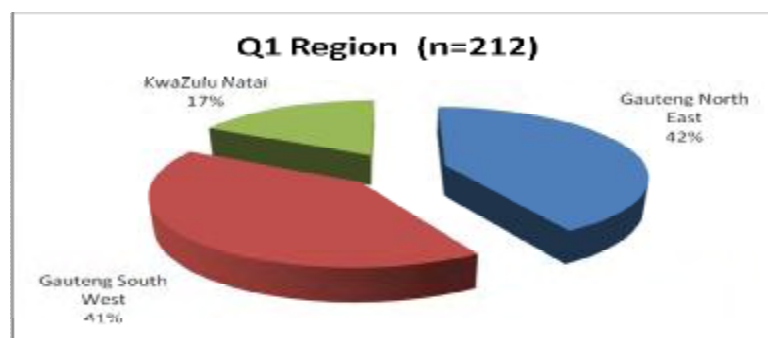
### DEMOGRAPHIC PROFILE OF RESPONDENTS

An analysis of the nominal demographic profiles of the respondents was done using descriptive statistics to summarise and describe the sample.

#### Region

Figure 4 shows the percentage of respondents per geographical region with a reasonable spread of representation achieved.

**Figure 4: Respondents per geographical region**

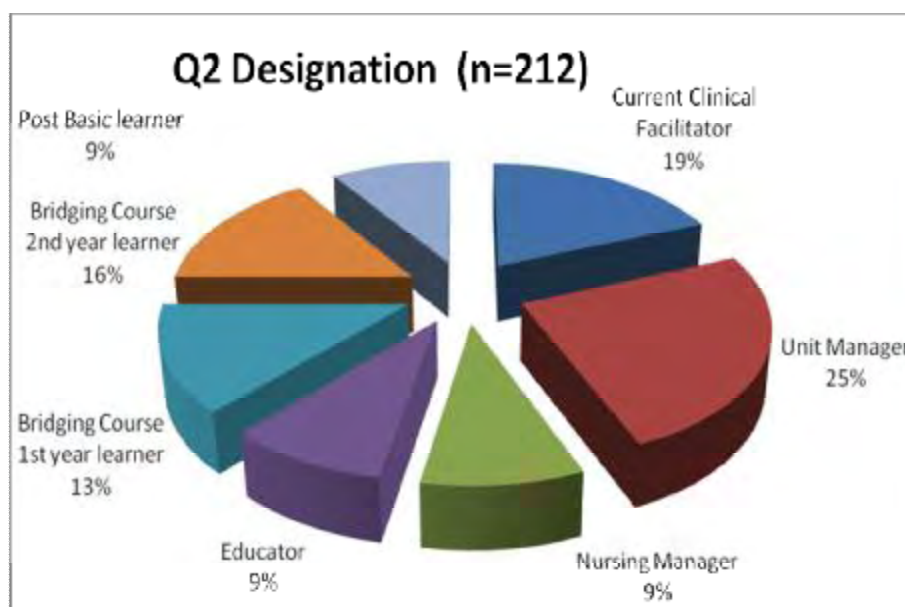




## Designation

Figure 5 shows the percentage per designation of the respondents. The bridging course (first and second-year) students and the post-basic students combined made up 38% of the total sample with nursing and unit managers constituting a total of 34%.

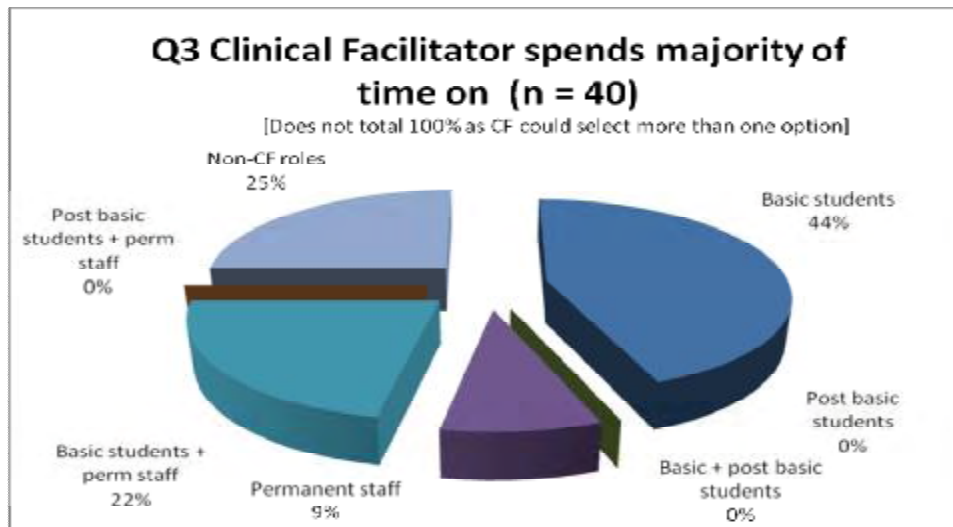
**Figure 5: Designation of the respondents**



## Clinical Facilitation time spent

Figure 6 shows the percentage of time the current clinical facilitators indicated that they spend the majority of their time on. The largest percentages (44%) of CFs spend time on basic students, while 25% stated that they spend time on non-clinical facilitation roles.

**Figure 6: Clinical facilitator - majority of time spent**



**Average percentage time spent on Activity**

Table 1 below shows the percentage of time the current clinical facilitators stated they spend on the activities identified in Figure 6. Of the 25% who responded that they spend time on non-CF roles, this accounted for 9% of their time. The majority of time (59%) was spent on basic students.

**Table 1: Average percentage of time clinical facilitator spends on activity**

<b>Q4 Average percentage of time clinical facilitator spends on activity</b>	
<b>Activity</b>	<b>Average % of time spent on activity</b>
Basic students	59
Post-basic students	3
Basic + post-basic students	5
Permanent staff	3
Basic std + perm staff	17
Post basic std + perm staff	4
Non-CF roles	9

## Main duties and responsibilities carried out in Clinical Facilitation

Table 2 represents 11 of the main duties that take up 80% of CFs time. The top five duties take up 55% of their time.

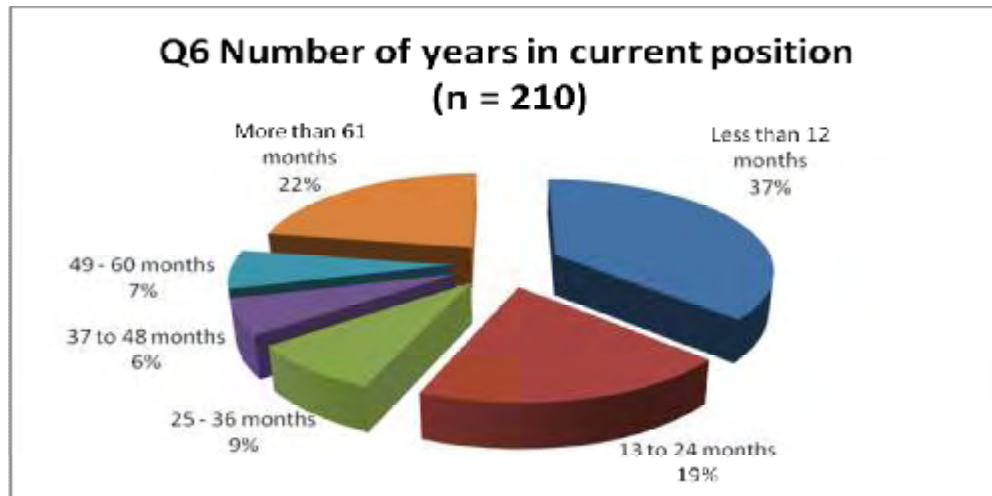
**Table 2: Main duties and percentage time per duty**

Q.5a. CF Main Duty			Q.5b. CF percentage time per duty
	Number of CFs	Percentage	Mean percentage
		CFs	
Administration	20	44	10
Assessments	16	36	14
Teaching	15	33	10
Accompaniment	13	29	14
Evaluation	11	24	7
Hands on	9	20	3
Structured clinical	9	20	5
Demonstration	8	18	4
In service	7	16	4
Counselling	6	13	2
Facilitation	5	11	5

## Number of years in current position

Figure 7 shows the number of years respondents have been in their current positions. More than half of the respondents (56%) have been in their positions for less than 24 months.

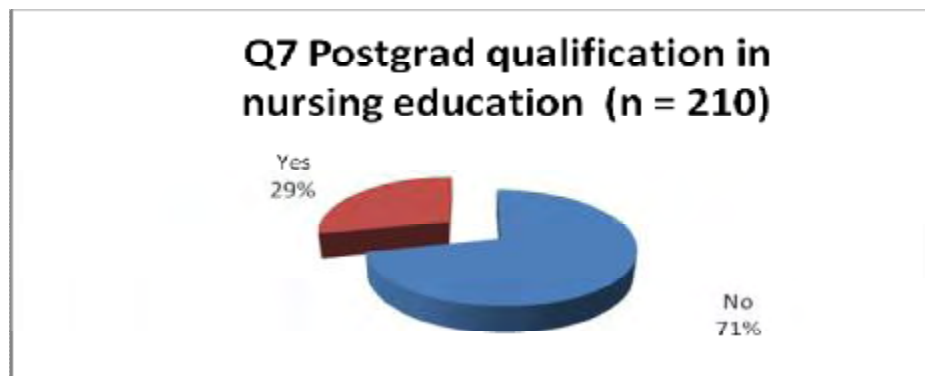
**Figure 7: Number of years in current position**



**Additional formal qualification in nursing education**

Figure 8 show that 29% of respondents have an additional formal qualification in Nursing Education.

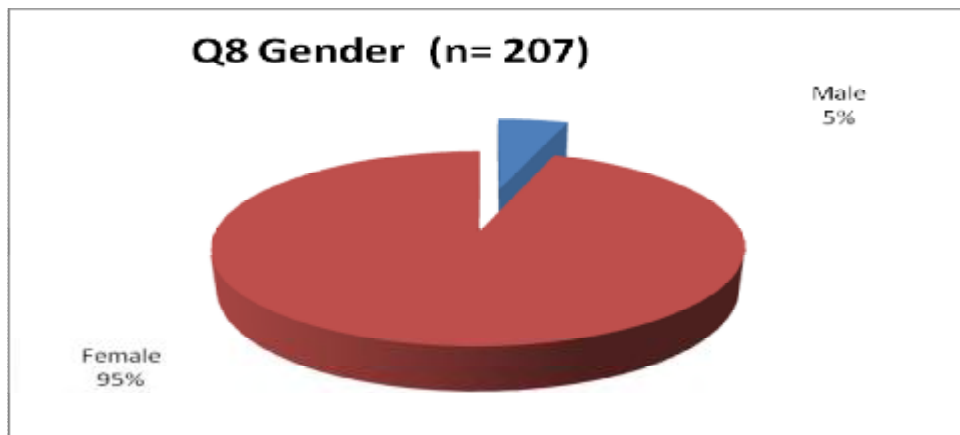
**Figure 8: Additional formal qualification in Nursing Education.**



## Gender

Figure 9 shows the gender distribution of respondents. It replicates the female-dominated profile of the nursing profession.

**Figure 9: Gender**



## SECTION TWO

### ONE-WAY FREQUENCY TABLES

Frequency tables indicating the rate of recurrence with which respondents gave a particular answer were compiled for section 2, part 1 (importance of competency to a CF), section 2, part 2 (evidence that the competency exists in CFs currently) and section 3, part 3 (same or different competency required for CF in general wards versus specialist units).

#### SECTION 2, PART 1

The frequency attained for the competencies in section 2, part 1 that were deemed to be very important (5 on the Likert scale) are indicated in table 3. Communication skills are regarded as the most frequently selected and important competency for CFs.

**Table 3: Competencies selected most frequently and deemed to be important for clinical facilitators**

Competency number	Competency	Percentage frequency of selection of "very important" (5 on the Likert scale)
#28	Communication skills	72.6%
#3	Professional role modelling	70.6%
#4	Evaluation and assessment	70.6%
#2	Theory application to practice	67.5%
#7	Compliance with training requirements	67.5%
#20	Quality orientation	66.4%

The competency deemed least important by respondents (i.e. selected least frequently) was managing administrative processes and business alignment.

**Table 4: Competencies selected most frequently as least important for clinical facilitators to have**

Competency number	Competency	Percentage frequency of selection of "very important" (5 on the Likert scale)
# 1	Managing administrative processes	24%
#12	Business alignment	24.6%

## SECTION 2, PART 2

The frequency of competencies selected in section 2, part 2 that were found to be most evident in CFs currently was specialist knowledge and education practice expertise.

**Table 5: Competencies selected most frequently as being most evident in clinical facilitators currently**

Competency number	Competency	Percentage frequency of selection of "good evidence" (5 on the Likert scale)
#43	Specialist knowledge	23.7%
#35	Education practice expertise	22.6%
#39	Observant	21.3%

The frequency of competencies selected as being the least evident in CFs currently were research and development techniques, crisis management, and planning and organising.

**Table 6: Competencies selected most frequently and deemed to be least evident in clinical facilitators currently**

Competency number	Competency	Percentage frequency of selection of "poor evidence" (1 on the Likert scale)
#21	Research and development techniques	8.5%
#23	Crisis management	6.2%
#25	Planning and organising	5.2%

If the selected options on the Likert scale of poor evidence are added together, that is, the options of selecting a one and a two, the competencies selected as being least evident in CFs currently still includes research and development and crisis management, but now also points to financial understanding and project participation.

**Table 7: Competencies selected most frequently and deemed to be least evident in clinical facilitators currently**

Competency number	Competency	Percentage frequency of selection of "poor evidence" (1 and 2 on the Likert scale added together)
#21	Research and development techniques	29.4%
#24	Financial understanding	24.8%
#22	Project participation	20.9%
#23	Crisis management	20.9%



The following list of competencies as shown in table 8 below were added by respondents in the open-ended option to include/list additional competencies that they felt were not included in the list provided. These competencies were found to be neither important nor strongly evident in CFs currently.

**Table 8: Additional competencies specified**

<b>Sect 2 Q1.46 - Q1.50 Other specify</b>		
	<b>Frequency</b>	<b>Percent</b>
Accuracy	1	4.8
Assertiveness	1	4.8
Competency	1	4.8
English use only	1	4.8
Evaluates accurately	1	4.8
Group work	1	4.8
Guidance - set a standard	1	4.8
Interpersonal skills	1	4.8
Mentor and advisor	1	4.8
Mutual respect	1	4.8
Night duty	1	4.8
On the spot teaching	1	4.8
Passion for job	1	4.8
Preparedness	1	4.8
Professionalism	1	4.8
Role modelling	1	4.8
Self-study	1	4.8
Time management	2	9.5
Visibility	2	9.5

## SECTION 2, PART 3

Table 9 shows that specialist knowledge and equipment familiarity were noted as being the most frequently selected as different in terms of being required for CFs in general wards versus specialist units.

**Table 9: Frequency of competencies selected as being different for clinical facilitators in general wards versus specialist units**

Competency number	Competency	Percentage frequency of selection of "different"
#43	Specialist knowledge	51%
#32	Equipment familiarity	50%
#3	Professional role modelling	46.7%
#1	Managing administrative processes	42.2%
#21	Research and development techniques	41%

The competencies most frequently selected as the least important when it comes to differences between CFs in general wards and specialist units, was being consistent and communication skills.

**Table 10: Frequency of competencies selected as least important to be different for clinical facilitators in general wards versus specialist units**

Competency number	Competency	Percentage frequency of selection of "different"
#14	Consistent	18%
#28	Communication skills	18.9%

## RESULTS BY QUESTION

### RESEARCH QUESTION 1

What are the core competencies required for clinical facilitators?

#### FACTOR ANALYSIS

A factor analysis was applied to answer the question of what the core competencies are for clinical facilitators. In this analysis, choosing only factors with eigenvalues greater than one would have led to the extraction of only two factors (see Appendix C for details of the eigenvalues). The scree plot (see Appendix D), in contrast, suggested a six-factor solution, since this was the point where the elbow occurred and the graph started decreasing more slowly. It was found that a six-factor solution also grouped the variables much better than the two-factor solution. The percentage of variance explained (for the six-factor solution) was 88%, which is considerably higher than the minimum of 60% recommended by Galpin (2002).

To interpret the six factors selected, a decision on what the "large" factor loadings had to be was made. A useful method was to start with, say, 0.8, and highlight all those of 0.8 and higher, and then to look at which variables have loadings of about 0.7 and which of about 0.6, and so on. A choice could then be made as to where the cut off would be.

In Appendix E, the factor loadings from the rotated factor matrix were colour coded to indicate the factor that they contributed most to.

The factors were then interpreted using the group of variables that contributed most to that factor to come up with an underlying construct that the factor encompassed.

Table 11 demonstrates the competencies associated with factor one which accounts for the most variance. The variables that load onto this factor, where the cut off of large factor loadings was taken as 70% and above, related to two main themes; these themes are interdependent and relate to relationships and people skills and are tied in with technical education expertise. This factor is therefore labelled "Competencies for leadership in clinical facilitation".

**Table 11: Competencies loading factor one**

<b>Variable</b>	<b>Loading</b>	<b>Competency</b>	<b>Rank: Importance</b>
Sect 2 Q 1#34	<b>0.75</b>	<b>Adaptability</b>	<b>21</b>
Sect 2 Q 1#33	<b>0.74</b>	<b>Leadership</b>	<b>20</b>
Sect 2 Q 1#35	<b>0.71</b>	<b>Education practice expertise</b>	<b>11</b>
Sect 2 Q 1#28	<b>0.70</b>	<b>Communication skills</b>	<b>4</b>
Sect 2 Q 1#30	0.69	Building collaborative relationships	24
Sect 2 Q 1#31	0.66	Stress tolerance	25
Sect 2 Q 1#32	0.64	Equipment familiarity	18
Sect 2 Q 1#29	0.62	Innovative	35
Sect 2 Q 1#40	0.58	Physical skilfulness/dexterity	28
Sect 2 Q 1#37	0.57	Develops others	19
Sect 2 Q 1#39	0.57	Observant	15
Sect 2 Q 1#36	0.56	Information monitoring	34
Sect 2 Q 1#45	0.44	Initiative	33
Sect 2 Q 1#27	0.40	People and performance management	31
		<b>Average of ranks</b>	<b>22.7</b>

Table 12 illustrates the competencies associated with factor two. The variables that load onto this factor, where the cut off of large factor loadings was taken as 62% and above, are related to quality in efficiency and effectiveness when dealing with education and student-type skills.

This factor is therefore labelled "Competencies for entrenching quality in teaching".

**Table 12: Competencies loading factor two**

<b>Variable</b>	<b>Loading</b>	<b>Competency</b>	<b>Rank: Importance</b>
Sect 2 Q 1#14	<b>0.66</b>	<b>Consistent</b>	<b>22</b>
Sect 2 Q 1# 4	<b>0.63</b>	<b>Evaluation and assessment</b>	<b>1</b>
Sect 2 Q 1# 2	<b>0.62</b>	<b>Theory application to practice</b>	<b>3</b>
Sect 2 Q 1#17	<b>0.62</b>	<b>Feedback</b>	<b>9</b>
Sect 2 Q 1#15	0.59	Coach	17
Sect 2 Q 1#16	0.58	Learner management and support	8
Sect 2 Q 1#11	0.56	Personal and interpersonal skills	7
Sect 2 Q 1#10	0.52	Adapting to and facilitating change	27
Sect 2 Q 1#20	0.51	Quality orientation	5
Sect 2 Q 1# 3	0.51	Professional role modelling	2
Sect 2 Q 1# 5	0.46	Initiative	33
Sect 2 Q 1# 7	0.45	Compliance with training requirements	6
Sect 2 Q 1# 9	0.44	Gains commitment	32
Sect 2 Q 1# 8	0.38	Teacher	14
		<b>Average of ranks</b>	<b>13.28</b>

Table 13 shows the competencies associated with factor three. The variables that load onto this factor, where the cut off of large factor loadings was taken as 50% and above, are related to management-type functions with project-type skills being the main component.

This factor is therefore labelled "Competencies for project processes".

**Table 13: Competencies loading factor three**

<b>Variable</b>	<b>Loading</b>	<b>Competency</b>	<b>Rank: Importance</b>
Sect 2 Q 1#23	<b>0.71</b>	<b>Crisis management</b>	<b>36</b>
Sect 2 Q 1#22	<b>0.66</b>	<b>Project participation</b>	<b>40</b>
Sect 2 Q 1#21	<b>0.59</b>	<b>Research and development techniques</b>	<b>39</b>
Sect 2 Q 1#19	<b>0.50</b>	<b>Strategic decision maker</b>	<b>41</b>
Sect 2 Q 1#25	0.41	Planning and organising	10
		<b>Average of ranks</b>	<b>33.2</b>

Table 14 give you an idea about the competencies associated with factor four. The variables that load onto this factor, where the cut off of large factor loadings was taken as 62% and above, related to being a knowledge leader and the application thereof.

This factor is therefore labelled "Competencies for knowledge leadership".

**Table 14: Competencies loading factor four**

Variable	Loading	Competency	Rank: Importance
Sect 2 Q 1#38	<b>0.64</b>	<b>Continuously learning</b>	<b>12</b>
Sect 2 Q 1#43	<b>0.62</b>	<b>Specialist knowledge</b>	<b>13</b>
Sect 2 Q 1#44	<b>0.62</b>	<b>Demonstrator</b>	<b>16</b>
Sect 2 Q 1#13	0.48	Technical professional nursing acumen	30
		<b>Average of ranks</b>	<b>17.75</b>

Table 15 show the competencies associated with factor five. The variables that load onto this factor, where the cut off of large factor loadings was taken as 48% and above, related to business acumen skills.

This factor is therefore labelled "Competencies of business acumen".

**Table 15: Competencies loading factor five**

Variable	Loading	Competency	Rank: Importance
Sect 2 Q 1#12	<b>0.67</b>	<b>Business alignment</b>	<b>43</b>
Sect 2 Q 1#24	<b>0.56</b>	<b>Financial understanding</b>	<b>44</b>
Sect 2 Q 1# 6	<b>0.50</b>	<b>Computer literacy and information technology</b>	<b>42</b>
Sect 2 Q 1#18	<b>0.48</b>	<b>Customer centric</b>	<b>38</b>
		<b>Average of ranks</b>	<b>41.75</b>

Table 16 explains the competencies associated with factor six which accounts for the least variance. The variables that load onto this factor, where the cut off of large factor loadings was taken as 41% and above, related mainly to being

able to manage oneself. This factor is therefore labelled "Competencies for personal mastery".

**Table 16: Competencies loading factor six**

<b>Variable</b>	<b>Loading</b>	<b>Competency</b>	<b>Rank: Importance</b>
Sect 2 Q 1#42	<b>0.55</b>	<b>Conflict resolution</b>	<b>26</b>
Sect 2 Q 1#41	<b>0.43</b>	<b>Team player</b>	<b>23</b>
Sect 2 Q 1#26	<b>0.43</b>	<b>Facilitating diversity/change</b>	<b>37</b>
Sect 2 Q 1# 1	<b>0.41</b>	<b>Managing administrative processes</b>	<b>45</b>
		<b>Average of ranks</b>	<b>32.75</b>

### **MODEL FIT**

The final step in factor analysis involved the determination of model fit. A basic assumption underlying factor analysis is that the observed correlation between variables can be attributed to common factors. Hence, the correlation between the variables were deduced or reproduced from the estimated correlations between the variables and the factors.

The differences between the observed correlations and the reproduced correlations, namely, the residuals, were examined to determine model fit. If there are many large residuals, the factor model will not provide a good fit with the data and will have to be reconsidered.



It was found that less than 1% of the residuals were larger than 0.1 in absolute value and less than 15% were larger than 0.05, indicating an acceptable model fit.

## **RESEARCH QUESTION 2**

Which are the most important competencies?

### **IMPORTANCE RATINGS**

The means and standard deviations were calculated for the importance ratings. These were sorted in descending order, so that it was possible to see which were considered to be the most important competencies (see Appendix F.) The top five competencies in terms of importance rating were found to be evaluation and assessment, professional role modelling, theory application to practice, communication skills and quality control. The lowest five were strategic decision maker, computer literacy and information technology, business alignment, financial understanding and managing administrative processes.

### **EVIDENCE RATINGS**

The same statistics of the mean values and standard deviations were calculated of the evidence ratings of the competencies. These ratings

were sorted in descending order so that it was possible to see which competencies were considered to be the most evident competencies.

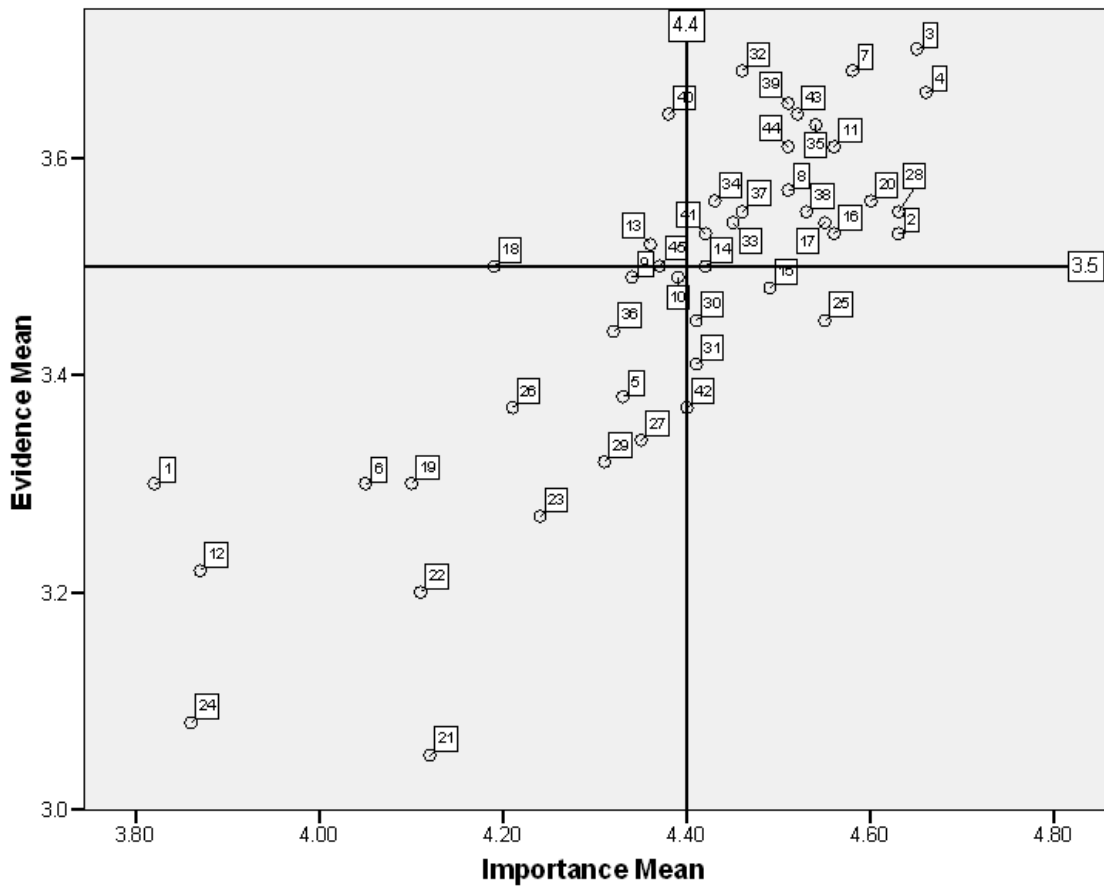
(See appendix G)

The top five competencies in terms of the evidence that the competency exists in CFs currently were documented as professional role modelling, equipment familiarity, compliance with training requirements and being observant with crisis management, business alignment, project participation, financial understanding, and research and development being the least evident

## **IMPORTANCE AND EVIDENCE MEANS**

The scatter plot below shows the importance and evidence means with labels for each competency.

**Figure 10: Importance and evidence means for each competency**



The evidence mean average is 3.5

The importance mean average is 4.4.

The competencies to highlight that fall into the low evidence/low importance mean are the following:

- # 1 Managing administrative processes
- # 12 Business alignment
- # 24 Financial understanding

- # 21 Research and development techniques
- # 22 Project participation
- # 6 Computer literacy and information technology
- # 19 Strategic decision maker

The competencies clustered around low evidence/high importance of competencies include the following competencies:

- # 25 Planning and organising
- # 15 Coaching
- # 30 Building collaborative relationships
- # 31 Stress tolerance

The competencies clustered around the centre of the average of both the evidence and importance means include the following:

- # 45 Initiative
- # 9 Gains commitment
- # 10 Adapting to and facilitating change
- # 14 Consistent
- # 41 Team player

The competencies to highlight that fall into the high evidence/low importance mean are the following:

- # 13 Technical professional nursing acumen
- # 40 Physical skilfulness
- # 18 Customer centric

The majority of the competencies fell into the quadrant of high evidence/high importance. A few examples are highlighted:

- # 3 Professional role model
- # 4 Evaluation and assessment
- # 7 Compliance with training requirements
- # 11 Personal and interpersonal skills

### **SAME VERSUS DIFFERENT RATINGS**

Two sample t-tests were performed for each competency, where the null hypothesis suggested that the mean importance rating of group 1 (those that considered the competencies to be the "same" in specialty and general nursing units) was no different to the mean importance rating of group 2 (those that considered the competencies to be "different" in specialty and general nursing units). In cases where the null hypothesis could not be rejected, it implied that on average the two groups agreed on

how important the competency was. The alternative hypothesis implied that there was a difference in how important these two groups considered the particular competency in question to be.

## **FINDING**

It was found that the null hypothesis could not be rejected for the majority of competencies. This implies that the two groups agreed on how important most of the competencies were.

The only competencies that differed significantly were numbers 29 (innovative), 30 (building collaborative relationships) and 37 (develops others).

## **RESEARCH QUESTIONS 3 AND 4**

What evidence is there that the core competencies exist?

What does the gap analysis reveal?

## **GAP ANALYSIS**

A gap variable was calculated for each competency by subtracting the evidence rating from the importance rating for that competency.

One sample t-tests were performed for each competency where the null hypothesis suggested that there was no gap between the mean importance and the mean evidence rating (i.e. that the mean of the gap variable is zero). The alternative hypothesis implied that there was a gap and therefore that a training need exists for the particular competency.

## **FINDING**

The null hypothesis was rejected for all the gap variables as the p-value was less than the significance value. This then implied that there is a definite need for training in all of the competencies as they were all significantly different from 0. Competencies were sorted in descending order according to the level of significance, thus indicating for which competencies the greatest gap exists.

See Annexure H for full details. The most important gaps were identified to be in the theory application to practice, evaluation and assessment, quality orientation, communication skills and being a teacher. The competencies showing the smallest, yet still significant gap were customer centricity, business alignment and managing administrative processes.

## RESEARCH QUESTION 5

Do the competencies differ between the groups defined by the designation of the respondent?

### ANOVA

A comparison was done of the competencies considered important by the seven groups identified by the designation question, namely, (1) clinical facilitators; (2) unit managers; (3) nursing managers; (4) educators; (5) bridging course first-year learners; (6) bridging course second-year learners; and (7) post-basic learners.

A one-way analysis of variance (ANOVA) was performed for each competency.

The null hypothesis suggested that there was no difference between the mean importance ratings of the seven groups.

The alternative hypothesis implied that the means of at least two of the groups differed for the particular competency in question.

In cases where the ANOVA was significant, multiple comparison tests were done in order to detect where the differences lay.



ANOVA tests showed significant differences between the importance ratings of the groups defined by designation ( $p$ -value < 0.05) for the following competencies:

- 1.5 Initiative
- 1.28 Communication skills
- 1.29 Innovative
- 1.30 Building collaborative relationships
- 1.31 Stress tolerance
- 1.35 Education practice expertise
- 1.37 Develop others
- 1.38 Continuously learns
- 1.39 Observant
- 1.43 Specialist knowledge
- 1.44 Demonstrator

Where the overall tests were significant, it indicated that at least two of the groups (designations) differed.

Multiple comparison tests, Bonferroni (Dunn) t Tests for Section 2, were then run in order to detect where the differences lay. These results are summarised in the table 17.

**Table 17: Multiple comparison tests showing significant differences between the importance ratings of groups defined by designation. (p-value < 0.05)**

#	Competency	Seen as More important	Seen as Less important	Positive difference
5	Initiative	Post-basic learners	Bridging Course 1st year learners	0.8694
		Clinical facilitators	Bridging Course 1st year learners	0.6467
28	Communication skills	Nursing managers	Bridging Course 1st year learners	0.6278
		Clinical facilitators	Bridging Course 1st year learners	0.5357
29	Innovative	Post-basic learners	Bridging Course 1st year learners	0.8694
		Clinical facilitators	Bridging Course 1st year learners	0.6852
30	Building collaborative relationships	All groups saw building collaborative relationships as equally important.		no positive differences
31	Stress tolerance	Clinical facilitators	Bridging course first-year learners	0.7071
		Post-basic learners	Bridging course first-year learners	0.7071
		Bridging course second-year learners	Bridging course first-year learners	0.6384
35	Education practice expertise	Post-basic learners	Bridging course first-year learners	0.6759
		Clinical facilitators	Bridging course first-year learners	0.5759
		Unit managers	Bridging course first-year learners	0.5674
37	Develop others	Unit managers	Bridging course first-year learners	0.6226
		Clinical facilitators	Bridging course first-year learners	0.55
38	Continuously learns	Post-basic learners	Bridging course first-year learners	0.6286
		Educators	Bridging course first-year learners	0.6128
		Nursing managers	Bridging course first-year learners	0.6128
		Clinical facilitators	Bridging course first-year learners	0.5786
		Unit managers	Bridging course first-year learners	0.5512
39	Observant	Post-basic learners	Bridging course first-year learners	0.6429
		Clinical facilitators	Bridging course first-year learners	0.5929
43	Specialist knowledge	Post-basic learners	Bridging course first-year learners	0.7278
44	Demonstrator	Post-basic learners	Bridging course first-year learners	0.7071

The differences detected by the tests were mainly between bridging course first-year learners and the other groups, where the former generally considered these competencies to be less important than the other groups.

The interpretation of the research results are presented in the next chapter.

## **CHAPTER 6: DISCUSSION OF RESULTS**

### **INTRODUCTION**

The topic of this research was focused on the healthcare industry, more specifically the field of nursing, nursing education and clinical facilitators.

The central problem that the research dealt with was to identify and prioritise the competencies required for clinical facilitators in acute care private hospital settings.

The general problem of the shortage of nurses as well as the increased demand for nursing services is mirrored in the specific role and function of clinical facilitation.

Clinical facilitators must have a range of skills, knowledge and understanding that must be applied in a variety of contexts in order to be effective in their role. Clinical facilitation practices influence the quality of the learning experiences of nurses.

### **RESPONDENT SAMPLE**

The overall response rate as originally proposed was achieved with 90.6% of the returns being suitable for analysis. The number of clinical

facilitators currently in the post that responded was lower than planned and no clear reason can be offered for this.

## **SECTION ONE**

### **DEMOGRAPHIC PROFILE OF RESPONDENTS**

An acceptable spread of respondents from seven designations as well as three geographical regions was obtained. This allowed for the inputs from an assortment of nurses in various positions, thereby providing a broad base of opinion.

Learners represented a total of 38%, nursing and unit managers made up 34%, and educators and clinical facilitators comprised 28% of the respondents.

The questions answered by only the clinical facilitators currently in the position yielded detailed findings. The CFs could select more than one option when indicating what they spent the majority of their time on. The fact that 44% indicated that they spent the majority of their time on basic students only and 22% indicated that they spent the majority of their time on basic and post-basic students supports what the function should be achieving to support workplace-based learning in an effective manner (Eraut, 2004).

Permanent staff was where 9% of the CFs spent the majority of their time which possibly indicates that the permanent staff are being under-serviced by CFs in terms of education and training support. Permanent staff is responsible, directly and indirectly for professional role modelling and sharing their knowledge and experience of being able to recognize departures from normal manifestations which students need to learn from (Fessey, 2002).

The remaining 25% of CFs stated that they spent the majority of their time on non-CF roles, but no further detail was obtained as to what these roles are.

Although there will always be times for nurses of any designation to perform non-core functions, CFs are often perceived as not being available for their primary job function because they are busy with non-CF roles.

The research found that average percentage of time spent on non-CF roles was calculated as being 9% which could be seen as more acceptable for an organisation to accept and manage.

The greatest amount of time was spent on the basic students (59%). Combining the time spent by CFs on post basic students only and both

basic and post basic students at 8% implies that at least 67% of the CFs time is spent on activities related to students.

The CFs detailed that they felt the main duties and responsibilities carried out in the role of clinical facilitation as being grouped around assessments which made up 14%, accompaniment 14%, administration 10%, teaching 10% and evaluations 7% of their time. This would be expected in the light of the majority of their time being spent on activities related to students on education and training programmes.

The next six duties, namely, hands-on, structured clinical practical, demonstrations, in-service counselling and facilitation accounted for a combined total of approximately 35% of their time. The remaining 20% of their time was varied and ranged between 0.5% and 2% of their time per activity.

Of the total population of respondents 56% have been in their current positions for less than two years and 22% have been in their positions for more than five years. This assisted in providing a distribution of experience and insights from the respondents thus reducing the possibility of bias toward one group.

The additional formal qualification in nursing education was held by 29% of respondents. This provided for an adequate number of people with

more education-related expertise to participate in responding with insight and understanding of both the theory and practice requirements that students have to fulfil as part of their education programmes, as well as continuous professional development for permanent staff.

The gender distribution of 5% male is slightly lower than the average males in nursing at 6 to 7%, but replicates the female dominated profile of the nursing profession. This may be an area that could be more actively encouraged.

## **RESEARCH QUESTION 1**

### **What are the core competencies required for clinical facilitators?**

For a clinical facilitator to be able to continuously grow and improve their own facilitation skills, they must, according to Meyer (2004), learn and practise certain skills.

Applying the model where a facilitator may have certain qualities, the work needed to improve their facilitation knowledge, skills and values are supported by the findings in this research.



## **FACTOR ANALYSIS**

The core competencies required for clinical facilitation was determined by applying factor analysis to the competencies identified.

### **Factor 1 – Competencies for leadership in clinical facilitation**

The competencies of adaptability, leadership, education practice expertise and communication skills load to this factor and are related to two main themes that are interdependent and relate to relationship and people skills tied in with technical education expertise.

The ability to maintain effectiveness when experiencing major changes, taking a positive lead to participate in learning and encouraging commitment to the process, being able to display an understanding of the theories of education and the key drivers of adult learning by developing and leveraging relevant infrastructure, learning channels, resources and technology would be necessary to ensure educational excellence and best brand credibility are built (Latham, 2006).

Of the additional competencies that load to factor one include being able to build collaborative relationships, having a tolerance for stress, showing initiative, being innovative by coming up with solutions and trying to be novel in the ways of dealing with problems and opportunities.

Eraut (2004) argues that learning in the workplace is significantly influenced by confidence. The confidence a CF has as a leader and role model who is adaptable, has education expertise supported by constructive communication skills will be successful in providing appropriate support to students to enhance learning in the workplace.

## **Factor 2 – Competencies for entrenching quality in clinical facilitation**

The competencies of being consistent, evaluation and assessment, theory application to practice and giving feedback load to this factor. They are related to quality in efficiency and effectiveness when dealing with education and student-type skills.

These competencies are part of the knowledge component of the model by Meyer (2004). See figure 2.

Being consistent in action and deed where the CF is able to maintain a particular standard with minimal variation, which is able to remove irregularities in the clinical environment, will support the function of ensuring that the application of theory to ward practice is operationalised. As Higgs and McAlister (2005) highlight the CF must also be able to juggle between the needs of the students and patients with the time available.

Evaluation and assessment of learners must be done in an ongoing manner with timely feedback that relates clinical practice standards to learner performance/practice to help strengthen specific knowledge and skill areas.

This supports the point made by Fessey (2002) who recognised that problem solving is a dominant aspect of nursing practice in situations where the unexpected causes deviation from the anticipated routine course of events.

### **Factor 3 – Competencies for management of education processes**

The competencies of crisis management, project participation, research and development techniques and strategic decision-making load to this factor. They are related to decision making around management type functions with project-type skills, not people management, being the main component.

The CF must be competent in being able to initiate prompt action to assess the nature and root cause of problems and crisis and take appropriate action.

The ability to plan, organise staff and control work projects that are underpinned by discovering new knowledge about clinical learning and being able to apply that knowledge to create new and improved clinical learning strategies, methodologies and techniques that better meet the requirements of students and other stakeholders ensures the CF exercises evaluative judgement and discretion when making decisions and taking action.

In Meyer's (2004) model these competencies are mainly within the knowledge component with communication skills being very important.

#### **Factor 4 – Competencies for knowledge leadership**

The competencies of continuously learning, having specialist knowledge and being able to demonstrate, lead to this factor. They are related to being a knowledge leader.

The knowledge factors align to the facilitation of performance and facilitation options for a facilitator (Meyer, 2004). These would be necessary to ensure that the CF keeps up to date with developments and trends in all relevant technical and professional nursing knowledge areas

and displays commitment to their own life-long learning journey across a broad range of disciplines.

The CF must be able to provide instruction, positive models and opportunities for students to observe as well as apply their skills in a patient and supportive environment that is conducive to learning.

When these circumstances are lacking then as described by Fessey (2002) novice nurses find the demands of learning in a new ward competes with what they have learnt in preceding wards and they suspend this previously gained knowledge in an effort to cope in the new ward.

### **Factor 5 – Competencies of business acumen**

The competencies of business alignment, financial understanding, computer literacy and information technology and being customer centric load to this factor.

Being a technical expert does not mean you know how to transfer that knowledge to other people. Being able to do this in a complex learning environment as described by Fessey (2002) is what CFs are often confronted with.

The idea that aspects relating to business acumen are less important than technical nursing acumen and facilitation is an inhibitor to a competent facilitator being able to leverage his or her competence as a role model, expert and consultant. To raise the level of work of a CF the understanding and alignment of activities to support the business context by keeping education and training policies, processes and procedures at the forefront of decision making and action the CF will more likely be successful.

Notwithstanding that the CF's role may be dominated by activities related to education and training the necessity of understanding how to manage financial resources and expenditure and participating in reporting and budgeting as well as being able to understand, apply and leverage information technology, tools and equipment to facilitate and reinforce the learning process is an essential component of the high tech, high care environment of private health care.

New students coming through current education programmes are often more technologically orientated and familiar and expect the facilitators to also be. To be competent would require the integration of knowledge, skills and values to a defined standard in a specific context (Meyer, 1996).

## **Factor 6 – Competencies for personal mastery**

The competencies of conflict resolution, being a team player, facilitating diversity and change and managing administrative processes that lead to this factor are related to being able to know and manage yourself as an individual.

The CF must know their own strengths and weaknesses and have a clear understanding and insight of who they are, what values they will not compromise on and what their limitations are.

This also supports the role as a leader and expert who has a variety of demands and pressures placed on them. The CF must be able to take positive action to resolve conflict in ways that addresses the issues, dissipates the conflict and maintains collaborative relationships.

The people skills required for a CF to be a team player who can establish and service relationships with internal and external stakeholders, will be able to maintain good co-operative and collaborative working relations for the efficient and effective implementation of learning objectives are necessary alongside the identified skill of communication. The diversity within the workplace, of the patients, colleagues and students needs a CF to have the level of resilience to create and maintain a positive

environment where the differences of others are recognised, understood and valued so that all can reach their potential and maximize their contributions (Latham, 2006).

The challenges of managing administrative requirements could be addressed by vigorously maintaining effectiveness in administrative work tasks and systems. The understanding and systematic following the logic of admin process and work flows and adjusting work structures and processes to support organisational policies and regulatory systems within a changing work context must be sought.

In summary the core competencies for clinical facilitators require:

- competence to support the confidence required to enable the CF to be a leader in clinical facilitation,
- quality to be entrenched in clinical facilitation practice,
- management of education-related processes effectively,
- maintaining a position of being a knowledge leader,
- being able to understand business acumen, and
- knowing and understanding oneself



## **RESEARCH QUESTION 2**

**Which are the most important competencies?**

### **IMPORTANCE RATINGS**

#### **Section 2, Part 1**

The model as described by Meyer (2004) in Figure 2 previously detailed in Chapter 2 of the knowledge, skills and values required for facilitation was applied as a tool to consider how much of a model fit there may be from the findings of this research.

From the rank ordered findings the competency most frequently selected as being important for a CF to have was communication skills. This is supported by being one of the competencies that forms part of factor one that implies the CF must be able to clearly convey information and ideas in a way that engages people and helps them to understand and retain the information.

Further competencies of professional role modelling, evaluation and assessment, theory application to practice, compliance to training requirements and quality orientation were of the top five most important competencies identified. These competencies include more of those found as part of factor two and relate to entrenching quality in clinical facilitation.

The competencies least frequently cited as being important were that of managing administrative processes and business alignment. The administrative processes are standardized in most departments thus part of routine work activities and therefore possibly being selected less frequently.

The fact the business alignment as an important CF competency is sited infrequently leaves one to consider if this could be one of the reasons for the lack of integration between the training provider (theory) requirements and the hospital needs (practical) that exists.

Other competencies seen as less important were computer literacy and financial understanding which as previously stated would be important to support the competitive leverage a CF could use.

### **RESEARCH QUESTION 3**

**What is the evidence that these core competencies exist?**

#### **EVIDENCE RATINGS**

##### **Section 2, part 2**

The competencies most frequently selected as being evident in current CFs was that of specialist knowledge, education practice and expertise and being observant.

The frequency of competencies selected as being least evident in CFs currently in the position were research and development techniques, crisis management and planning and organizing. In addition financial understanding and project participation were found to be poorly evident. These competencies of efficiency and effectiveness would be necessary as core competencies for facilitators (Meyer 2004).

The additional competencies listed by respondents were one-off responses listing a competency except for 'time management' and 'visibility' where two respondents listed these as competencies required of a CF. Many of these competencies were already included in the list given and 'night duty' and 'use of English' were more what respondents would like to see CFs performing than a competency.

The means and standard deviations of the evidence ratings were sorted in descending order to see which competencies were considered the most to least evident in clinical facilitators currently in the position.

Professional role modelling was the competency that was the most evident in the current CFs. This is part of factor two of entrenching quality in clinical facilitation. The role and responsibility of being a CF includes demonstration and personifying skill and competence in practice with model ethical and professional behaviour where the impact on students is crucial for supporting the socialisation and internalisation of the norms and values of nursing and healthcare (Fessey, 2002).

Equipment familiarity and being observant are competencies that load to factor one, namely, competencies for leadership in clinical facilitation.

Compliance to training requirements and evaluation and assessment are also part of factor two. As already discussed in the demographic profile of respondents, CFs spend approximately 67% of their time on activities related to students. Forty-five percent of this time is spent on duties of evaluations (7%), assessments (14%), teaching (10%) and accompaniment (14%). These activities are what are tangibly evident to students and other nursing staff.

Competencies rated as being least evident are part of factor three, namely competencies for the management of education processes and factor five, namely competencies of business acumen.

Research and development techniques would have to be enhanced as it forms part of the cornerstone of continuous learning and best practice and thereby the ability to ensure new trends in healthcare and education are improved by yielding greater improvements in skills, attitudes and behaviours of health professionals. This supports the stance taken by Mercer and Dol Poz (2006) which puts forward the point that for effectiveness of workplace based learning to occur the integration of the development of workplace competencies, practice-based teaching, problem-based learning and patient focused practice must be ensured.

In summary the factor analysis of the forty five competencies was reduced to six factors that clearly define the dimensions required for clinical facilitators.

## **IMPORTANCE VERSUS EVIDENCE RATINGS**

When these competencies are matched against each other in a scatter plot of an evidence / importance matrix analysis it visually confirms previous points made. It can be seen that the majority of competencies

fall in the high evidence/high importance quadrant with many competencies falling at the point of the intersection of the average means of the evidence and importance ratings.

Very few competencies fall into the high evidence/low importance quadrant with a fair number of competencies falling into the low evidence/low importance quadrant. The competencies that fall into this quadrant are mainly those already discussed and form part of factor three (competencies for the management of education processes) and factor five (competencies relating to business acumen).

### **Section 2, part 3**

The frequency of competencies selected as being different for CFs in general wards versus specialist units was specialist knowledge and equipment familiarity as these would be highly differentiated between the two areas. Specialist units require additional post basic training of staff working in these areas to be able to provide care to critically ill patients or patients with specialist needs.

Professional role modelling, managing administrative processes and research and development techniques were also more frequently selected as being different between the two clinical areas. This is probably due to the expert nature nursing staff, doctors and other

therapists who work in these areas and who need to comply to international protocols and practices.

Being consistent and communication skills were selected least frequently as competencies required that would be different between the clinical areas as they are essentially critical for the role of any nurse and especially someone in a facilitation role.

The two sample t-test found that the null hypothesis could not be rejected for the majority of the competencies. This implied that the two groups (those that considered the competencies to be same versus different in specialized units and general wards) agreed on how important most of the competencies were. The competencies that differed significantly were innovation, building collaborative relationships and developing others. These all form part of the competencies that load to factor one (competencies for leadership in clinical facilitation).

The necessity for working effectively and co-operatively with others to establish and maintain good working relationships that are mutually beneficial must be in place for CFs to be able to set people up for success by removing obstacles to performance and simultaneously creating the conditions that facilitate the successful achievement of goals (Latham, 2006).

## **RESEARCH QUESTION 4**

### **What does the gap analysis reveal?**

#### **GAP ANALYSIS**

By subtracting the evidence rating from the importance rating for each competency the gap variable was calculated. The finding was rejected for all null hypotheses that suggested there was no gap between the mean importance and the mean evidence rating (p-value was less than the significance level). This implied that there is a definite need for training in all of the competencies as the gap variables were all significantly different from zero (See Annexure H).

The competency that showed the greatest gap was that of theory application to practice. Out of the top ten competencies (in descending order) eight relate to factor one and two relate to factor two i.e. competencies for leadership in clinical facilitation and for entrenching quality in clinical facilitation respectively.

The fact that all of the competencies require training supports the point made in the introduction that talks to the call for formalisation of the recognition of education and training for clinical facilitators at an appropriate level.



The aim of the research which was to identify the prioritized competencies that are essential for a clinical facilitator has been achieved. What was not expected was that all of the competencies would show a statistical significance in terms of the gaps identified and thus the need for training in all areas.

## **RESEARCH QUESTION 5**

**Do the competencies differ between the groups defined by the designation of the respondent?**

### **ANOVA**

Of the forty-five competencies listed there was a common understanding between all groups for thirty four of the competencies. The eleven competencies that had significant differences between two or more groups identified by designation were analysed by a one-way analysis of variance (ANOVA) for each competency.

The null hypothesis suggested that there was no difference between the mean importance ratings of the seven groups.

The alternative hypothesis implied that the means of at least two of the groups differed for the particular competency in question.

In cases where the ANOVA was significant, multiple comparison tests were done in order to detect where the differences lay.

The ANOVA tests that showed significant differences between the importance ratings of the groups defined by designation (p-value < 0.05) were for competencies that loaded to factor one in nine out of eleven of the competencies and factor two for two competencies namely continuously learns and is a demonstrator.

Where the overall tests were significant, it indicated that at least two of the groups (designations) differed.

In all cases it was the Bridging course first year students who deemed the competency to be of less importance than the groups that saw the specific competency as more important.

Making no claim that the following possible reasons for this are the truth a number of ideas are postulated.

Notwithstanding that the first year bridging students make up a small percentage (13.2%) of the total population, the empirical world they experience may be seen as different to that of the other groups. They will be primarily involved in meeting their training requirements and learning

objectives and thus require and see as very important the competencies related to achieving this aim.

If one considers the designations of the nurses from the population group of respondents on a continuum (See Table 18) with the bridging first year students at one pole and the nursing managers at the other pole each one's primary focus may be different even if there are a few that have common characteristics. This could give rise to speculation for some of the reasons for the differences between the designations seeing some competencies as being more or less important for clinical facilitators to have.



## CHAPTER 7 CONCLUSIONS AND RECOMMENDATIONS

### SUMMARY OF FINDINGS

The quality of responses received was high and the response rate sufficient to be a fair representation of the target of nursing staff.

The core competencies recognized for clinical facilitators using the groups of variables that contributed most to the factors identified were competencies for leadership in clinical facilitation, for entrenching quality in clinical facilitation, the management of education processes, knowledge leadership, business acumen and personal mastery.

The five most important competencies identified for clinical facilitators to have were evaluation and assessment, professional role modeling, theory application to practice, communication skills and quality orientation.

The competencies considered to be the most evident in clinical facilitators were identified as professional role modeling, equipment familiarity, compliance to training requirements, evaluation and assessment and being observant. The competencies found to least be

least evident were crisis management, business alignment, project participation, financial understanding and research and development.

The gap analysis revealed there was a statistically significant need for training on all the competencies with the biggest gap being in the theory application to practice, evaluation and assessment, quality orientation, communication skills and being a teacher.

Only three competencies namely being innovative, building collaborative relationships and developing others were considered to differ significantly in the two groups that considered competencies to be 'different' in specialty units and general wards.

## **RECOMMENDATIONS**

To gain value out of taking the identification and prioritization of competencies required for clinical facilitators to prepare, equip and empower them educationally, professionally and personally for the role of clinical facilitation a specifically designed development programme should be designed and implemented as a structured formal mechanism to meet the training needs identified and to bridge the gap between what has been identified as being important as well as contributing to ensuring the competencies will then also be evident in practice.

The concept of training the trainer necessitates a development programme that gives attention to integrating technical and interpersonal competencies, while ensuring that the clinical expertise of the CF is leveraged to its best advantage.

Some of the technical competencies would include quality orientation, integrating theory to practice, research and development techniques, project management, evaluation and assessment and business alignment.

Some of the interpersonal competencies would include managing people, adapting to and facilitating change, communication, diversity management and relationship building and alliance partnering.

By raising the overall competence, efficiency and confidence of the clinical facilitator as well as that of clinical facilitation as a function, the recognition and credibility of the role will be forthcoming.

## **SUGGESTIONS FOR FURTHER RESEARCH**

This research provided some evidence of which competencies were regarded as important, which competencies were evident in clinical facilitation and what the gaps identified were. This could be expanded to interrogate the reasons why these findings arise.

The questionnaire used in this research could be developed to identify more specific means of measuring the various factors identified to be able to strengthen their validity.

Supplementary investigations of the competencies required of clinical facilitators to suggest a structure for performance management against work standards that can be identified through a work analysis could be carried out.

## **CONCLUSIONS**

The research set out to identify and prioritise the competencies required for clinical facilitators. These competencies were established contributing information on a high level as to what these competencies are and where the biggest gaps exist supporting the necessities to consider for training interventions of the clinical facilitators as trainers. This study could contribute to the understanding by hospital services and educators of where to focus to ensure the highest level of competence and efficiency is attained.



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## APPENDICES

### APPENDIX A: DRAFT QUESTIONNAIRE

Adapted from Nkado (1999) and Nel *et al.*(2004).

#### Non-standardized Schedule for Preliminary Interviews

##### Interview Schedule

#### COMPETENCIES REQUIRED OF CLINICAL FACILITATORS

*Thank you for granting me this interview. I intend to take no more than 30 minutes of your time.*

*I am conducting research into the core competencies required of Clinical Facilitators as part of my research report at the Gordon Institute of Business (University of Pretoria).*

*All responses will be analysed for this research. Please feel free to answer in any way you wish. All responses will remain confidential. This interview will assist in developing a detailed questionnaire that will be distributed to stakeholders who are either directly or indirectly involved with clinical facilitators.*

#### Researcher use only:

Interview type

Telephone	
Face-to-face	

Permission to quote in interviewee's words without identification:

Yes	
No	

Copy of report required

Yes	
No	

Date

### Demographic data

Please tick one option per question only

#### Region

Gauteng North east	
Gauteng South West	
KwaZulu Natal	

#### Designation

Current Clinical Facilitator	
Unit Manager	
Nursing Manager	
Educator	
Bridging Course 1st year student	
Bridging Course 2nd year student	
Post basic student	

Please complete next question

If you are currently in a CF position, which is the area of the majority of your CF role?

Allocate a percentage of your time as a CF to a total 100% between the options below.

Basic students	
Post Basic students	
Basic and post basic students	
Permanent staff only	
Basic students + Permanent staff	
Post basic students + Permanent staff	
Non Clinical facilitation roles	

#### Number of years in current position

Less than 12 months (less than 1 year)	
13 to 24 months (1 - 2 years)	
25 - 36 months (2 - 3 years)	
37 to 48 months (3 - 4 years)	
49 - 60 months (4 - 5 years)	
More than 61 months (> 5years)	

#### Do you have a post basic/graduate qualification in Nursing Education?

Yes	
No	

#### Gender

Male	
Female	

## SECTION 2: CORE COMPETENCIES

2.1. For the purposes of this research, core competencies are defined as the skills, knowledge and ability of an individual to perform a task.

Is there anything you would wish to add to this **definition**, especially in the context of clinical facilitators?

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2.2. What in your opinion are the **core** competencies of clinical facilitators?

Technical / basic competencies	Business competencies	Interpersonal / Self competencies
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

2.3. Are there **additional** competencies specifically required if the clinical facilitator is responsible for specialist units?

Technical / basic competencies	Business competencies	Interpersonal / Self competencies
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

2.4. What would you say may be competencies required to **extend** the range of services traditionally provided by clinical facilitators?

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2.5. What are the **main** duties and responsibilities carried out in clinical facilitation?

Duties / Responsibility	% time spent	Daily / Weekly / Monthly
1		
2		
3		
4		
5		
6		
7		
8		

2.6. What decisions are involved in carrying out the duties and responsibilities of clinical facilitation?

Duties / Responsibility	% time spent	Daily / Weekly / Monthly
1		
2		
3		
4		
5		
6		
7		
8		

2.7. What level of education/ qualification do you believe is required to perform this job adequately?

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2.8. What type of training is required to perform this job adequately?

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2.9. What special skills and / or experience is required to perform the job adequately?

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2.10. In your opinion, are there any 'abnormal' working conditions associated with the job of clinical facilitator?

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2.11. Is there anything else you would like to add in terms of clinical facilitator competencies?

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***“THANK YOU FOR YOUR ASSISTANCE IN COMPLETING THIS INFORMATION”***

## APPENDIX B: QUESTIONNAIRE AND COVERING LETTER

Shannon Nell

NETCARE Operations Centre

76 Maude Street

Sandton

July 2007

Dear Madam/Sir

### RE: COMPETENCIES REQUIRED OF CLINICAL FACILITATORS

I invite you to participate in significantly contributing to the identification and clarification of competencies required of the pivotal role of Clinical Facilitation.

As partial fulfilment of the requirements for the MBA degree I am required to submit a research dissertation. The research “**Competencies required of Clinical Facilitators**” will aim to define the prioritised importance of competencies that are essential for Clinical Facilitators working in an acute care private hospital setting. The research will evaluate the gaps between prioritised competencies and the current evidence of the level of use by clinical facilitators currently in these positions.

A survey method using primary data will be conducted using a research questionnaire with data collected over a period of approximately 4 weeks from Nursing Managers, Unit Managers, Clinical Facilitators, Lecturers and students.

I trust the findings from this survey will contribute to the further development of the body of knowledge to possibly contribute to a competency framework for the career path of clinical facilitation in the future.

Kindly complete the attached questionnaire thoughtfully. It was carefully designed to take no more than 30 minutes of your valuable time.

To assure confidentiality, the identity of individuals is not required. Should you wish to receive a copy of a summary of the final data obtained from the research please complete the attached ‘Research Report’ form and fax, email, post it to the details as provided in the form or hand it in separately to the facilitator.

Once you have completed the questionnaire, please hand it back to the facilitator, or fax to

011 217 9869, or email to [shannon.nell@netcare.co.za](mailto:shannon.nell@netcare.co.za)

Yours truly

**SHANNON NELL**

Cell: 082 498 3553



**QUESTIONNAIRE: CONFIDENTIAL**

**Survey on Competencies Required of Clinical Facilitators**

Your responses to the questions contained in this questionnaire will be treated as strictly confidential. All responses to this questionnaire will be aggregated and analysed for this research.

If you wish to receive a copy of the summary of the findings of this survey and wish to remain anonymous, please complete and fax/email separately the **Report Request** form to the details indicated on the form.

**SECTION 1**

**Demographic data**

Please tick one option per question only

**1**

**Region**

Gauteng North East	1
Gauteng South West	2
Kwazulu Natal	3

**2**

**Designation - (please select ONE option only)**

Current Clinical Facilitator	1
Unit Manager	2
Nursing Manager	3
Educator	4
Bridging Course 1st year learner	5
Bridging Course 2nd year learner	6
Post Basic learner	7

Please complete Question 3, 4, + 6 and continue to complete the remainder of the questionnaire



Please skip to Question 6

**Only Current Clinical Facilitator - please answer Question 3 AND Question 4**

**3 + 4**

	Q3. In which areas listed below do you spend the majority of your time?	Q4. For each selection made in Q3 please allocate the % of time spent on each of these to a total 100%.
Basic students ( Assistants, PFN 1st + 2nd year , Bridging Course 1st + 2nd Year students)	1	1
Post Basic students (RN doing an additional Qualification Diploma/Degree)	2	2
Basic and post basic students (as defined above)	3	3
Permanent staff (any category) ONLY	4	4
Basic students + Permanent staff	5	5
Post basic students + Permanent staff	6	6
Non Clinical Facilitation roles	7	7
		100%

**Only Current Clinical Facilitator - please answer Question 6**

**5**

**What are the main duties and responsibilities carried out in clinical facilitation?**

Main duties + responsibilities	% time spent doing each duty + responsibility
1	
2	
3	
4	
5	
6	
7	
8	
<b>TOTAL</b>	<b>100%</b>

**ALL RESPONDENTS TO ANSWER ALL FURTHER QUESTIONS PLEASE**

**6**

**Number of years in current position**

Less than 12 months (less than 1 year)	1
13 to 24 months (1 - 2 years)	2
25 - 36 months (2 - 3 years)	3
37 to 48 months (3 - 4 years)	4
49 - 60 months (4 - 5 years)	5
More than 61 months (> 5 years)	6

**7**

**Do you have a post basic/graduate qualification in Nursing Education?**

Yes	1
No	2

**8**

**Gender**

Male	1
Female	2



**SECTION 2**  
Instructions for completing the questionnaire:  
Read to each competency listed below, please mark with an X over the number on each of the three rating scales to indicate your rating of:  
Part 1: The level of importance of the competency for a clinical facilitator to have.  
Part 2: How evident the competency is in clinical facilitation currently.  
Part 3: What competencies would be the same or different for clinical facilitation in general wards versus specialist units?  
Please see attached descriptor of competencies that can be used to refer to as needed.

Competencies of Clinical Facilitator	Part 1					Part 2					Part 3	
	Importance of competency to a Clinical Facilitator					Evidence competency exists in Clinical Facilitators currently					competency required for Clinical Facilitation in general wards versus specialist units	
	Not Important	Important	Very Important	Poor	Adequate	Excellent	Same	Different				
1 Managing administrative processes	1	2	3	4	5	1	2	3	4	5	1	2
2 Theory application to practice	1	2	3	4	5	1	2	3	4	5	1	2
3 Professional role modelling	1	2	3	4	5	1	2	3	4	5	1	2
4 Evaluation + assessment	1	2	3	4	5	1	2	3	4	5	1	2
5 Initiative	1	2	3	4	5	1	2	3	4	5	1	2
6 Computer literacy & info. technology	1	2	3	4	5	1	2	3	4	5	1	2
7 Compliance to training requirements	1	2	3	4	5	1	2	3	4	5	1	2
8 Teacher	1	2	3	4	5	1	2	3	4	5	1	2
9 Career commitment	1	2	3	4	5	1	2	3	4	5	1	2
10 Adapting to / facilitating change	1	2	3	4	5	1	2	3	4	5	1	2
11 Personal + interpersonal skills	1	2	3	4	5	1	2	3	4	5	1	2
12 Business alignment	1	2	3	4	5	1	2	3	4	5	1	2
13 Technical professional nursing sciences	1	2	3	4	5	1	2	3	4	5	1	2
14 Consistent	1	2	3	4	5	1	2	3	4	5	1	2
15 Coach	1	2	3	4	5	1	2	3	4	5	1	2
16 Learner management + support	1	2	3	4	5	1	2	3	4	5	1	2
17 Feedback	1	2	3	4	5	1	2	3	4	5	1	2
18 Customer service	1	2	3	4	5	1	2	3	4	5	1	2
19 Strategic decision maker	1	2	3	4	5	1	2	3	4	5	1	2
20 Quality orientation	1	2	3	4	5	1	2	3	4	5	1	2
21 Research + development techniques	1	2	3	4	5	1	2	3	4	5	1	2
22 Project participation	1	2	3	4	5	1	2	3	4	5	1	2
23 Crisis management	1	2	3	4	5	1	2	3	4	5	1	2
24 Financial understanding	1	2	3	4	5	1	2	3	4	5	1	2
25 Planning / organising	1	2	3	4	5	1	2	3	4	5	1	2
Competencies of Clinical Facilitator	Part 1					Part 2					Part 3	
	Importance of competency to a Clinical Facilitator					Evidence competency exists in Clinical Facilitators currently					Same / Different competency required for Clinical Facilitation in general wards versus specialist units	
	Not Important	Important	Very Important	Poor	Adequate	Excellent	Same	Different				
26 Facilitating diversity / change	1	2	3	4	5	1	2	3	4	5	1	2
27 People + performance management	1	2	3	4	5	1	2	3	4	5	1	2
28 Communication skills	1	2	3	4	5	1	2	3	4	5	1	2
29 Innovative	1	2	3	4	5	1	2	3	4	5	1	2
30 Building collaborative relationships	1	2	3	4	5	1	2	3	4	5	1	2
31 Stress tolerance	1	2	3	4	5	1	2	3	4	5	1	2
32 Equipment familiarity	1	2	3	4	5	1	2	3	4	5	1	2
33 Leadership	1	2	3	4	5	1	2	3	4	5	1	2
34 Adaptability	1	2	3	4	5	1	2	3	4	5	1	2
35 Education practice expertise	1	2	3	4	5	1	2	3	4	5	1	2
36 Informatics monitoring	1	2	3	4	5	1	2	3	4	5	1	2
37 Develop others	1	2	3	4	5	1	2	3	4	5	1	2
38 Continuously learns	1	2	3	4	5	1	2	3	4	5	1	2
39 Observant	1	2	3	4	5	1	2	3	4	5	1	2
40 Physical robustness / stability	1	2	3	4	5	1	2	3	4	5	1	2
41 Team player	1	2	3	4	5	1	2	3	4	5	1	2
42 Conflict resolution	1	2	3	4	5	1	2	3	4	5	1	2
43 Specialist knowledge	1	2	3	4	5	1	2	3	4	5	1	2
44 Concentrate	1	2	3	4	5	1	2	3	4	5	1	2
45 Initiative	1	2	3	4	5	1	2	3	4	5	1	2
46 OTHER - please specify	1	2	3	4	5	1	2	3	4	5	1	2
47 OTHER - please specify	1	2	3	4	5	1	2	3	4	5	1	2
48 OTHER - please specify	1	2	3	4	5	1	2	3	4	5	1	2
49 OTHER - please specify	1	2	3	4	5	1	2	3	4	5	1	2
50 OTHER - please specify	1	2	3	4	5	1	2	3	4	5	1	2

MY SINCERE THANKS TO YOU FOR COMPLETING THIS SURVEY

SHARON MEI



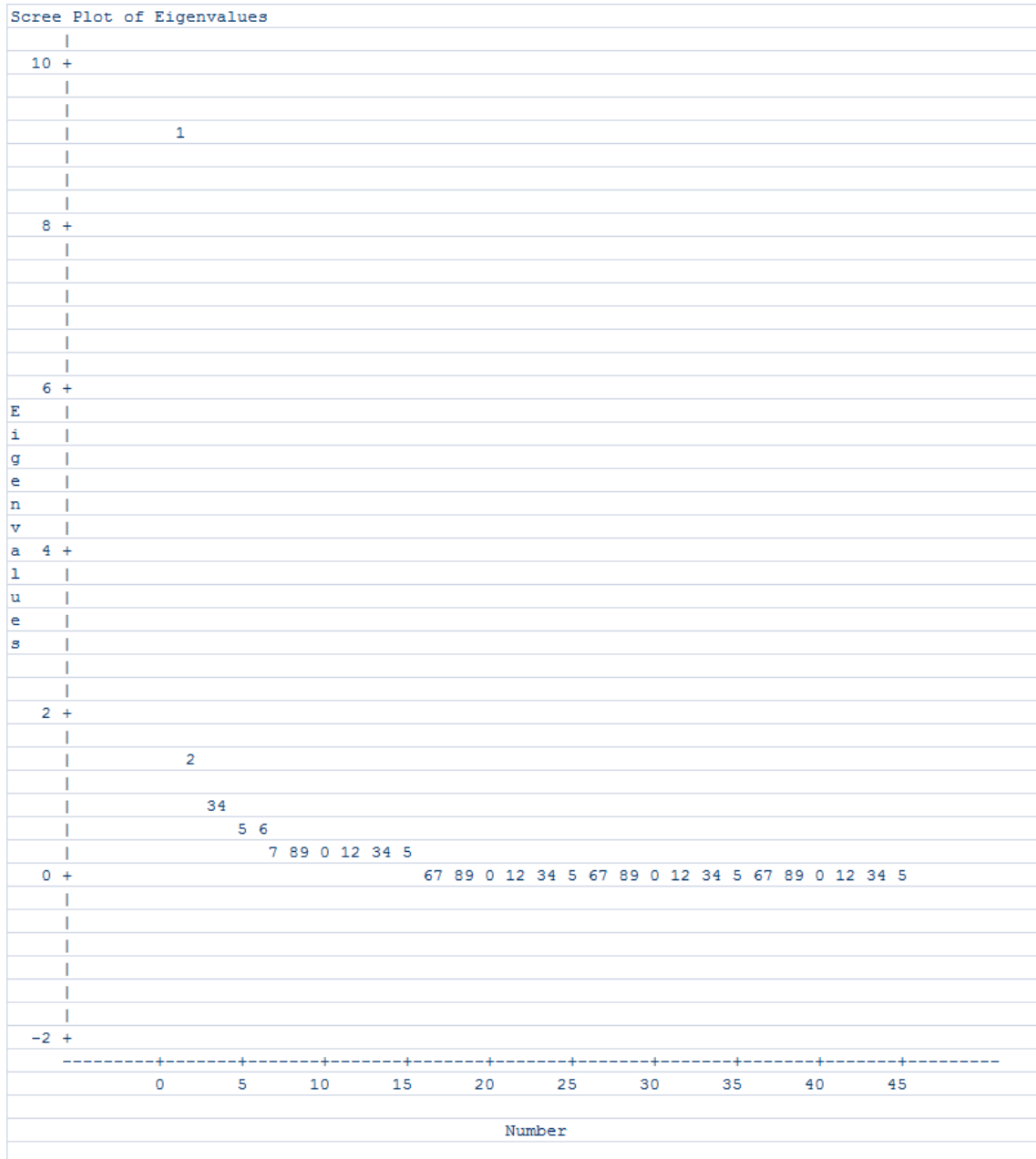
SECTION 7	
Description for clinical competencies	
Please consider the following as a guide for possible descriptions to the competencies listed below	
Competencies of Clinical Facilitator	Description
1 Managing administrative processes	Maintaining effectiveness in administrative work tasks and systems by understanding and systematically following the logic of admin process and work flows and adjusting work situations and processes to support company policies and regulatory systems within a changing culture and work context
2 Theory application to practice	Facilitates ongoing learning opportunities, skill tests and reflections, papers and facilitate structured clinical group practical learning in assessment, accompany learners on a one-on-one basis in the ward setting to facilitate progressive independence and allow a safe environment to apply new knowledge and skills
3 Professional role modelling	Demonstrate and personally skill and competence in practice, model ethical and professional behaviour, committed to self-learning and learning of others
4 Evaluation + assessment	Provide ongoing, timely constructive feedback that relates clinical practice standards to learner performance/practice, conducts formal evidence based evaluations of learner performance, communicates ongoing learner progress to identified participants, contribute to the summative evaluation of learners
5 Initiative	Displays an open-mindedness to the ideas of others and is willing and able to initiate and experiment with ideas and concepts
6 Computer literacy & info. technology	Understands, applying and using IT & technology systems, tools and/or equipment to facilitate and maintain the learning process
7 Compliance to training requirements	Understands the nursing education industry and uses this knowledge to ensure that all educational interventions carried out are done in a manner consistent with professional education requirements as defined by SANC and education provider
8 Teacher	Prepares and delivers clearly structured and interactive (participative) training sessions utilising a number of standard delivery methods, tools, techniques and standard case studies to reinforce learning, evaluates and integrates existing clinical learning processes, standards, technologies and resources to advance best practice in clinical facilitation
9 Care commitment	Establishes good relationships and commitment from others by being open and approachable and helping people feel valued, appreciated and included in discussions, fosters trust by consistently demonstrating alignment to core values
10 Adapting to / facilitating change	Facilitating the implementation and acceptance of change in the workplace, maintains effectiveness when experiencing major changes in work tasks or the work environment, adjusting effectively to new work structures, processes, or to work within a new culture
11 Personal + interpersonal skills	Establishes and maintains good interpersonal relationships by listening to others, objectively considering their ideas and opinions even when they conflict with own ideas, helps people feel valued, appreciated and included in work plans
12 Business alignment	Understands and aligns activities to support the business context, keeping the clinical education vision, hospital goals, policies, processes and procedures of the learner or decision making and action
13 Technical professional nursing science	Achieving a satisfactory level of technical and professional nursing skill and knowledge, keeping abreast of current developments in the area of clinical nursing expertise
14 Consultant	Allow to maintain a particular standard or report a particular task with minimal variation in the facilitator assessment, is able to remove obstacles and requirements and bring them into conformity with one another
15 Coach	Facilitating the practical teaching/learning process, guiding and coaching others through a process of clinical teaching/learning experiences to enable them to observe, practice, acquire and/or strengthen skills
16 Issue management / support	Managing, supporting, assisting and guiding the progress of skill learners through the learning and development process to facilitate the acquisition of skills and capabilities
17 Feedback	Applying assessment methods to determine how well learners are meeting instructional goals, Monitoring and critically evaluating the results of clinical performance and providing timely guidance and feedback to learners to help strengthen specific knowledge and skill areas
18 Customer centric	Identify and make customers and their needs a primary focus of work actions, developing and sustaining mutually customer relationships
19 Strategic decision maker	Examines evidence, judgement and discretion when making decisions and taking action that are consistent with available facts, circumstances and probable consequences. This includes identifying and understanding issues, problems and opportunities, comparing them from different sources to draw conclusions, using effective approaches for choosing a course of action or developing appropriate solutions
20 Quality orientation	Originating action to improve existing work processes and conditions for improved quality or outputs, Accomplishing tasks by considering all areas involved, no matter how small, allowing concerns for all aspects of the job, accurately checking processes and tasks, being watchful over time
21 Research + development techniques	Assessing new knowledge about clinical learning, applying that knowledge to create new and improved clinical learning strategies, methodologies and techniques that better meet the requirements of learners and other stakeholders
22 Project participation	Participating in the planning, organising, staffing and control of work projects
23 Crisis management	Initiating prompt action to assess the nature and root causes of problems and crises, taking prompt action to contain and minimise the damage to ensure recovery from crises
24 Financial understanding	The process of managing financial resources and expenditure, including assessing decisions concerning reporting and budgeting
25 Planning / organising	Establishing, prioritising and re-organising tasks and courses of action for self and others to ensure that work is completed efficiently in a systematised manner
26 Facilitating diversity / change	Creating and maintaining a positive environment where the differences of others are recognised, understood, and valued, so that all can reach their full potential and maximize their contributions
27 People + performance management	Uses appropriate methods and interpersonal style to manage others to facilitate the successful delivery and completion of team goals against performance standards, focuses and guides others in the achievement of work success and plans and supports the development of others through timely guidance and feedback to solve future business imperatives
28 Communication skills	Clearly conveying information and ideas in a way that engages people and helps them to understand and retain the message
29 Initiative	Imaginative, generates ideas, shows ingenuity, thinks up solutions, tries different and novel ways to deal with work problems and opportunities
30 Building collaborative relationships	Working effectively and co-operatively with others to establish and maintain good working relationships that are mutually beneficial
31 Stress tolerance	Maintaining stable performance under pressure or opposition (such as time pressure and job ambiguity), handling stress in a way acceptable to others and the organisation
32 Equipment familiarity	Well acquainted with a variety of medical apparatus and equipment, are able to use, calibrate, trouble shoot and teach as necessary in clinical practice setting
33 Leadership	Inspire and engenders enthusiasm to participate in the learning and encourages commitment to the process, is able to listen equally effectively to learner needs, sense need and provider requirements/demands in a dynamic and diverse environment, is both a customer and employee champion
34 Adaptability	Maintains effectiveness when experiencing major changes in work tasks or the work environment, adjusts to new work structures, processes or to work within a new culture
35 Education practice expertise	Displays an understanding of the theories of education and the key drivers of adult learning by developing and leveraging relevant infrastructure, learning theories, resources and technology to ensure educational standards and best brand visibility
36 Information monitoring	Gathers, collates and interprets student data for needs analysis purposes, expectations and learning objectives, is able to collate and calculate assessment results as well as interpret trends in results to determine student support requirements, is methodical, precise and accurate
37 Develops others	Sets people up for success by identifying obstacles to performance and removing them while simultaneously creating the conditions that facilitate the successful achievement of goals
38 Continuously learns	Keeps up to date with current developments and trends in all relevant technical and professional nursing knowledge areas, demonstrates personal commitment to continuous lifelong learning by actively seeking opportunities to participate with and learn from others in the practical work environment
39 Observant	Able, actively in touch with changes in the local environment, quick to identify potential opportunities, notices the detail or situations
40 Physical skillfulness / dexterity	Energetic, moves quickly, doesn't sit still, enjoys exercise
41 Team player	Seeks to establish and service relationships with internal and external stakeholders/ business partners and others at peer level, to maintain good co-operative and collaborative working relations for effective and efficient execution of learning objectives
42 Conflict resolution	Takes positive action to resolve conflict in a way that addresses issues, dissipates the conflict and maintains collaborative relationships
43 Specialist knowledge	Maintains own clinical and professional competencies by asking questions, monitoring trends and keeping up to date with new developments in clinical practice across a broad range of nursing disciplines
44 Demonstrator	Provides instruction, positive models and opportunities for students to observe the demonstration and application of skills in a patient and supportive environment conducive to learning
45 Initiative	Displays an open mindedness to the ideas of others and is willing and able to initiate and experiment with ideas and concepts



## APPENDIX C: EIGENVALUES

Preliminary Eigenvalues: Total = 15.0120346				
Average = 0.33360077				
	Eigenvalue	Difference	Proportion	Cumulative
1	9.05	7.49	0.603	0.603
2	1.56	0.72	0.104	0.707
3	0.84	0.11	0.056	0.763
4	0.73	0.16	0.048	0.811
5	0.57	0.09	0.038	0.849
6	0.48	0.08	0.032	0.881
7	0.40	0.10	0.026	0.907
8	0.30	0.02	0.020	0.927
9	0.28	0.04	0.019	0.946
10	0.24	0.01	0.016	0.962
11	0.24	0.02	0.016	0.978
12	0.21	0.02	0.014	0.992
13	0.20	0.04	0.013	1.005
14	0.15	0.01	0.010	1.015
15	0.14	0.01	0.010	1.025
16	0.13	0.02	0.009	1.034
17	0.11	0.01	0.007	1.041
18	0.10	0.02	0.007	1.048
19	0.08	0.03	0.006	1.053
20	0.06	0.01	0.004	1.057
21	0.05	0.00	0.003	1.060
22	0.05	0.01	0.003	1.064
23	0.04	0.01	0.003	1.066
24	0.03	0.00	0.002	1.068
25	0.02	0.01	0.002	1.070
26	0.02	0.01	0.001	1.071
27	0.01	0.01	0.001	1.072
28	0.00	0.02	0.000	1.072
29	-0.02	0.00	-0.001	1.071
30	-0.02	0.00	-0.001	1.070
31	-0.02	0.01	-0.002	1.068
32	-0.03	0.01	-0.002	1.066
33	-0.04	0.02	-0.003	1.064
34	-0.05	0.00	-0.004	1.060
35	-0.06	0.00	-0.004	1.056
36	-0.06	0.01	-0.004	1.052
37	-0.06	0.00	-0.004	1.048
38	-0.07	0.00	-0.005	1.044
39	-0.07	0.01	-0.005	1.039
40	-0.07	0.01	-0.005	1.034
41	-0.08	0.00	-0.006	1.028
42	-0.09	0.01	-0.006	1.023
43	-0.10	0.01	-0.006	1.016
44	-0.10	0.04	-0.007	1.009
45	-0.14		-0.009	1.000

## APPENDIX D: SCREE PLOT OF EIGENVALUES







## APPENDIX E: ROTATED FACTOR PATTERN

Rotated Factor Pattern		Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Sect 2 Q 1#34	Adaptability	0.75	0.27	0.17	0.17	0.19	0.05
Sect 2 Q 1#33	Leadership	0.74	0.20	0.26	0.09	0.09	0.19
Sect 2 Q 1#35	Education practice expertise	0.71	0.21	0.12	0.38	0.08	0.08
Sect 2 Q 1#28	Communication skills	0.70	0.30	-0.01	0.03	0.00	0.20
Sect 2 Q 1#30	Building collaborative relationships	0.69	0.21	0.10	0.12	0.11	0.25
Sect 2 Q 1#31	Stress tolerance	0.68	0.22	0.18	0.13	0.04	0.22
Sect 2 Q 1#32	Equipment familiarity	0.64	0.21	0.09	0.35	0.10	0.01
Sect 2 Q 1#29	Innovative	0.63	0.37	0.18	0.14	0.16	0.14
Sect 2 Q 1#40	Physical skilfulness / dexterity	0.63	0.07	0.36	0.34	0.07	0.01
Sect 2 Q 1#37	Develops others	0.57	0.18	-0.10	0.44	0.14	0.22
Sect 2 Q 1#39	Observant	0.57	0.25	0.20	0.53	0.12	-0.08
Sect 2 Q 1#36	Information monitoring	0.56	0.22	0.15	0.19	0.39	0.15
Sect 2 Q 1#45	Initiative	0.44	0.27	0.35	0.36	0.16	0.10
Sect 2 Q 1#27	People + performance management	0.45	0.28	0.19	0.18	0.09	0.38
Sect 2 Q 1#14	Consistent	0.19	0.66	0.03	0.29	0.21	0.25
Sect 2 Q 1#4	Evaluation + assessment	0.19	0.63	0.14	0.15	0.10	0.26
Sect 2 Q 1#2	Theory application to practice	0.24	0.62	0.14	0.18	0.04	0.11
Sect 2 Q 1#17	Feedback	0.19	0.62	0.30	0.11	0.15	0.12
Sect 2 Q 1#15	Coach	0.20	0.59	0.07	0.34	0.15	0.27
Sect 2 Q 1#16	Learner management + support	0.28	0.58	0.30	0.04	0.08	0.21
Sect 2 Q 1#11	Personal + interpersonal skills	0.48	0.56	0.07	0.01	0.21	0.02
Sect 2 Q 1#10	Adapting to + facilitating change	0.37	0.52	0.17	0.14	0.33	0.07
Sect 2 Q 1#20	Quality orientation	0.13	0.81	0.48	0.28	0.18	0.00
Sect 2 Q 1#3	Professional role modelling	0.31	0.51	0.18	0.09	0.02	0.11
Sect 2 Q 1#6	Initiative	0.37	0.46	0.27	0.23	0.20	0.00
Sect 2 Q 1#7	Compliance to training requirements	0.35	0.45	0.12	0.30	0.16	-0.14
Sect 2 Q 1#9	Gains commitment	0.34	0.44	0.30	0.04	0.25	-0.05
Sect 2 Q 1#8	Teacher	0.36	0.35	0.37	0.07	0.06	0.06
Sect 2 Q 1#23	Crisis management	0.18	0.26	0.71	0.04	0.18	0.14
Sect 2 Q 1#22	Project participation	0.17	0.24	0.66	0.18	0.23	0.12
Sect 2 Q 1#21	Research + development techniques	0.08	0.20	0.59	0.33	0.18	0.13
Sect 2 Q 1#19	Strategic decision maker	0.13	0.27	0.58	0.10	0.41	0.05
Sect 2 Q 1#25	Planning + organising	0.25	0.37	0.41	0.10	0.15	0.16
Sect 2 Q 1#38	Continuously learns	0.82	0.14	0.10	0.64	0.05	-0.02
Sect 2 Q 1#43	Specialists knowledge	0.28	0.14	0.44	0.62	0.03	0.07
Sect 2 Q 1#44	Demonstrator	0.30	0.26	0.12	0.62	0.09	0.20
Sect 2 Q 1#13	Technical professional nursing sciences	0.12	0.43	0.19	0.45	0.22	-0.02
Sect 2 Q 1#12	Business alignment	0.08	0.16	0.31	0.17	0.67	0.11
Sect 2 Q 1#24	Financial understanding	0.12	-0.01	0.48	0.03	0.56	0.17
Sect 2 Q 1#6	Computer literacy & info. technology	0.16	0.22	0.09	0.04	0.50	0.15
Sect 2 Q 1#18	Customer centric	0.06	0.40	0.27	0.31	0.48	0.08
Sect 2 Q 1#42	Conflict resolution	0.32	0.29	0.29	0.19	0.14	0.55
Sect 2 Q 1#41	Team player	0.34	0.05	0.25	0.38	0.21	0.43
Sect 2 Q 1#26	Facilitating diversity / change	0.34	0.32	0.25	0.01	0.13	0.43
Sect 2 Q 1#1	Managing administrative processes	0.12	0.20	0.06	-0.06	0.25	0.41

## APPENDIX F: IMPORTANCE RATINGS IN DESCENDING ORDER

Summary Statistics						
Results						
The MEANS Procedure						
Means and standard deviations of the importance ratings (Section 2 Part 1) sorted in descending order.						
Variable	Label	Mean	Std Dev	N	N Miss	
1.04	Sect 2 Q 1#4	Evaluation + assessment	4.66	0.57	211	1
1.03	Sect 2 Q 1#3	Professional role modelling	4.65	0.59	211	1
1.02	Sect 2 Q 1#2	Theory application to practice	4.63	0.56	212	0
1.28	Sect 2 Q 1#28	Communication skills	4.63	0.67	212	0
1.20	Sect 2 Q 1#20	Quality orientation	4.60	0.62	211	1
1.07	Sect 2 Q 1#7	Compliance to training requirements	4.58	0.66	212	0
1.11	Sect 2 Q 1#11	Personal + interpersonal skills	4.56	0.65	209	3
1.16	Sect 2 Q 1#16	Learner management + support	4.56	0.62	212	0
1.17	Sect 2 Q 1#17	Feedback	4.55	0.65	212	0
1.25	Sect 2 Q 1#25	Planning + organising	4.55	0.67	211	1
1.35	Sect 2 Q 1#35	Education practice expertise	4.54	0.68	211	1
1.38	Sect 2 Q 1#38	Continuously learns	4.53	0.68	212	0
1.43	Sect 2 Q 1#43	Specialist knowledge	4.52	0.72	211	1
1.08	Sect 2 Q 1#8	Teacher	4.51	0.74	211	1
1.39	Sect 2 Q 1#39	Observant	4.51	0.67	211	1
1.44	Sect 2 Q 1#44	Demonstrator	4.51	0.71	211	1
1.15	Sect 2 Q 1#15	Coach	4.49	0.68	212	0
1.32	Sect 2 Q 1#32	Equipment familiarity	4.46	0.73	212	0
1.37	Sect 2 Q 1#37	Develops others	4.46	0.68	212	0
1.33	Sect 2 Q 1#33	Leadership	4.45	0.74	212	0
1.34	Sect 2 Q 1#34	Adaptability	4.43	0.74	212	0
1.14	Sect 2 Q 1#14	Consistent	4.42	0.68	212	0
1.41	Sect 2 Q 1#41	Team player	4.42	0.73	212	0
1.30	Sect 2 Q 1#30	Building collaborative relationships	4.41	0.69	210	2
1.31	Sect 2 Q 1#31	Stress tolerance	4.41	0.77	211	1
1.42	Sect 2 Q 1#42	Conflict resolution	4.40	0.75	211	1
1.10	Sect 2 Q 1#10	Adapting to + facilitating change	4.39	0.70	208	4
1.40	Sect 2 Q 1#40	Physical skilfulness / dexterity	4.38	0.74	211	1
1.45	Sect 2 Q 1#45	Initiative	4.37	0.74	210	2
1.13	Sect 2 Q 1#13	Technical professional nursing acumen	4.36	0.70	205	7
1.27	Sect 2 Q 1#27	People + performance management	4.35	0.72	212	0
1.09	Sect 2 Q 1#9	Gains commitment	4.34	0.71	210	2
1.05	Sect 2 Q 1#5	Initiative	4.33	0.75	209	3
1.36	Sect 2 Q 1#36	Information monitoring	4.32	0.73	210	2
1.29	Sect 2 Q 1#29	Innovative	4.31	0.79	210	2
1.23	Sect 2 Q 1#23	Crisis management	4.24	0.86	212	0
1.26	Sect 2 Q 1#26	Facilitating diversity / change	4.21	0.76	211	1
1.18	Sect 2 Q 1#18	Customer centric	4.19	0.79	211	1
1.21	Sect 2 Q 1#21	Research + development techniques	4.12	0.87	212	0
1.22	Sect 2 Q 1#22	Project participation	4.11	0.86	210	2
1.19	Sect 2 Q 1#19	Strategic decision maker	4.10	0.85	211	1
1.06	Sect 2 Q 1#6	Computer literacy & info. technology	4.05	0.89	208	4
1.12	Sect 2 Q 1#12	Business alignment	3.87	0.83	211	1
1.24	Sect 2 Q 1#24	Financial understanding	3.86	0.94	212	0
1.01	Sect 2 Q 1#1	Managing administrative processes	3.82	0.86	208	4

## APPENDIX G: EVIDENCE RATINGS IN DESCENDING ORDER

Summary Statistics					
Results					
The MEANS Procedure					
Means and standard deviations of the <b>evidence</b> ratings (Section 2 Part 2) sorted in descending order.					
Variable	Label	Mean	Std Dev	N	N Miss
Sect 2 Q 2#3	Professional role modelling	3.70	0.91	209	3
Sect 2 Q 2#32	Equipment familiarity	3.68	0.87	210	2
Sect 2 Q 2#7	Compliance to training requirements	3.68	0.89	210	2
Sect 2 Q 2#4	Evaluation + assessment	3.66	0.89	211	1
Sect 2 Q 2#39	Observant	3.65	0.97	211	1
Sect 2 Q 2#40	Physical skilfulness / dexterity	3.64	0.89	211	1
Sect 2 Q 2#43	Specialits knowledge	3.64	1.03	211	1
Sect 2 Q 2#35	Education practice expertise	3.63	0.98	212	0
Sect 2 Q 2#11	Personal + interpersonal skills	3.61	0.89	211	1
Sect 2 Q 2#44	Demonstrator	3.61	0.97	210	2
Sect 2 Q 2#8	Teacher	3.57	0.93	212	0
Sect 2 Q 2#20	Quality orientation	3.56	0.96	209	3
Sect 2 Q 2#34	Adaptability	3.56	1.01	212	0
Sect 2 Q 2#37	Develops others	3.55	0.97	211	1
Sect 2 Q 2#28	Communication skills	3.55	0.99	212	0
Sect 2 Q 2#38	Continuously learns	3.55	1.01	211	1
Sect 2 Q 2#17	Feeback	3.54	1.00	209	3
Sect 2 Q 2#33	Leadership	3.54	1.00	210	2
Sect 2 Q 2#2	Theory application to practice	3.53	0.93	210	2
Sect 2 Q 2#41	Team player	3.53	0.98	209	3
Sect 2 Q 2#16	Learner management + support	3.53	1.04	211	1
Sect 2 Q 2#13	Technical professional nursing acumen	3.52	0.86	207	5
Sect 2 Q 2#14	Consistent	3.50	0.92	212	0
Sect 2 Q 2#18	Customer centric	3.50	0.95	209	3
Sect 2 Q 2#45	Initiative	3.50	0.99	209	3
Sect 2 Q 2#10	Adapting to + facilitating change	3.49	0.90	211	1
Sect 2 Q 2#9	Gains committment	3.49	0.91	209	3
Sect 2 Q 2#15	Coach	3.48	0.96	210	2
Sect 2 Q 2#30	Building collaborative relationships	3.45	0.99	209	3
Sect 2 Q 2#25	Planning + organising	3.45	1.04	212	0
Sect 2 Q 2#36	Information monitoring	3.44	0.96	211	1
Sect 2 Q 2#31	Stress tolerance	3.41	1.01	212	0
Sect 2 Q 2#5	Initiative	3.38	0.97	210	2
Sect 2 Q 2#26	Facilitating diversity / change	3.37	0.91	212	0
Sect 2 Q 2#42	Conflict resolution	3.37	1.04	211	1
Sect 2 Q 2#27	People + performance management	3.34	0.93	212	0
Sect 2 Q 2#29	Innovative	3.32	0.95	207	5
Sect 2 Q 2#1	Managing administrative processes	3.30	0.94	210	2
Sect 2 Q 2#19	Strategic decision maker	3.30	1.02	211	1
Sect 2 Q 2#6	Computer literacy & info. techology	3.30	1.03	211	1
Sect 2 Q 2#23	Crisis management	3.27	1.06	211	1
Sect 2 Q 2#12	Business alignment	3.22	0.91	210	2
Sect 2 Q 2#22	Project participation	3.20	1.00	211	1
Sect 2 Q 2#24	Financial understanding	3.08	1.00	210	2
Sect 2 Q 2#21	Research + development techniques	3.05	1.08	211	1



## APPENDIX H: T TEST FOR COMPETENCIES GREATEST GAP

t Test					
The TTEST Procedure					
T-Tests					
Gap vars	Competency	Mean	Std Dev	t Value	Pr >  t
2	Theory application to practice	1.10	1.04	15.33	<.0001
4	Evaluation + assessment	1.01	0.99	14.81	<.0001
20	Quality orientation	1.03	1.01	14.77	<.0001
28	Communication skills	1.08	1.10	14.38	<.0001
8	Teacher	0.93	0.98	13.86	<.0001
27	People + performance management	1.01	1.06	13.84	<.0001
10	Adapting to + facilitating change	0.91	0.96	13.63	<.0001
11	Personal + interpersonal skills	0.94	1.00	13.58	<.0001
17	Feedback	1.02	1.09	13.55	<.0001
3	Professional role modelling	0.95	1.01	13.48	<.0001
21	Research + development techniques	1.07	1.16	13.43	<.0001
25	Planning + organising	1.10	1.19	13.39	<.0001
36	Information monitoring	0.89	0.96	13.35	<.0001
42	Conflict resolution	1.03	1.13	13.23	<.0001
38	Continuously learns	0.99	1.10	13.14	<.0001
15	Coach	1.01	1.12	13.12	<.0001
26	Facilitating diversity / change	0.84	0.95	12.89	<.0001
35	Education practice expertise	0.91	1.04	12.74	<.0001
7	Compliance to training requirements	0.90	1.03	12.63	<.0001
16	Learner management + support	1.03	1.20	12.42	<.0001
37	Develops others	0.91	1.07	12.42	<.0001
44	Demonstrator	0.89	1.04	12.38	<.0001
23	Crisis management	0.97	1.15	12.23	<.0001
30	Building collaborative relationships	0.97	1.15	12.22	<.0001
5	Initiative	0.96	1.14	12.15	<.0001
33	Leadership	0.91	1.09	12.15	<.0001
29	Innovative	0.99	1.17	12.12	<.0001
14	Consistent	0.92	1.11	12.04	<.0001
31	Stress tolerance	1.00	1.22	11.88	<.0001
43	Specialist knowledge	0.89	1.09	11.88	<.0001
39	Observant	0.85	1.04	11.87	<.0001
41	Team player	0.89	1.08	11.83	<.0001
45	Initiative	0.87	1.05	11.83	<.0001
9	Gains committment	0.85	1.06	11.65	<.0001
13	Technical professional nursing acumen	0.83	1.02	11.62	<.0001
22	Project participation	0.92	1.15	11.54	<.0001
19	Strategic decision maker	0.80	1.01	11.52	<.0001
34	Adaptability	0.87	1.11	11.46	<.0001
32	Equipment familiarity	0.78	1.01	11.19	<.0001
40	Physical skilfulness / dexterity	0.75	0.98	11.03	<.0001
24	Financial understanding	0.79	1.09	10.42	<.0001
6	Computer literacy & info. technology	0.77	1.09	10.16	<.0001
18	Customer centric	0.69	1.02	9.74	<.0001
12	Business alignment	0.66	1.01	9.36	<.0001
1	Managing administrative processes	0.52	1.12	6.71	<.0001
<b>Note: The above table (T-tests) shows the following:</b>					
Column A: The number of the competency (from the questionnaire) that the gap variable relates to					
Column B: The competency that relates to the gap variable					
Column C: The mean of the gap variable					
Column D: The standard deviation of the gap variable					
Column F: The p-values of the t-tests. This is compared to a significance level (usually 0.05) to determine whether the t-test is significant. If the <b>p-value is less than the significance level</b> , the null hypothesis can be <b>rejected</b> . This then implies that the mean of the gap variable is significantly different from 0.					