

**ALIENATION AND ENGAGEMENT AS FRAMEWORK FOR
CHARACTERIZING REGISTRARS' PERCEPTIONS OF THEIR
LEARNING ENVIRONMENT: AN EXPLORATORY QUALITATIVE
STUDY**

By

DR. FRANCIS OKELO OOKO

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DECLARATION

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ABBREVIATIONS

CMSA:	Colleges of Medicine of South Africa
CT:	Computed Tomography
FHS:	Faculty of Health Sciences
FMHS:	Faculty of Medicine and Health Sciences
HEQF:	Higher Education Qualification Framework
HEQSF:	Higher Education Qualification Sub-Framework
HPCSA:	Health Professions Council of South Africa
HREC 2:	Human Research Ethics Committee - 2
MDB:	Medical and Dental Board
MEDUNSA:	Medical University of South Africa
MRI:	Magnetic Resonance Imaging
NQF:	National Qualification Framework
PETM:	Postgraduate Education and Training (Medical) sub-committee
PMHC:	Polokwane/ Mankweng Hospital Complex
RSA:	Republic of South Africa
SGB:	Standard Generating Body
TREC:	Turfloop Research and Ethics Committee
UL:	University of Limpopo
UNIN:	University of the North
WFME:	World Federation for Medical Education
WIL:	Work Integrated Learning

ABSTRACT

Alienation and engagement as framework for characterizing registrars' perceptions of their learning environment: an exploratory qualitative study.

Research into students' learning experiences in higher education has often focussed on what has been described as surface, deep or strategic approaches to learning. The approaches theory has been critiqued because it does not account for the influence of the learning environment (Webb, 1997). The concepts of alienation and engagement may be used to characterize student learning experiences in postgraduate medical training as they incorporate the influence of the learning environment and socio-cultural characteristics (Mann, 2001). The purpose of the present study was to explore the registrars' perceptions of their learning environment through the lens of alienation and engagement. An exploratory qualitative study comprising twelve semi-structured interviews was conducted among registrars at the University of Limpopo, Faculty of Health Sciences between June and October 2015. Qualitative methods were used to analyse the results. Different degrees of alienation and/or engagement could be discerned from the registrars' perception of their educational environment with regard to: the curriculum design and implementation; integration of theoretical and practical teaching; support from the supervisors, the university, and the teaching hospitals; and inter-professional relationships at the hospitals. This research points to a number of suggestions for future practice including that fostering closer relationships between the institutions' administrative systems and the registrars could enhance engagement and reduce alienation.

Keywords: Learning environment; alienation; engagement; postgraduate medical education; approaches theory; learning experiences.

OPSOMMING

Vervreemding en verbintenis as 'n raamwerk vir die karakterisering van kliniese assistente se persepsie van hul vakgebied: 'n verkennende kwalitatiewe studie.

Navorsing met betrekking tot 'n student se leerondervinding in hoër onderwys word hoofsaaklik bepaal deur die oppervlakte-, diepte- of strategiesebenadering van sy/haar studierigting. Die benaderingsteorie het egter kritiek ontlok aangesien dit nie invloed van die leeromgewing asook die sosio-kulturele eienskappe van daardie omgewing in berekening bring nie (Webb, 1997). Die konsep van vervreemding en verbintenis kan eerder gebruik word om 'n student se leerondervinding van nagraadse mediese opleiding te bestudeer aangesien die wel die leeromgewing asook sosio-kulturele omgewing waarin hy/sy hom/haar bevind, insluit (Mann, 2001). Die doel van hierdie studie was om die kliniese assistente se persepsie van vervreemding en verbintenis in hul leergebied waar te neem. 'n Verkennende kwalitatiewe studie bestaande uit twaalf semi-gestruktureerde onderhoude is gevoer met kliniese assistente van die Unversiteit van Limpopo se Gesondheidswetenskappe Fakulteit in die tydperk van Junie tot Oktober 2015. Toepaslike benaderings is gebruik om die kwalitatiewe data te analiseer. Verskillende grade van verbintenis en/of vervreemding kon onderskei word in die kliniese assistente se persepsies van hul vakgebiedomgewing met betrekking tot die leerplanontwikkeling en -toepassing, integrasie van teoretiese- en praktiese onderrig, onderskraging van hul studieleiers, die universiteit en akademiese hospitale asook hulle onderliggende professionele verhoudings by die hospitale. Hierdie navorsing het, onder andere, bewys dat die koestering van verhoudinge tussen instansies se administratiewe bestuurstelsels en die kliniese assistente versterk moet word om vervreemding te verminder.

Sleutelwoorde: Studieveld omgewing, vervreemding, verbintenis, nagraadse mediese-onderrig, benadering, leervaardighede

CHAPTER ONE: ORIENTATION OF THE STUDY

1.1. Introduction

Students' approaches to learning describe what the students do when they are learning and why they learn in a particular way. Research on student learning has focussed on addressing the relationship between the perceptions of the learning environment, the learning approaches, and the learning outcomes (Trigwell and Prosser, 1991). Earlier research demonstrated the relationship between the academic learning environment and the students' approaches to study (Entwistle and Ramsden, 1983; as cited by Trigwell and Prosser, 1991). The mixed method research using both qualitative and quantitative techniques showed that it was the student's perception of that environment (which may be different from the reality) that related to the approaches to study (Trigwell and Prosser, 1991). Another qualitative study carried out among university students in Hong Kong showed that motivation for learning was affected by the teaching and learning environment (Kember et al, 2010). The present study focussed on the students' perceptions of their learning environment in the context of a health sciences faculty where they are studying for master of medicine degree (MMed) in different medical disciplines. Qualitative research techniques were used to collect and analyse the data in this study.

1.2. Background to the study

How postgraduate students' perceive their learning environment in a medical setting has not been extensively researched, particularly in comparison to the many studies that have explored undergraduate students' perceptions of their learning environment (Genn and Harden, 1986; Genn, 2001a; Genn, 2001b; Mayya and Roff, 2004; Youssef et al, 2013; Khursheed and Baig, 2014; Veasuvalingam and Arzuman, 2014). Few studies which reported on the postgraduate learning environment in South Africa could be found in the literature, particularly not in medical education, yet environmental and sociocultural factors are becoming increasingly important in this area (Bezuidenhout et al, 2011). Challenges in the postgraduate medical training have been attributed to factors such as: external and internal pressures, difficulties between the students and their teachers, the course

curriculum and philosophy, inadequate teaching and learning facilities, shortage of academic staff, difficulties between the students and the institutional administrative systems, and workplace interpersonal differences (Whitfield and Fahrson, 2001).

Most of the students enrolled for postgraduate medical specialization courses are required to provide medical services in their training hospitals. They often encounter work related pressure in their teaching hospitals, particularly heavy patient loads (Whitfield and Fahrson, 2001; Chirdan et al, 2010; Elhalaby et al, 2012). Interpersonal difficulties which could pose problems in their learning environment may involve the students and other professionals at the workplace, or may occur between the students and their teachers (Whitfield and Fahrson, 2001). Additionally, difficulties may occur as a result of the unavailability of medical facilities in the university teaching hospitals, as well as the shortage of medical specialists who are the primary trainers of the students (Naicker et al, 2009; Elhalaby et al, 2012). Issues that centre on the curriculum such as the course philosophy, lack of direction, lack of teaching, inadequate institutional support, assessments, and research based dissertation requirements may also present a challenge to the students (Whitfield and Fahrson et al, 2001; Couper et al, 2012). The students are also likely to experience financial and family pressures since they are often adult students with family obligations. This study therefore investigated how registrars enrolled in 2015 at the University of Limpopo, Faculty of Health Sciences perceived their learning environment.

1.3. Rationale for the study

Previous research showed that students are affected by their learning environment and tend to adopt either a surface, deep, or strategic approach to learning in response to their situation (Trigwell and Prosser, 1991). However, the approaches theory does not account for the influence of the learning environment on the students' learning experiences (Webb, 1997; Mann, 2001; Case, 2008). The learning environment and an individual student's learning process exist together and both influence one another in a continuous interplay (Vermetten et al, 2002). However, it is the student's perceptions of the learning environment rather than the environment itself that has got more influence on how students learn (Entwistle, 1991). Therefore,

one way of assessing students' learning experiences is by investigating how they perceive their learning environment. Bezuidenhout et al (2011) reiterates the importance of the role of the learning environment and socio-cultural factors in the learning process and calls for more work to be done to fully understand the impact these factors have on students' outcomes. Understanding the students' perception of their learning environment may help one to gain insight into the strengths and weaknesses of the learning context, particularly in the relatively new medical education training sites such as the University of Limpopo (Youssef et al, 2013; Khursheed and Baig, 2014; Tsai et al, 2014; Veasuvalingam and Arzuman, 2014). Exploring and identifying the students' learning needs and expectations may also form a useful background for adopting measures that might enhance positive perceptions of the learning environment (Pai et al, 2014).

1.4. Research question

What are the perceptions of the learning environment among registrars enrolled for their postgraduate structured specialization programmes at the University of Limpopo, Polokwane – Mankweng Campus?

The aim of the study was to explore how the registrars perceived their learning environment. The specific objectives were: to describe their perceptions from the perspective of a particular theoretical framework; and to suggest how their experiences could be used to create a learning environment that fosters student engagement.

1.5. Research design

An exploratory qualitative study was performed. The research was underpinned by interpretivist approach and sought to obtain an understanding of the perceptions of the learning environment from the students' perspective. McMillan (2015) explains that interpretivist is a worldview to a study design based on the assumptions that: reality is context dependent and knowledge in a qualitative enquiry is derived from the experiences of both the participants and the researcher, which in turn affects what is conceptualised. These assumptions may allow for the individual participant's

unique or subjective perspective to be heard, and for the researcher to develop an understanding of the subject from the perspective of the participants in a particular teaching and learning experience, or environment (McMillan, 2015). The approach was chosen for this study because perceptions or feelings are complex, unstable and non-linear responses which require study designs that could allow some flexibility in the interpretation of naturally emerging insights (Bunnis and Kelly, 2010). The reality of the learning environment was captured by the researcher based on the subjective responses of the students on how they have constructed their feelings and their interpretation of the overall environment where they train (Botma et al, 2010; Ringsted et al, 2011).

1.6. Setting

The study was carried out in the School of Medicine at the Faculty of Health Sciences of the University of Limpopo, in Limpopo Province, South Africa. University of Limpopo (UL) came into being as a result of the merger of the University of the North (UNIN) and the Medical University of South Africa (MEDUNSA) between 2002 and 2005 (UL, 2015). Before the merger, UNIN offered only humanities and non-medicine healthcare based programmes such as optometry and nursing. The MEDUNSA component offered both undergraduate and postgraduate medical programmes, as well as other non-medicine healthcare programmes. The Polokwane - Mankweng training platform was a satellite training site for MEDUNSA then and offered mainly postgraduate medical programmes. However, the merger between UNIN and MEDUNSA was reversed in December 2014. Since then, the Polokwane - Mankweng training platform became the School of Medicine of the University of Limpopo. The MMed programmes at the training site were then re-accredited by the Health Professions Council of South Africa (HPCSA) for a period of five years. Sixteen postgraduate programmes leading to MMed degrees in specialization areas were accredited in February of 2015 (Table 1.1).

Table 1.1: List of postgraduate programmes offered at UL

Programmes	Programme clusters
General surgery; Otorhinolaryngology ; Anaesthesiology; Obstetrics and gynaecology; Ophthalmology; Plastic and reconstructive surgery	Surgical disciplines
Internal medicine; Family medicine; Public health medicine; Dermatology; Radiation oncology; Psychiatry; paediatrics and child health	Consulting disciplines
Forensic pathology; diagnostic radiology	Diagnostic disciplines

1.7. Report outline

Chapter one has provided a brief overview of the study. Drawing on the literature, chapter two explores the concepts of student learning, the learning environment, and students' perceptions. In addition, the theoretical construct of alienation and engagement is described and discussed. These form the conceptual and theoretical framework on which this study is based. An in-depth discussion of the context in which registrars undertake MMed training in South Africa, as well as the context at UL are discussed in chapter three. The learning environment is described in detail to help the reader understand the context of the study. Chapter four describes the methodology of the study, including justification of methods, data collection and analysis. The findings of the study are presented in chapter five. The findings are discussed in chapter six, where they are examined in relation to the context and postgraduate medical education in South Africa in general. Practical implications of the findings as well as suggestions on how learning may be enhanced in this setting are discussed in chapter seven.

CHAPTER TWO: THEORETICAL PERSPECTIVES

2.1. Introduction

Learning is an active process whereby the student constructs knowledge and understanding of a subject. Intentional learning may be defined as the internally motivated quest for the understanding of a subject matter, characterised by purpose, planning, and the ability of the student to exert conscious control over their learning in a metacognitive manner (Vosniadou, 2003). The learning is motivated with intentions and is usually goal directed. It is also persistent, and purposeful energy is applied to both the strategies and processes. Both the student's individual characteristics and contextual factors are important in intentional learning (Bereiter and Scardamalia, 1989; Vosniadou, 2003). Student factors such as beliefs, goals, motivation and interest, attitude towards the course, reasoning process, and strategies adopted during the process play an important role in learning (Vermunt, 2005). Equally important are the educational setting where teaching and learning takes place (Vermunt, 2005). Additionally, the wider social and cultural environment in which the student lives and learn is also important (Vosniadou, 2001; Bezuidenhout et al, 2011).

Even though the student should take responsibility for directing and controlling their own learning, an optimum intentional learning environment requires a mutual relationship between the student and the teacher, each of whom have specific roles to play. The teachers' role is to be a mentor or coach, advising and training the student; whereas the students' role is to question, connect, reflect and apply the acquired knowledge to develop or improve skills and achieve their intended goal (Harden and Crosby, 2000; McLean et al, 2008).

Students' approaches to intentional learning was described in a qualitative research carried out by Marton and Saljo (1976) that categorised it into surface-level approach or deep-level approach. According to these two researchers a deep-approach is distinct from a surface-approach with regards to the intentions and the way the student goes about acquiring the knowledge. When adopting a deep-approach, the student is actively involved in searching for relationships between concepts and meaning, whereas in surface approach the intention of the student is

to complete the requirements of an externally imposed task by memorising the facts or by rote-learning. Since it was described, the result of Marton and Saljo's (1976) phenomenographic research gained much credibility and use in characterizing students' learning experiences in higher education for nearly four decades (Entwistle, 1997; Vermunt and Verloop, 1999; Entwistle and Peterson, 2004). The concept of approaches to learning places emphasis on the learning processes and outcomes (Marton and Saljo, 1976).

The approaches theory has however been criticised in terms of its validity as a description for important differences in the way students learn because it does not take into account the influence of the learning environment and socio-cultural factors (Webb, 1997; Mann, 2001; Haggis, 2003; Case, 2008). Scientific knowledge is believed to be constructed through interaction of the student with the physical and social learning environment whereby the empirical data is validated or modified by the scientific community (Leach and Scott, 2003). These two researchers argue that learning and meaning making originate in social interactions between individuals, or from the interaction of individuals with cultural setting available to them in terms of learning opportunities and resources. Even though students may bring some prior knowledge to a teaching situation, the pre- instructional knowledge is usually modified by teaching and learning methods that students encounter during the educational experience (Leach and Scott, 2003).

In light of the above, the influence of the learning environment in the education domain is reviewed in this chapter. The concept of alienation and engagement is introduced and reviewed in terms of how it may be used to characterize student learning experiences in postgraduate medical training. Justification is also presented on why alienation and engagement may offer an informative way of gaining insight into the medical students' learning experiences as it incorporates the influence of the learning environment.

2.2. The learning environment

The learning environment has previously been defined as "everything that is happening in the classroom or a department, faculty, or a university" (Backhshaliabad et al, 2015). The learning environment is characterised by learning

tasks and the physical and socio-cultural setting in which the tasks are being undertaken. Students' factors such as personality, prior knowledge, intellectual abilities, learning style and attitude to the course, motivation, work habits and study skills also form part of the learning environment. It encompasses the overall atmosphere and characteristics of the learning institution, its curriculum, its values, and the kind of life that is portrayed and perpetuated (Genn, 2001a; Genn 2001b; Murakami et al, 2009; Youssef et al, 2013). The learning environment also includes the extent to which the learning situation fosters scholarly or intellectual activities, friendliness, co-operation and supportiveness, thereby contributing significantly to the learning experience (Genn and Harden, 1986). Learning can be enhanced by creating a learning environment that is positive, challenging, respectful and engaging (Reardon, 1999 as cited by Gravett, 2005: 36). However, the overall effect of the learning environment appears to be mediated by the student's own perception of the environment (Entwistle and Tait, 1990).

The learning environment is an important determinant of the students' behaviour (Genn, 2001a). Genn (2001a) argues that the behaviour and attitude of a student during a learning experience is related to the way he / she perceives the environment. The same learning environment may be perceived differently from one individual to another, culminating in a variety of learning experiences, which in turn shapes the students' behaviour in different ways (Roff and McAleer, 2001). The students' perception of their learning environment further contributes significantly to their achievements, satisfaction and success (Genn, 2001b; Mayya and Roff, 2004; Youssef et al, 2013). How a student perceives an environment may lead them to either a deep-approach or a surface-approach to learning (Case 2007; Mann, 2001). Case (2008) and Mann (2001) however, proposed the concept of alienation and engagement as a possible theoretical framework for characterizing students' learning experiences instead of the approaches theory. They argued that the concept of alienation and engagement may provide a more powerful, broader and realistic view of a student's learning experiences, as it takes into account the approaches to learning perspective, as well as factors within the learning environment which determine performance (Mann 2001; Case 2008).

2.3. Alienation

Alienation is defined in this report as “a social or psychological state of separation from self, others, social life generally, or the products or processes of one’s labour” (Calhoun, 2002). Alienation may also be viewed as an aberration in social relationships characterized by a low degree of integration and a high degree of distance or isolation between individuals, or between an individual and a group of people in a work or learning environment (Schabracq and Cooper, 2003). Alienation, therefore, is a concept which always points to a relationship between a subject and some aspects of their environment, real or imagined. The concept of alienation as applied to a higher education setting may be considered as deficiency in the experience that students would have liked to have at the learning institution (Case, 2007). In her experience with engineering students at a university in South Africa, Case (2007) found a possible focus of the desired relationship or experience to be the student’s studies, the university environment, the social circumstances at home, the career, one’s classmates, or the teachers. In a related study carried out among postgraduate pathology students at a tertiary teaching hospital in South Africa, Bezuidenhout et al (2011) identified the individual, the workplace, home circumstances, and socio-demographic background as the four different dimensions that had an impact on their perception of the learning environment (Table 2.1).

Table: 2.1: The four dimensions of alienation and engagement. Adapted from Bezuidenhout et al, (2011)

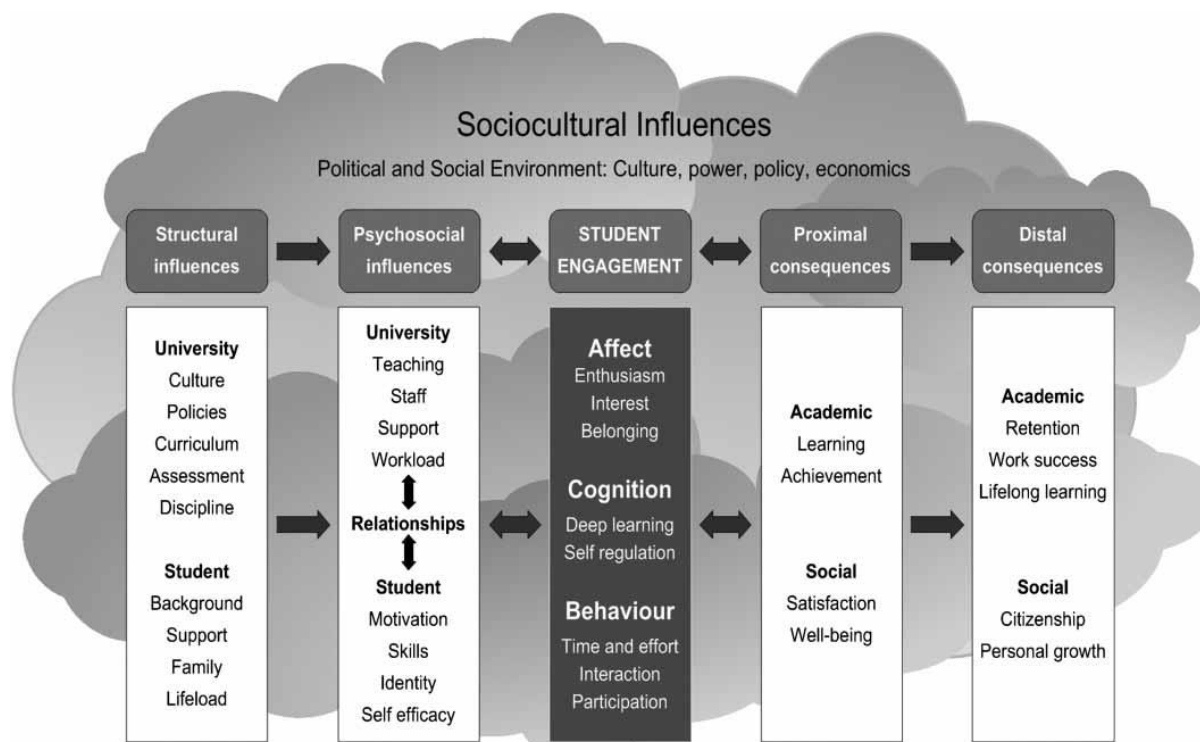
	THE INDIVIDUAL	THE HOME	THE WORKPLACE	THE INSTITUTION
ENGAGED	Choice of the program Preferred choice Loves the specialty Personal attributes Positive attitude Inquisitive mind Motivated Strategies for coping Balanced life	Positive family Background supportive Family expectations high	Attitude to learning Understand workplace-based learning; pattern recognition; integration; intellectual challenge; place and value of research Academic role models Balanced; gives perspective; dynamic, strong leader; professional; dedicated; efficient; hardworking; liberal thinker; apply knowledge; appreciative; passion Lecturers Accepting; prepared to listen; willingness to teach; accommodating; enjoy teaching; appreciative; humble	Liked speciality Institution's good standing Role models Good line-function structure Information is freely available
ALIENATED	Choice of the program No other alternative Strategies for coping Depend on others rather than self Blame workload	Conflict between family and work	Attitude to learning Workplace learning and unstructured academic activities; no place for own initiative Impact of studies Feeling persecuted, insecure, unmotivated; loss of self-confidence, despondent, pessimistic, more subdued Lecturers (consultants) Does not inspire/appreciate creativity; focus on negative feedback; belittle you	No training for registrars from the faculty No information about faculty structures Expensive fees Institution's reputation

Both these studies enable one to explore students' perceptions of their learning experiences and obtain a sense of whether these experiences are either alienating or engaging.

2.4. Engagement

The role of student engagement on learning and achievement in higher education is increasingly being recognised (Kahu, 2013). The state of engagement may be equated to what is believed to happen during a deep-approach to learning. In deep-approach to learning where the focus is on seeking meaning and understanding of the subject matter, the student is holistically engaged with the subject, enjoys the intellectual challenge, examines logic, and argues critically in a reflective manner, using evidence to arrive at a conclusion (Entwistle and Peterson, 2004; Case, 2007). In this report student engagement is considered to be the quality of effort students themselves devote to educationally purposeful activities that contribute directly to the desired outcomes (Krause and Coates, 2008). It is also the extent to which the student focuses on activities that are linked with high quality outcomes, presented on a continuum from alienated to engaged, with the same student sometimes exhibiting different levels of engagement (Krause and Coates, 2008; Bryson and Hand, 2007). Engagement can be discerned from the way a student develops independent thinking and shows more autonomy and responsibility in their learning. Zyngier (2008) elaborates on student engagement as a blend of behavioural, emotional, and cognitive dimensions. The behavioural dimension involves the student carrying out learning tasks, following the rules, persisting and actively participating; the emotional (affective) dimension focuses on interest, values and feelings towards the institution, the course, and the teachers; whereas the cognitive dimension includes motivation, effort and use of strategy (self-regulation) in their learning (Zyngier, 2008).

Figure: 2.1: The conceptual framework of engagement, antecedents and consequences (Kahu, 2013):



Kahu (2013) proposed a conceptual framework that depicted student engagement and how it is influenced by the three psychological dimensions (affect or emotion, cognition, behaviour) as shown in figure 2.1 above. The engagement is further embedded in and modified by the socio-cultural context, such as the university, the relationships, and other student variables such as motivation, skills, identity and self-efficacy (Kahu, 2013). The framework distinguishes between the factors that influence engagement (antecedents), the engagement itself, and the effect of the engagement (consequences). Important institutional responsibilities such as provision of support services that afford ready environment for engagement but do not represent the state of engagement as such are antecedents. Examples of student related antecedents of engagement are personality, academic skills, motivation, and expectations. The outcome or consequences of engagement are manifestations of how the student time has contributed to the future life skills, development of personal values, and social responsiveness in general. The immediate outcomes of engagement such as learning, achievement, satisfaction, and well-being are classified as proximal consequences; whereas long term outcomes such as work success, lifelong learning, personal growth, and citizenship

are distal consequences (Kahu, 2013). The framework also recognises the bi-directional nature of influences between engagement and both the immediate antecedents and proximal consequences as depicted by the two-way arrows (Kahu, 2013). This report draws upon Kahu's (2013) framework because it encapsulates most of the factors that lead to engagement, the engagement itself, as well as the consequences of engagement.

Following a review of the literature, Zepke and Leach (2010) identified four perspectives which are in agreement with Kahu's (2013) framework with regard to the bi-directional nature of influence between the engagement, its antecedents and consequences. These authors concluded that: engaged students are intrinsically motivated and want to exercise their agency; there is a transactional engagement between the students and the teachers; institutions provide a favourable environment that supports learning; and active citizenship, in which the students and the institution interact to solve challenges to social beliefs and practices (Zepke and Leach, 2010). The four perspectives can be used as a point of departure for the development of proposals for action to enhance engagement among students.

2.5. Conclusion

The primary purpose of higher education institutions is to develop students into critical thinking beings capable of life-long learning, personal engagement, and inclusion in the society (Mann, 2001). How students approach their learning is important in achieving this goal. The concept of approaches to learning as developed by Marton and Saljo (1976) differentiated between deep- and surface-approach, emphasising mainly an individual student's cognitive abilities. Subsequent related studies suggested that student awareness of their learning environment is related to the approach they adopt (Trigwell et al, 1999). The effect of the learning environment is however mediated by how the students perceive their own environment (Entwistle and Tait, 1990). The way a student perceives their learning environment is influenced by its characteristics and the student's socio-cultural factors (Mann, 2001; Case, 2007; Case 2008; Bezuidenhout et al, 2011). The learning environment and socio-cultural characteristics of the student are increasingly becoming important determinants of how students learn (Bezuidenhout et al, 2011).

The concept of alienation and engagement in higher education takes into account the approaches to learning perspective as well as factors within the learning environment that determine how students perform in their courses (Mann 2001; Case 2008). Exploring the students' perceptions allows us to categorize them as having either alienating or engaging learning experiences, as well as allows us to gain insight into strengths and weaknesses of a learning environment (Mann 2001; Case, 2007; Case 2008; Bezuidenhout et al, 2011).

CHAPTER THREE: CONTEXTUALIZATION

3.1. Introduction

This chapter provides an overview of the postgraduate medical specialist training in South Africa. It gives an in-depth analysis of the postgraduate medical specialist learning environment and the specific context within which this study was undertaken. It also elaborates on the tasks that should be accomplished by the students before they are eligible for registration as specialists in a clinical discipline in South Africa. The chapter closes with highlights of the challenges that accompany the Master of Medicine (MMed) training from a teaching and learning perspective.

3.2. The context of MMed programmes in South Africa

3.2.1. Accredited academic departments

The Master of Medicine (MMed) is a postgraduate academic degree awarded by faculties of medicine in South Africa to registered medical practitioners following a specified period of instruction in a clinical discipline, examinations, and research. The postgraduate student undergoing MMed training programmes in a recognised medical specialty is known as a registrar. The usual period of instruction and practical experience at an academic hospital attached to a university faculty of health sciences is between four to five years depending on the discipline. The training programmes are structured to meet the Health Professions Council of South Africa (HPCSA) requirements for eligibility and recognition as a medical specialist.

The HPCSA is a statutory body created by laws of the Republic of South Africa to guide and regulate the health professionals in the country in order to protect the public (HPCSA, 2013). The activities of the HPCSA are co-ordinated by professional boards that deal with matters relating to the specific professions. Medical, dental and medical science practitioners are regulated by the Medical and Dental Board (MDB). The MDB's sub-committee on Postgraduate Education and Training (Medical) [PETM] is responsible for monitoring specialists' training. The specialist training time is recognised only when it takes place in an HPCSA-accredited academic

department within a teaching hospital controlled by a university with a Faculty of Health Sciences or a School of Medicine (HPCSA, 2010).

3.2.2. Requirements for a registrars' post

A prospective student who wishes to be admitted at a university for a MMed programme must be a graduate in medicine registered with HPCSA in the independent practitioners' category. He or she must have completed the prescribed three years' internship and community service periods at HPCSA-approved hospitals - a pre-requisite for registration by HPCSA in the independent medical practitioners' category. The selected student is then jointly appointed by an academic hospital and a university against an approved training number which the HPCSA allocates to the university teaching department. The training numbers are allocated after inspection and accreditation of the training facilities by the PETM. The accreditation is based on the specialist trainer to trainee ratio and the availability of facilities that can support training of a medical specialist in a department.

3.2.3. Workplace-based learning at a teaching hospital

The registrar then undergoes workplace-based learning. Workplace learning is defined as lessons and training that people receive while they are at work with an aim of developing the individual, while at the same time developing the organization through contribution to production, effectiveness and innovation (Lee et al, 2004). The workplace-based training involves participation of the registrars in the healthcare delivery and patient care activities in the training hospitals under supervision of medical specialists. At the same time the registrar also undergoes formal teaching and tutorials which they are required to integrate into their practical activities. In the course of their training the registrar completes a series of assessment activities. These activities are aimed at promoting their learning, as well as providing evaluation of their competence, knowledge and skills, in order to fulfil the requirements of the national examinations body, the universities, and the professional regulatory body – the Health Professions Council of South Africa.

3.2.4. *The summative assessments*

The Standards Generating Body (SGB) sub-committee of the Medical and Dental Board (MDB) recommended new requirements for registration of specialists with effect from 1 January 2011 (HPCSA, 2010). The changes were meant to align the qualifications of the medical specialists with the Higher Education Qualifications Framework (HEQF) of South Africa. The changes were also meant to ensure uniform standards of training with respect to the requirements for a common core syllabi and assessment methods across all universities in South Africa offering similar qualifications. The HEQF provides a framework for integrating all higher education qualifications into the National Qualification Framework (NQF) for the purpose of generating comparable national and international standards and quality assurance (RSA, 2007). Under the new dispensation the prospective specialist must fulfil the following requirements before registration by the HPCSA as a specialist:

- Provide evidence of assessment during their training
- Provide proof of completion of a national professional examinations at exit level I and II (Part I and II)
- Complete a research component on a relevant topic under supervision of the head of academic department in the university where they are enrolled

The national professional exit level I and II examinations are conducted by the Colleges of Medicine of South Africa (CMSA) for all candidates who wish to register their speciality in South Africa. The CMSA is a national examining body appointed by the HPCSA to conduct examinations and evaluations as requirements necessary for partial fulfilment of the conditions for registration of a medical specialist in South Africa (CMSA, 2014). The MMed programmes and CMSA programmes run concurrently. Part I examinations are usually done after a minimum instruction period of one year. It evaluates the basic foundation knowledge of the specialty. The registrar is eligible for Part II examinations after a minimum of three year's instruction period in an approved training post. Part II examinations evaluate the overall knowledge and skills that the candidate has attained, and which is expected of a specialist in the specialty. Even though it is the CMSA who conducts Part I and Part II examinations, the results of these examinations may be used for credits towards the MMed programme.

A research study is required besides Part I and Part II. The research component should fulfil the required norms of a scientific study. Firstly, a research protocol should be compiled and approved by an ethics committee. Thereafter a regular progress report on the research process is required. Finally the results should be reported in the form of a dissertation or mini-dissertation according to an acceptable scientific format. The research component, which is examined at the university level, carries a minimum of 60 credits in the NQF. Its results are used as credit for Part III of the MMed degree.

3.2.5. Formative assessments

The formative assessments are in the form of a learning portfolio with a stipulated minimum number of procedures that the trainee should perform, both under observation of a supervisor and independently. The title and summary of the research project which he/she will submit to their university for MMed qualification also forms part of the formative assessment. Some specialties require evidence of statistical training and practice before the student is eligible to enter the final summative assessment. This is in the form of a critical review of an article in a relevant medical journal.

3.2.6. The role of the Universities

Although the national professional examinations are conducted by the CMSA, the universities are responsible for determining the curricula, the research component, and for providing an optimum educational environment that enables the registrar to achieve the learning outcomes that meets the HPCSA requirements for specialization (CMSA, 2015). They are also responsible for awarding the MMed degree once the registrar has successfully completed the MMed programme.

3.3. The setting

3.3.1. The teaching Hospitals

At the University of Limpopo (UL), Faculty of Health Sciences, the registrars undergo workplace-based training in the two tertiary hospitals in Limpopo Province, namely the Pietersburg Hospital and Mankweng Hospital. Pietersburg Hospital is located in

Polokwane in an urban setting, whereas Mankweng Hospital is located approximately 30 km away in a rural township setting. Most clinical disciplines are located at both Pietersburg and Mankweng Hospitals, except a few that are found either at Pietersburg Hospital only or at Mankweng Hospital only. The disciplines that are found at both hospitals are general surgery, anaesthesiology, obstetrics and gynaecology, paediatrics and child health, internal medicine, dermatology, family medicine, diagnostic radiology, psychiatry, and public health medicine. Radiation oncology, forensic pathology and otorhinolaryngology are found at Pietersburg Hospital, whereas ophthalmology is based at Mankweng Hospital only. Even though the two tertiary hospitals are administratively independent, there is only one joint academic department for each of the disciplines found at both Mankweng and Pietersburg Hospitals.

The two hospitals have a high clinical staff vacancy rate due to difficulties of attracting the needed professionals, particularly the medical specialists (PMHC, 2009). The medical specialists or consultants are the teachers and supervisors of the registrars. In some departments there is only one consultant who also doubles up as the head of the department. This tends to limit the time that the consultant can dedicate to supervising the registrars' academic work as well as for instructions and demonstrations in the clinical area. The two hospitals also lack some of the medical equipment such as computed tomography (CT) and magnetic resonance imaging (MRI) scanners that are required for proper diagnosis and treatment of some medical conditions. The equipment is also necessary for training of students in all clinical disciplines, especially in diagnostic radiology. Availability of teaching staff and medical equipment are important factors in teaching and learning environment of students in medicine.

3.3.2. Local infrastructure

With regards to availability of social amenities most upper and middle class residential areas, schools, retail shops, shopping malls, entertainment and leisure facilities are located in Polokwane. There is a good paved road connecting Polokwane and Mankweng which is 20 minutes' drive away. Telephone facilities, internet, electricity, piped water and a few retail stores are available in Mankweng as well. The Mankweng training site therefore seems to lack some facilities that the

registrars may consider necessary for their needs and that of their families such as schools and healthcare facilities. Most of them opt to live in Polokwane and commute to Mankweng daily. Travelling over long distance to work may present problems to the students due to the cost and time involved. Additionally it may also present a security concern especially if they have to travel at night when they are on call.

3.4. Challenges in the MMed training

Medical doctors in specialty training work as members of multi-professional teams in their training hospitals and other healthcare settings. This exposes them to a variety of influences in their environment. Generally training programmes are structured and the postgraduate trainees have specific learning objectives according to the requirements of the examining and licensing bodies. They are also responsible for providing safe and quality healthcare to the patients. Furthermore, they interact daily with patients' relatives and other healthcare providers in their team. A great demand is placed on them as they go about meeting these obligations.

In South Africa the diversity of medical doctors entering postgraduate training at specialization level calls for a closer look at their needs from the educational environment. As already mentioned in the introductory chapter, few studies were found in the literature that reported on registrars' learning environment in South Africa (Bezuidenhout et al, 2011). Bezuidenhout et al (2011) carried out their study in a single specialty department of a well-established university hospital. However, it is important to build on their work and explore other learning environments, especially the newly established resource constrained learning environments such as the UL, in light of the changing students' learning needs, as well as the community healthcare needs in South Africa and beyond (Kent and De Villiers, 2007; WHO, 2011; Van Heerden, 2013). In this study therefore the researcher explored how the registrars perceive their learning environment with a view of identifying those aspects that might be addressed to enhance their learning experience.

3.5. Conclusion

The registrars learn and work in a complex environment, with many factors that may influence the way they learn. Therefore it is important to investigate how they perceive their learning environment in order to have an insight into the specific factors which influence their learning.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. Research design

4.1.1. Introduction

The purpose of this study was to explore the lived reality of the learning environment as experienced and interpreted by the registrars themselves. The objectives were:

- I. To explore the perceptions of the learning environment among the registrars.
- II. To describe their perceptions from the perspective of a particular theoretical framework.
- III. To suggest how their experiences might be used to create an environment that supports learning.

A qualitative method of inquiry was used to explore the perceptions of the registrars. An exploratory qualitative study may be used when a researcher seeks to identify and explain a phenomenon (Coverdale, 2013). For this reason qualitative research methods were deemed appropriate to explore this phenomenon as it offered the best opportunity of building a detailed picture of the registrars' understanding of their environment (Kahu, 2013). Perceptions or feelings are subjective, complex and personal, therefore multiple and diverse interpretations may exist (Bunniss and Kelly, 2010). The registrar-researcher discourse was therefore interpreted by the researcher using qualitative methods of analysis to gain insight into the extent to which these experiences could be regarded as alienating or engaging. The study focussed on depth and intensity of the responses rather than their numerical values.

4.1.2. Sampling

Purposive sampling was used to identify the participants for the study. Purposive sampling is a technique commonly used in qualitative research where participants are chosen purposefully because of some definite characteristics (as outlined below) that make them holders of the data that is needed to answer the research question (Leedy, 1997; Musselman et al, 2005; Maree, 2007b; Bezuidenhout et al, 2011). This approach is suitable for an exploratory qualitative study that seeks to maximize

the richness and depth of the data that answers the research question (Dicicco-Bloom and Crabtree, 2006; Botma et al, 2010). Sampling was done in June 2015 after receiving ethics approval from the Stellenbosch University Human Ethics Research Committee (HREC-2 approval number S15/02/047, addendum 1).

The study population comprised of 72 registrars from various clinical departments which were accredited by the HPCSA. They were registered with the University of Limpopo (UL) for the 2015 academic year. The sample comprised of the registrars in different years of study who met the selection criteria. The factors which were considered in the selection of participants were:

- Joint appointment as a registrar at either Pietersburg or Mankweng Hospital and the UL.
- Had voluntarily agreed to participate and signed the informed consent
- Could speak and understand English language and agreed to be interviewed in English

The list of registrars was used as the starting point and the selection criteria were applied. The registrars were then stratified according to the following clusters (Table 1.1): surgical disciplines (general surgery, otorhinolaryngology, anaesthesiology, obstetrics and gynaecology); consulting disciplines (internal medicine, family medicine, public health medicine, dermatology, oncology, psychiatry, paediatrics and child health); and diagnostic disciplines (forensic pathology, diagnostic radiology, nuclear medicine). The intention was to interview a sufficient number of registrars across the three clusters until saturation could be reached (Bezuidenhout et al, 2011; Murakami et al, 2009). This point was reached at the twelfth interview (see section 4.1.4 below).

4.1.3. Data collection

Data collection by means of an in-depth interview was conducted by the researcher from 27 June 2015 to 15 October 2015. An interview lasting between 45 to 60 minutes was conducted with each participant using a set of semi-structured questions to guide the process (Table 4.1).

Table 4.1: Interview questions

1. What did you do after undergraduate qualification?
2. What was your undergraduate training like? (Prompt: What do you remember as having facilitated your learning? What barriers did you experience?)
3. Please explain to me why you chose to specialize in this area of medicine.
4. Why did you choose this University?
5. What are your feelings about the way your training is structured?
6. What do you enjoy most in your course and why?
7. What do you enjoy least in your course and why?
8. How would you describe work place learning?
9. What is your opinion on the time you have to undertake workplace learning?
10. What is your opinion about the time you have for your self-directed studies?
11. What progress have you made towards your dissertation? (Prompt: If you have made progress- what has supported this process and what has hindered it? If you have not yet started, what do you feel will enable you to get started?)
12. What role does your consultant/lecturer play in your work place learning?
13. What role does your family, relatives, friends and role models play in your life with regard to your training?
14. What factors enable your learning?
15. What factors constrained your learning? (Prompt: How do you deal with stressful situations at work and in your studies?)

Using pre-determined set of questions ensured that the participants were interviewed in the same general format. The interviews were conducted in English, which is the official language of instruction at the UL. The questions were based on factors which have been identified from the literature to play a significant role in learning experiences of students (Eva, 2003; Mitchell et al, 2005; Bryson and Hand, 2007; Case 2007; Bezuidenhout et al, 2011; Philibert, 2012). Questions 1 and 2 focussed on basic educational and professional background of the registrar. Question 3 inquired about reasons for choosing their particular course. The reasons for choosing the UL was addressed in question 4. Questions 5 to 10, 12, 14 and 15 explored the registrars' feelings about the teaching and learning environment and how it affects their learning and work-based relationships (Zepke and Leach, 2010; Bezuidenhout et al, 2011). The projected progress in the programme, particularly in the research based dissertation was addressed by question 11. Lastly, question 13 explored issues related to the registrars' personal life. The interviews were audio recorded, then transcribed verbatim. The interviewer also took field notes to record the observations he made during the interview that may not have been captured by the audio recorder. The field notes assisted with reconstruction of events and

observations that took place during the interview when later analysing the data (Wolfinger, 2002; Mulhall, 2003).

4.1.4. Data collection and analysis process

Data analysis was done concurrently with the interviews so that the researcher could generate an understanding about the emerging themes, which in turn determined the data saturation point (Dicicco-Bloom and Crabtree, 2006). The audio recorded interviews were transcribed verbatim by an independent person who also deleted all personal and identifying information from the records. The transcripts were then analysed using the principles of thematic analysis that sorted segments of text into codes, then sorted texts with similar contents into separate themes and finally aggregated the themes into three clusters (Maree, 2007a; Botma et al, 2010; Bezuidenhout et al, 2011). Key relationships were recorded by themes rather than by frequency of occurrence (Philibert, 2012). These themes were then characterised as either alienating or engaging by comparing the registrars' experiences with those in the model described under section 2.3 above (Table 2.1). In conformity with the intention of this study to focus on the depth and intensity of the responses rather than their numerical values, terms such as; some, few, and majority of the registrars, were used to give the reader a rough indication of how prevalent each perception was (Case, 2007). Codes were generated from the first few interview transcripts in the first phase of data analysis then used to analyse the rest of the transcripts (Table 5.1).

4.1.5. Ethical issues related to data collection

In addition to the ethics clearance obtained from Stellenbosch University Human Research Ethics Committee (HREC-2) as explained in section 4.1.2 above (addendum 1), permission to carry out the study in Pietersburg and Mankweng Hospitals was obtained from the Limpopo Provincial Government Department of Health Research Office on 26 June 2015 (addendum 2). Ethics approval was also obtained from the University of Limpopo Turfloop Research and Ethics Committee (Project number - TREC/141/2015: PG) since the participants were students at the UL (addendum 3). Ethics approval from HREC-2 and the permission from Limpopo Province Department of Health were obtained before data collection commenced.

The interviews took place at a mutually agreed location within the hospital that ensured privacy and safety. Normal working hours were used but the participants selected the time that they were free of commitments for at least one hour. No physical harm or pain was caused to any participant. No test-retest processes were carried out. No medicines or any active substances were administered to the participants. The researcher explained to the participants that participation would be voluntary and that the informed consent form would be signed by both the researcher and the participant before an interview could begin. The participants were further informed about their right to withdraw from the study at any time if they wished, without giving any explanation. They were also informed that withdrawing from or declining to participate in the study carried no penalty.

The participants were informed that the study may not benefit them directly but the information obtained might be useful in modifying the teaching and learning environment for the registrars. The electronic written records and digital data were protected by password. Hard copies of the transcripts were kept safely under lock when not in use and were accessed by authorised people only. The anonymity of the participants were maintained at all times, including in the final report. Every attempt was made to avoid negative labelling and identification of any participant or a group of participants by anonymising (Coverdale et al, 2013). However due to the small number of registrars in the two hospitals, remote chances of some information in any publication that may arise from this work being associated with a participant still exist.

4.2. Quality criteria (trustworthiness) of the study results

4.2.1. Introduction

Trustworthiness is a term used to describe quality criteria in a qualitative study. Guba (1981) described four major concerns relating to trustworthiness which the quality criteria must address, such as: the credibility (truth value), transferability (applicability), dependability (consistency), and confirmability (neutrality). In a qualitative study, provisions must be made for measures that ensure these four criteria are met (Shenton, 2004; Framback et al, 2013).

4.2.2. *Credibility*

Credibility is the extent to which the study findings are congruent to the reality and can be believed by others. In this study the methodology is consistent with those employed in other studies that have explored the learning environment (Case, 2007; Bezuidenhout et al, 2011; Murakami et al, 2009). Data was gathered during semi-structured interviews that were guided by a specific set of questions. Qualitative methods of analysis have been used previously in investigating the phenomenon of the learning environment in other contexts (Case, 2007; Bezuidenhout et al, 2011; Murakami et al, 2009).

The researcher is familiar with the setting where the study was carried out and therefore he could be said to have had a prolonged engagement with both the setting and the participants. The prolonged engagement allowed the investigator to gain adequate understanding of the setting and to establish trust between him and the participants. Prolonged engagement with the participants and the context of study affords credibility to a study results (Shenton, 2004). However, the limitations which may result from prolonged exposure and familiarity with the participants is recognised and discussed under limitations of the study (section 6.3). Although the participants were selected by purposive sampling, stratification was initially done according to the medical disciplines at the two teaching Hospitals (Table 1.1). Thereafter measures were taken to ensure sufficient number of participants across all the three clusters of surgical, consulting, and diagnostic disciplines. After stratification, only the registrars who readily volunteered to participate were selected. The researcher believed that these registrars were most likely to give rich information during the interviews. Using a wide range of informants from different disciplines and across years of study also served as a way of achieving triangulation (Shenton, 2004).

Every participant was given an opportunity to refuse to participate in the study with the intention that only those who genuinely wanted to participate were interviewed. The participants were also made aware that they could withdraw from the study at any time without penalty of any kind and they were under no obligation to divulge any information they wished to keep private. Accuracy of the transcription was emphasized and the audio recording was compared with written transcripts to ensure

its correctness before coding commenced. No changes were made to the definition of codes once data analysis started.

Another important measure aimed at promoting credibility was the detailed description of the learning environment. The concepts of the learning environment, alienation and engagement were described in details in chapter two as were other studies that examined these concepts. The MMed training in South Africa and the setting at the UL were also fully described. The detailed description will assist the reader to understand the context in which the study was conducted. It also has relevance for framing the analysis of the data, given the focus of this study on a particular environment.

Other aspects focusing on the researcher himself but which may have had an impact on the trustworthiness of the results were considered. The first one deals with the researchers own scrutiny and reflections in the course of the study. As the interviews progressed some of the responses from the registrars revealed matters which the researcher, as part of the teaching staff in the faculty may have neglected to do, or was not aware of initially. However the researcher made an effort to remain neutral and base the results of the study on the registrars' responses rather than his opinions. Secondly, the researcher's background, qualification, and experience as an education investigator are declared. The researcher is a member of the teaching staff and Head of a Department in the School of Medicine. He is a specialist in radiation oncology and supervises radiation oncology registrars who are at different stages of their training. Although he has conducted clinical investigations, he is relatively new in medical education domain as pedagogy. He is enrolled for a Master of Philosophy programme in Health Professions Education for which this research assignment is a partial fulfilment requirement for the degree (see also limitations and strengths of the study findings in section 6.3).

4.2.3. Transferability

Transferability is the extent to which the findings of a study can be replicated in a different setting. The findings of a qualitative study are specific to the participants and are defined by the specific contexts in which they are carried out (Shenton, 2004). However, Shenton (2004) believes that if the readers feel that their context is

similar to that which is described in the study, they may relate the findings to their own situation. It is the responsibility of the investigator to give a detailed description of the context, the methodology, and the relevance of the findings in view of the current literature (Frambach, 2013). A detailed description of the learning environment, the concept of alienation and engagement, the methodology, and a discussion of the findings are given in this report for the benefit of the readers.

4.2.4. Dependability

Dependability addresses the question of whether the findings of a study would be consistently repeated if the enquiry were replicated with the same or similar participants in the same or similar context (Guba, 1981). Reporting the processes within the study in details enables other researchers to repeat the work (Shenton, 2004). A comprehensive description of the setting, the participants and the methods used in this study has been given. Data was collected and analysed simultaneously until no new themes emerged. Iterative data collection and analysis allowed the researcher to identify the emerging themes as well as identify the saturation point where no new information emerged from the interviews. Extending data collection to the saturation point enhances the dependability of a study finding (Frambach, 2013).

4.2.5. Confirmability

Confirmability addresses the question of how one can establish the extent to which the findings of an enquiry are a function of the experiences and ideas of the participants and the setting, instead of being the preferences or interests of the researcher (Guba, 1981; Frambach, 2013). To this end the researcher made a full disclosure of his position at the learning institution, and the relationship between him and the participants. The data and the interpretation were derived solely from the participants and were not influenced by any other consideration. Additionally, the theories and perspectives underpinning the framework used in this study have been explained and supported by evidence from the literature (Shenton, 2004). Furthermore, the detailed methodological description given will enable the reader to scrutinize the paper and make a conscious judgement as to the extent to which they accept the data and the deduction made from it (Guba, 1981; Shenton, 2004; Frambach, 2013).

In conclusion, this report contains information on measures that have been taken to enhance trustworthiness. The information may enable the reader to determine for themselves whether or not the study results are trustworthy.

CHAPTER FIVE: FINDINGS

5.1. Introduction

This study explored how the registrars at the University of Limpopo (UL) perceived their learning environment. The data was generated by means of a qualitative inquiry using semi-structured interviews conducted among 12 registrars. The findings were recorded according to how the registrars responded to the questions that explored the different aspects of their environment (section 4.1.3). Data analysis was done in two phases. Phase one involved iterative analysis of the transcripts as the interviews progressed. Codes that defined the meaning of a quotation were assigned to segments of texts as they emerged. Segments of texts with similar meaning were assigned the same code according to the examples shown in table 5.1.

Table 5.1: Overview of phase one data analysis

MEANING UNIT (EXAMPLE)	CODE
They've got a mentorship programme	University culture
Formal modular courses that empower registrars	Programme curriculum
My dad was struggling	Student background
When your morale is low they would lift it up	Support systems
Bread-winner issues and also dependence of extended family on you	Life-load
I'm a very spiritual person	Identity
But I always say some of us thrive in adversity	Self-efficacy
I will be a better person after the programme	Motivation
But then you realize when you start working medicine is actually social, it is more how you relate to people	Professional skills
I think that is something that I was drawn to more	Interest in subject
I loved it so much and I wanted to do more	Enthusiasm
I'm very happy in Polokwane, it is a very pleasant place to work	Sense of belonging
Getting a lot out of the environment is mainly what you do	Self-regulation
I have to sort of make a conscious choice on how to make my time	Time and effort
I'm actively involved in all spheres of my training	Active participation
We tend to work closely	Interaction
I had a bursary that took care of a lot of things	Bursary
We are students but we are also paid a salary	Financial status
You come from a cultural background that is different	Culture (ethnicity)
The training is very empowering	Satisfaction
We would be the first specialists that would also pave a way for others after us	Citizenship
The specialization would... allow me to work in a space where [my speciality] is practiced	Work success

Interviews and analysis were conducted concurrently until no new codes emerged from the transcripts. The data saturation point was reached by the twelfth interview. All the twelve transcripts were analysed in the second phase of data analysis. No changes were made to the codes during the second phase. The process of data reduction and cross checking was done to eliminate repetitions and allow presentation in a readable format. Table 5.2 provides a summary of the relationship between the themes and the predominant codes.

Table 5.2: Overview of the phase two data analysis

CLUSTERS	THEMES	CODES AND FINDINGS
Antecedent for engagement	Structural influence	University culture: Poor communication of policies affecting registrars; no formal orientation programmes at the beginning of registrar training
		Programme curriculum: A new training platform and programmes; programmes not structured; no information on curriculum
		Support systems: Inaccessible libraries and inadequate learning spaces; academic staff and medical resources shortages; family and peer support available
		Life-load: Registrars have immediate and extended family responsibilities
	Psychosocial influence	Identity: Prefers to live in home province near family
		Self-efficacy: Believes on own ability to thrive in adversity
		Motivation : Persistent and determined to succeed
	Sociocultural influence	Professional skills: Chose to specialize in order to bridge their skills gap
		High expectations from family members and the community
Engagement	Affect	Financial status: Registrar posts are full-time salaried positions
		Interest in subject: Mostly chose subject because of interest
		Enthusiasm: wants to learn more and succeed in their specialities
	Cognition	Sense of belonging: Happy to be in Polokwane
		Self-regulation: Being proactive in order to get maximum benefit out of the environment, but guidance and support from the teachers still lacking
		Time and effort: Plans course work and research activities
	Behaviour	Active participation: Involved in all aspects of training
		Interaction: Mostly good workplace interaction even though some tensions are experienced
	Consequence of engagement	Proximal consequences

		inadequately prepared specialist
	Distal consequences	Citizenship: Believes their contribution as specialists will improve health care staff establishment and health outcomes of the communities in Limpopo.
		Work success: To be medical practitioners who are competent in their specialities

The meanings and explanations attached to the codes were drawn from the feelings expressed by the respondents. The codes were sorted into the eight themes identified by Kahu (2013) as some of the most predominant determinants of student engagement, according to the framework shown in figure 2.1 (see section 2.4). The eight themes were: structural, psychosocial and sociocultural influences; the three psychological dimensions of affect, cognition and behaviour; and lastly proximal and distal consequences of engagement. Further analysis involved assigning the themes to the three clusters comprising of elements of engagement such as: factors that influence, but are not themselves the state of engagement (antecedents of engagement); the three psychological dimensions of engagement identified as emotion or affect, behaviour, and cognition (the state of engagement); and lastly the consequences of engagement (Table 5.2).

Both the positive and negative perceptions were considered and reported in order to ensure the necessary checks and balances are adhered to in the final analysis (see also sections 4.2 and 6.3 for trustworthiness and limitations of the findings respectively). The registrars' experiences were compared to those presented in table 2.1 suggesting the state of engagement or alienation. The positive experiences were considered as enabling and therefore suggested factors that could result in engagement, or the state of engagement. The negative experiences on the other hand were considered to suggest the state of alienation. Therefore, data analysis will be able to offer a sense of whether the registrars' perceptions suggested the experiences of alienation (negative perceptions) and/or engagement (positive perceptions). Due to the qualitative nature of the methodology used in this inquiry, actual numerical tallies of the registrars reporting a particular experience were not deemed necessary to report.

5.2. The participants

All the participants in the study were assigned pseudonyms. The pseudonyms were chosen to reflect the clinical discipline cluster and the numerical order in which the registrars were enrolled into the study. The first letter of the pseudonym reflected the disciplines' cluster, whereas the number after the letter represented the numerical order in which the registrar from a particular cluster was enrolled into the study: for example S3 means the third (3) registrar enrolled into the study from the surgical (S) cluster (Table 5.3).

Table 5.3: Participants' characteristics

Participants' pseudonym	Disciplines' cluster
S1	Surgical disciplines cluster
S2	
S3	
S4	
C1	Consulting disciplines cluster
C2	
C3	
C4	
D1	Diagnostic disciplines cluster
D2	
D3	
D4	

All quotations were verbatim as transcribed, except in instances where the registrar named their department or speciality. In such instances the researcher deleted the name and replaced it with "my speciality" in square brackets. No attempt was made to correct grammatical errors. Due to the small number of registrars at the UL, the participants were aggregated into clusters rather than placed into individual departments, to avoid easy identification and possible negative labelling (Coverdale et al, 2013). The discipline clusters were defined under section 1.6 (Table 1.1). For the same reason, the registrars were not classified according to their year of study as this would have made it easier to identify the participants. The researcher however hopes that this nomenclature will facilitate easy reading of the report and

assist the reader to understand the quotations ascribed to the registrars based on their speciality background.

5.3. Description of the themes

5.3.1. Antecedents of engagement

5.3.1.1. Structural influences

Most of the registrars reported that their undergraduate programmes were structured, therefore enabling them to successfully complete their courses. The structured undergraduate programmes clearly outlined the course contents, schedules, method of instructions, time tables, learning experiences, and the expected outcomes. For example, C3 reported:

Undergraduate training was more structured. It was ...you knew exactly what was going to happen, when the classes were...everything was set for you. So you just needed to go through whatever program or structure that was put in place.

Other support systems such as student mentoring programmes, dedicated teachers, availability of financial support, and less social responsibilities were mentioned as some of the factors that enabled their success at undergraduate level:

I think another thing that made it easy for me when I was at school, I didn't have to cook, like you know, I had a bursary that took care of a lot of things. I think maybe if I had that problem it was going to be a drawback. But because financially I had bursary that was paying I only had to concentrate on my studies (S3).

This contrasts with what they encountered at postgraduate level, as observed by D2 in the diagnostic cluster, when asked about her feelings regarding the structuring of her programme:

It is not structured at all. I feel that you get into a programme but there is nothing in place to show that, O.K, we are here and this is where we are going, this is what is expected of me.

Most of the registrars felt that their programmes were either not structured at all, or it was partially structured but was still not adequate to facilitate learning. Some registrars felt that a more structured programme would have made their registrar

time more meaningful. Additionally, the registrars felt that they did not receive adequate prior information related to their programmes when they entered into the registrar positions as reported by S1:

For me when I started I actually did not know what it means. I had no idea what it means to be training. Initially it was slow and I thought that is how it is, but I could tell it was slow.

However, a few registrars felt that an unstructured programme at postgraduate level allows for flexibility and own initiative in time and effort management. These registrars also felt that it enables the student to be independent and self-reliant.

With regard to the reason for choosing their specialties, the majority of the registrars chose their specialties because of intense interest in the discipline. They were enthusiastic about training in their chosen areas and becoming medical specialists, as captured in the following conversations:

The things I like specifically about [my speciality] is that you get to work with technology, and I enjoy working with technology. I enjoy working with gadgets, so that is quite satisfying that I work with that aspect (D1).

I'm more of a speaking kind of person, presenting lectures, doing research, and having an impact on a bigger scale. So I found that in [my speciality]. When I looked at my interest in medicine that was the best field that I could actually specialize in (C2).

So I just thought let me go and see what it is about. Then when I was there I thought that I can actually do this. But I never really had it in mind as an area of interest. But now I really like [my specialty] (S1).

Other registrars chose their specialty for personal satisfaction and for social responsibility and citizenship:

There are very few specialists. In my family there were many surgical problems. I think it is genetic. So I wanted to help them (S4).

They also chose the specialties because of anticipated job satisfaction later on once they completed their studies.

When asked why they chose to study at the UL, the majority of registrars reported that they come from Limpopo Province and they have families living there. Their choices were informed by the desire to live within their home environment, close to family members, who often provided moral support:

Since I completed my studies I came to Limpopo, it is home, it has become my comfort zone, and I felt, yes, if it means I need to move anywhere else I can. But if I can study at home and be with my family, why not (C4).

However, some registrars chose the institution because the posts in their preferred fields of specialization were easily available at UL as compared to other centres, or because their fixed registrar time elsewhere had expired. Only one registrar reported that she would have wished to specialize at another university.

Nearly all the registrars encountered challenges at the teaching hospitals. They found it difficult to work and train in the two teaching hospitals due to lack of resources and heavy patient loads. The problem was compounded by lack of sufficient teaching and learning opportunities in the hospitals. When asked about their experiences of workplace learning the following responses were received:

To tell you honestly there is no academic atmosphere here in Polokwane. Because we are the only department in the province we are concentrating more on service rendering rather than service rendering plus academic things. So we end up just treating patients and not learning sometimes (S2).

Our clinics are hectic; and theatre can also be hectic. So you may find that it is only two people running a clinic to see eighty plus patients. You find that sometimes it does get a bit overwhelming and you find that you are tired when you leave. Even if you planned to via the library or to study a bit, I just need to rest first, then maybe study after I get some rest (S4)

Heavy service delivery workload left some registrars exhausted to the extent that they could not study after work. Additionally, some registrars were concerned about the inability to achieve the normal standard of care for their patients due to resource constraints. This feeling was captured in the following conversation:

And when patients you wish you could do something for, but there are things beyond you, you cannot control. And if those things were there you are almost 100 percent sure you would make a huge difference in their lives (C4).

Resource constraints also had a negative effect on the skills training, especially for the surgical registrars:

It affects my learning in that if specific procedures are cancelled due to lack of supplies or equipment I end up losing on seeing, or observing or even assisting. There are cases which you need to learn. I just feel it is proper when you are able to feel competent doing those procedures (S2).

Lack of sufficient teaching and learning materials, as well as poor communication of policies between the University management and the registrars was a frequent cause of concern for the students. The registrars felt that their academic needs were not recognised and catered for despite being registered students of the university. They reported the lack of teaching and learning materials as well as limited access to the library facilities:

I wish that our library would close a bit later, because our library closes a bit early, it closes at five on some weekdays and at four on Fridays (C3).

The concern is that we are registered with the University of Limpopo which traditionally is not a medical school and the question is always the support that we get there, the facilities, the resources especially maybe books (D3).

I use my own laptop, my own modem, my own memory. I don't even have a printer I use my own printer in the office. Those basic things (C2).

The registrars believed that as fees paying students, the university had the obligation to provide them with the necessary academic and material support. However, a few registrars reported that they could access internet facilities as well as the electronic library materials:

The electronic access is much better than the physical library facilities (D2).

And in terms of the internet, I mean, this year I know we are able to access the Wi-Fi in the university like here in the hospital, which is quite good (C2)

Most of the registrars also reported insufficient supervision in their coursework and research, often leading to late submission of their research protocols to the ethics committee. However, a few registrars were happy with the support they received from their supervisors:

There are consultants that have dedicated themselves to teaching us. Basically when I was preparing for my primaries they were there, even after hours they would offer themselves to help, and even in terms of teaching in theatre they were willing to teach and they were always waiting for us to approach them, and the more you show eagerness the more they dedicate themselves (S3).

5.3.1.2. Psychosocial influence

The majority of the registrars had several years of clinical experience after undergraduate studies and decided to specialize in order to bridge the skills gap they encountered. Some of them had obtained formal training leading to diploma and

master's degree qualifications. Most of them were determined to succeed in their specialization and appeared to be resilient and ready to adapt to the situation they found in the postgraduate training environment. A significant number of registrars seemed to have developed ways of coping with stress at their workplace. One registrar, D1, actively participated in recreation and competitive sports as a means of dealing with stress:

I am a very active person; I do a lot of sports. You know, actually when it comes too much I run. I'm a full time runner, I do the comrades. And when I can do sports I actually found out that I'm in full control.

Some registrars were able to find emotional support from their fellow registrars, or from family members:

I think the first thing is having colleagues that are in the same boat as you that you can actually help each other. They act as sounding boards when you are in need. Then also if you have a partner in your social life who understands you and supports you. That also assists a lot (C2).

However, some registrars found it difficult to cope, especially in situations where they were exposed to hostility from the supervisors, or when there were differences among the supervisors themselves, as S2 reported:

I find that the biggest challenge is that there is no unity and there is no communication between them. You find that because of their lack of communication they end up using us to fight whatever battle they have between themselves. It puts us really in awkward position (S2).

Poor inter-professional relationship was also experienced between some of the registrars and other health professionals in their clinical teams. However, some registrars reported good working relationship with fellow medical practitioners and other clinical staff:

Basically we tend to work closely. So, basically their role, I guess we complement each other (S4).

With regard to the nursing staff, they play a supportive role for me as a doctor (C4).

And there are nice people that are working in the province that is actually a pleasure to work with (D3).

5.3.2. *The engagement*

5.3.2.1. Cognition

Most of the registrars reported that they planned their learning activities. A few registrars in the consulting discipline (C1 and C2) reported that opportunities for research were available in the hospital setting, if one actively looked for them. A few registrars commented that one should rely on their own effort at postgraduate level in order to succeed. However, most of the registrars felt that they needed more direction from their supervisors to plan and manage their learning activities.

5.3.2.2. Behaviour

The registrars reported being actively involved in their learning and work-related activities. Some mentioned they dedicated a portion of their time for academic work, and synchronized their course work with research-related activities. This enabled them to complete and submit the dissertations in time. A few had also attended an optional research methodology courses for registrars that helped in the writing of the protocols and the reports.

5.3.3. *Consequences of engagement*

5.3.3.1. Proximal consequences of engagement

Most of the registrars chose their specialities either because it would benefit them in their future careers, or because they felt that it was an honourable profession. Many of them were happy when their patients made good recovery after medical interventions. Those that were involved in community-based activities expressed satisfaction at their achievements during these interactions as reported by C4 below:

I enjoy mainly interaction with my patients because I think the utmost thing is to make a difference in their lives

However, they also expressed dissatisfaction at the low quality of care they were forced to give to their patients due to heavy workload and shortage of resources at the teaching hospitals.

5.3.3.2. Distal consequences

With a focus on long term goals of their training, some registrars felt that their training will help to increase the number of specialists available to provide healthcare to the community. They projected that this would improve the healthcare provision and help the community. The long term goal encouraged those registrars to endure the difficulties they encountered during training, as reported by D2:

But still there are those things that actually motivate one to stay here compared to other places. And we would be the first specialists that would also pave a way for others after us because we know the frustrations that we are going through and we would like to make it easier for them (D2).

5.4. Potentially alienating and engaging experiences

Data analysis revealed a trend of experiences that the students liked, and those that they did not perceive positively. The negative perceptions were considered by the researcher to be potentially alienating, whereas the positive perceptions were potentially engaging (Table 5.2). Based on this modelling, it was possible to characterize the registrars' experiences as either alienating or engaging, depending on the particular aspect of the learning environment being focussed on.

Most of the positive experiences were in the areas that registrars themselves had control over. The negative experiences were in areas where the registrars had limited or no control, such as the availability of resources at their university and in the teaching hospitals.

5.5. Conclusion

The findings of this study revealed experiences of the learning environment that the registrars favoured and some that they perceived negatively. The structural influences arising from the domains such as basic undergraduate training, family background, support mechanisms, the university, and the teaching hospitals played a big role in shaping their perceptions. Some registrars compared their postgraduate experiences with what they went through during the undergraduate period. Aspects

of the learning environment were experienced differently by the registrars even though some domains tended to be experienced in a similar way by a vast majority of registrars. The choice of speciality was mainly due to the individual registrar's interest in the subject and elicited positive perceptions in nearly all the registrars. However, other domains such as the access to support services and the availability of resources at the teaching hospital elicited predominantly negative perceptions in a vast majority of the registrars. It was possible to regard a perception as either resulting from negative or positive experiences. This enabled the researcher to categorize their experiences as either negative, or enabling, which formed the basis for characterizing them as either alienating or engaging respectively.

CHAPTER SIX: DISCUSSION

6.1. Introduction

This study explored the experiences of postgraduate students in medical specialization programmes at a South African University Teaching Hospital through the lens of alienation and engagement. Krause and Coates (2008) observed that “student engagement focuses on the extent to which students are engaging in activities that higher education research has shown to be linked with high quality learning outcomes”. It is therefore desirable to achieve student engagement as a critical requirement for student learning (Zyngier, 2008). The focus of students’ experiences on surface/deep/strategic approaches to learning has been criticised by some education writers as insufficient for creating engagement in students (Mann, 2001; Bryson and Hand, 2007). Looking at the students’ learning experiences through the lens of alienation and engagement compels us to consider the extent to which alienations in a learning environment cannot be avoided, or are changeable, and our own ability to influence this (Mann, 2001). Bryson and Hand (2007) posit that if the inevitable alienating influences within the higher education system are to be countered, then a multi-faceted way of attaining engagement is required. They believe that the concept of student engagement focuses on the interaction between the student and the learning environment (Bryson and Hand, 2007).

The findings of this study seem to suggest that the students had high expectations upon entering the registrar training programmes. Most of the registrars interviewed had mainly engaging learning experiences at their undergraduate level as revealed by the positive perceptions they had of that environment. The undergraduate environment enabled them to concentrate on their studies therefore completing their degree programmes on schedule. Their response to the interview questions also seem to suggest that they expected a similar environment at the postgraduate level. This was supported by the interest and enthusiasm they showed when they registered for training in their areas of specializations. The findings by Zepke and Leach (2010) in a literature review on student engagement supports the findings of this study: that engaged students are motivated and are keen to exercise their agency. However the postgraduate learning environment was critical in determining

whether or not these intentions were achieved. Vermetten et al (2002) revealed that the learning environment and the individual learning process do not exist separately from each other, and that they both influence one another in a continuous interplay. The beliefs and values held by the registrars from their previous experiences were different from what they found at postgraduate level. This presented a challenge and friction for them in the postgraduate learning phase. Lack of congruence could be discerned between the registrars' expectations and some of what they actually found in their environment.

6.2. Understanding alienation and engagement

The registrars encountered challenges at both the university and at the workplace which contributed to potentially alienating and sometimes engaging experiences. Both the positive and negative perceptions of the learning environment, interpreted in this report as alienation and engagement respectively, seem to have been influenced mainly by factors relating to the situations at the current university, the workplace, and on communication between the registrars and the authorities at both the university and the teaching hospitals.

6.2.1. The University

The university system did not provide enough support in terms of the curriculum design, teaching and the availability of the physical facilities such as the library and learning spaces. Mann (2001) emphasized the role of the institution in creating a setting where a sense of respect, belonging and mutuality can flourish as one way of fostering engagement. Zepke and Leach (2010) concluded from a literature review that the institutional culture is important for cultivating engagement. The institution must be adaptable and develop a culture that is welcoming to all students; where they feel they are accepted, affirmed and belonged (Zepke and Leach, 2010). In the current study, students from most academic departments had no prior information about the design of their curriculum, curriculum implementation, sought outcomes, and methods of delivery. The situation was worsened by lack of proper supervision, monitoring, and evaluation of their progress accompanied by prompt feedback. Availability of well-designed study guides could have assisted in highlighting the

curriculum objectives, course time table, and also assisted the students in their self-directed studies endeavours (Holsgrove et al, 1998).

Secondly, alienating experiences resulted from lack of access to the library facilities. Even though the library was available within the teaching hospital, the students could not gain ready access due to the limited opening hours of the facility. Another library with more materials and longer opening hours was situated away from the teaching hospitals and could not be readily accessed by the registrars due to the long distance. The importance of the academic library was highlighted by Haddow (2013) who observed that a more frequent library use may lead to improved integration into a learning institution thereby contributing significantly to student engagement. Kuh and Gonyea (2003) reported that library experiences strongly correlated with other educationally purposeful activities, particularly where the access is made easy. They also suggested that some students tend to use the library more frequently because they perceive it to be a neutral and safe place that supports learning in collaboration with other students of similar characteristics (Kuh and Gonyea, 2003).

6.2.2. The workplace

The clinical learning environment is an important factor in the workplace learning of registrars. Daugherty et al (1998) observed that within this environment the doctors "...must learn to balance such diverse demands as the responsibility for patient care, economic hardships, on-call schedules, patient deaths, the need for constant learning, the task of teaching, the requirements of attending physicians and senior residents, along with the necessities of family and personal life". The clinical learning environment encompasses many aspects such as the quality of supervision and teaching, the facilities, and the learning atmosphere (Boor et al, 2007). The current study revealed that the workplace learning environment was a major cause of both alienation and engagement. Heavy workload, sometimes associated with longer working hours, in addition to the lack of medical equipment and supplies was cited by many registrars as factors that caused demotivation and despondency. In the surgical disciplines these factors caused cancellation of theatre lists resulting in the inability of the registrars to observe, assist in, or perform surgical operations that would have enabled them to learn critical surgical skills during their training. The lack of diagnostic equipment such as CT and MRI scanners also resulted in inability to

attain standard of care for many patients, as well as failure to provide learning opportunities for the registrars.

The World Federation for Medical Education's (WFME, 2003) global standards for quality improvement in postgraduate medical education states that postgraduate training must be practice-based, as well as involving personal participation of trainees in the services and responsibilities of patient care activities in the training institutions. Additionally the training must encompass integrated practical and theoretical instructions. Clearly the reported lack of medical equipment and supplies undermined the goals of achieving a practice-based training that integrates practical and theoretical instructions as envisaged by WFME. While recognising the relationship between training and service, the WFME (2003) policy also requires that the apprentice nature of medical training be described and respected, and that the integration between training and service must be rationalized such that the training provided is complementary and not subordinated to service demands. A number of the registrars reported heavy service workload that interfered with learning, both in the clinical areas and after hours due to exhaustion. In a study conducted among hospital resident professionals in Spain, Ayala-Morillas et al (2014) found a strong association between the time available to perform routine tasks and the overall satisfaction with the training. Those who worked more than 40 hours per week were more dissatisfied than those who worked fewer hours (Ayala – Morillas et al, 2014). Therefore, heavy workload and long hours of service are important factors because they may prevent the students from engaging in other important activities besides healthcare.

6.2.3. Communication

The registrars reported failure of communication between themselves and the university management, as well as between themselves and some of their consultants, leading to alienation. In the first instance the failure of communication led to the difficulties of appreciating the role of the university in facilitating learning and the expected achievements. The registrars perceived the institution to be exploitative in terms of being interested in charging fees without having an insight into their academic requirements. They also perceived the institution to be unaware of the unique nature of the professional MMed degree programmes, considering

them in the same manner as other master's programmes in non-clinical medicine fields. In the second instance the communication failure between the registrars and the consultants also resulted in a perceived lack of transfer of clinical skills in the clinical areas, as well as slow progress in finalizing research protocols for the research reports. Interactions between the registrars and some of the consultants were a cause of alienation especially where there was lack of agreement on the standards of supervision, or where the consultant was not sensitive to the needs of the registrar. The converse could easily also have led to alienation if the purposes and intentions of the consultants were not clear to the affected registrar.

Mann (2005) suggested that failure in communication might lead to the students misunderstanding what the institution or the teachers are trying to convey, with the institution misunderstanding or being ignorant of this fact. More importantly, failure of communication may include the failure of the institution and the teachers to be aware of, or misunderstand the students' experiences of the learning environment, their desires, interests, and fears within it. The opposite of this situation is whereby the student is ignorant or misunderstands the institution's purpose, makes assumptions about the institutions purposes and actions, and the institutions own understanding of the learning environment (Mann, 2005). To mitigate the potential conflict this stand-off might cause, the institution should not merely expect the students to adapt to an unfavourable situation, but should recognise the importance of the students' perception of their learning environment, their experiences, and perspectives that are necessary in creating a mutually acceptable climate (Bryson and Hand, 2007; Zepke and Leach 2010; Kahu, 2013) . Bryson and Hand (2007) citing Mann (2001) asserts that fostering closer relationship between the staff/faculty and the students offer some hope in enhancing engagement.

Some interactions were however positive and enhanced engagement. The registrars in such cases were motivated and the consultants were enthusiastic about teaching them. They felt encouraged and immersed themselves in their learning, almost always passing their assessment examinations. One would say that these registrars were intrinsically motivated by the positive response and support from their consultants. Intrinsic motivation concerns active engagement with tasks that people find interesting, and that in turn promote personal growth (Deci and Ryan, 2000:233). Interactions with the staff in other supporting disciplines were also constrained in

some instances. These however arose from poor definition of the roles of the different professions in a multidisciplinary team, coupled with staff shortage and inadequate medical supplies.

6.3. Strengths and limitations

The main limitation of the study was that it relied on a single source of data. The data originated from self-reported information acquired during interviews of participants selected by purposive sampling. This could have promoted bias in the reporting as there were no other independent sources of data for triangulation. Relying on reports from volunteers may also have created a bias in the final analysis of results in that the volunteers may have wanted to push forward their own agenda at the expense of considering all issues objectively. Acquiring data from different sources was not practical for the purpose of this report due to the limited time and financial resource constraints.

However, this limitation was mitigated by the qualitative nature of the inquiry which gave the registrars a “voice” to freely talk about their experiences, as opposed to when standard questionnaires are used to measure the students’ perceptions. Using surveys limits the observation of the variables unique to the participants, such as student motivation, expectations and emotions. Survey instruments also impose the same measure across different disciplines where the learning environmental factors may be different. By conducting a semi-structured interview, the participants were in a position to talk freely about what they felt was most important to them. Kahu (2013) affirms that the use of in-depth qualitative methodologies in exploring engagement is recommended in order to capture the diversity of experiences of the participants. The anticipated lack of objectivity from the respondents’ point of view is dispelled by the fact that the registrars gave both positive and negative points of view with regard to the issues that affected them in their learning environment. By looking at both sides of the issues, the registrars showed objectivity in their responses. The positive and negative points of view were also equally considered and discussed in this report.

The participants were drawn from a single institution which had enrolled a limited number of registrars in the different speciality disciplines. This may limit the extent to

which the findings can be generalized to other medical training institutions. However, the methodology used in this study was drawn from sources that have previously examined the learning environment. Therefore the methodology may be replicated in other settings. Secondly, the setting of this study is unique to a particular institution, which makes it possible to apply some aspects of the findings and recommendations in this report to address the problems identified in the learning environment at the UL.

Online discussions of the research process and its findings took place between the researcher and the supervisor, mainly through e-mails as well as on Skype. The discussions took place during the crafting of the study proposal (protocol) and in the writing of initial drafts of this report. The discussions may be considered as a form of debriefing which enhances the trustworthiness of this report.

CHAPTER SEVEN: CONCLUSION

7.1. Recommendations

One of the objectives of the study was to suggest how the registrars' experiences could be used to create a learning environment that fosters engagement. Reinforcement of student behaviours (such as interest, enthusiasm, sense of belonging, self-regulation, effort, participation and interaction) that lead to engagement might ensure that the cycle of engaging experiences are maintained resulting into satisfaction and even more engagement. Enhancing feedback systems, especially positive feedback, and creating rapport with students are some of the ways by which the university and the consultants might enhance student engagement (Deci and Ryan, 2000; Bryson and Hand, 2007; Zepke and Leach, 2010).

From the dimension of the university, measures such as: ensuring that institutional cultures are welcoming to the registrars from diverse background; improving support services such as the library and teaching facilities; offering explanations of the institutional policies that concern the registrars; and adapting to the registrars expectations, might go a long way in enhancing their engagement. The curriculum design, methods of teaching, and the learning outcomes could also be made clear to the registrars from the outset when they enter into their posts. A formal orientation programme at the beginning of the training would ensure assimilation into, and understanding of, the institution's philosophy, educational approaches and the anticipated role of its graduates in the community. The report on the library may be an important indicator to the university to review how it operates, in order to respond to students' needs. The library services can be made to contribute significantly in the achievement of student engagement by ensuring that it can be accessed during weekdays as well as on Saturdays. Electronic learning materials such as journals and books should also be made accessible to the students both within the campus and off-campus. Additionally, ensuring access to Wi-Fi within the teaching hospital premises might also improve access to learning material wherever the students are.

The teaching hospitals should also be committed to attain and maintain the minimum standards required for training of registrars in terms of availability of: medical equipment and supplies; physical facilities such as theatres; reasonable staff levels; appropriate hours of service; and reasonable service workload. In this regard the university should work together with the teaching hospital management to ensure that minimum standards are attained and maintained. The higher education policy recommends that where work integrated learning (WIL) takes the form of workplace-based learning, it is the responsibility of the institutions of higher learning that offers the programmes requiring credits for such learning to place the students into appropriate workplaces (RSA, 2014).

7.2. Conclusion

The findings from the exploratory qualitative study seemed to suggest that postgraduate students enrolled in the masters' of medicine programmes experienced both alienation and engagement during their training. These experiences arose from the interaction of the individual students with their learning environment at both the teaching hospital and the university where they are registered.

Most of the registrars were intrinsically motivated and enthusiastic when they entered into their training posts, as engagement could be discerned from their experiences. As they continued in their training the registrars experienced different levels of engagement and/or alienation as a result of their interaction with the environment in areas such as: the programme curriculum design; the teaching and supervision they received from their consultants; the support facilities from the university; the working and learning conditions at the teaching hospitals; and the interactions with other members of staff at both the university and the hospitals.

From their perceptions it could be inferred that: improving the structure of their individual curriculum; improving the level of teaching and supervision by the consultants; improving the work conditions and infrastructure at the teaching hospitals; and improving the level of communication with the university could go a long way in creating a learning environment for medical specialists' in training that fosters engagement. Looking at the registrars' learning experiences through the lens of alienation and engagement might enable us to succinctly identify the factors that

could lead to alienation in the learning environment and how we can counter them in order to foster engagement.

REFERENCES

- Ayala - Morillas L. E, Fuentes-Ferrer M.E, Sánchez-Díaz J et al. (2014). Factors associated with residents' satisfaction with their training as specialists. *Revista Clínica Española*; 214 (4): 175-183.
- Backhshialiabad H, Backhshi M and Hassanshahi G. (2015). Students' perception of the academic learning environment in seven medical sciences courses based on DREEM. *Advances in Medical Education and Practice*; 6: 195 -203
- Bereiter C and Scardamalia M. (1989). Intentional learning as a goal of instruction. In *Resnick L.B (ed). Knowing, Learning and Instruction: Essays in honor of Robert Glaser. Pp. 363 – 392. Hilldale, NJ.*
- Bezuidenhout J, Cilliers F, Heusden M, Wasserman E and Burch V. (2011). Alienation and engagement in postgraduate training at a South African Medical School. *Medical Teacher*, 33: e145 - e153.
- Boor K, Scheele F, Van Der Vleuten C.P.M et al. (2007). Psychometric properties of an instrument to measure the clinical learning environment. *Medical Teacher*; 41:92 - 99
- Botma Y, Greef M, Mulaudzi F.M et al. (2010). Writing research proposal. In *Research in Health Sciences*. Pearson Education South Africa (Pty) Ltd, Cape Town.
- Bryson C and Hand L. (2007). The role of engagement in inspiring teaching and learning. *Innovations in Education and Teaching International*; 44 (4):349 - 362.
- Bunniss S and Kelly D. (2010). Research paradigms in medical education research. *Medical Education*; 44: 358 – 366.
- Calhoun C (ed.). (2002). *Alienation. Dictionary of the Social Sciences* (Online). Oxford University Press. Available online from: <http://www.oxfordreference.com/>
- Case J. (2007). Alienation and engagement: exploring students' experiences of studying engineering. *Teaching in Higher Education*, 12 (1): 119 - 133.
- Case J.M. (2008). Alienation and engagement: development of an alternative theoretical framework for understanding student learning. *Higher Education*, 55: 321 - 332.
- Chirdan L. B, Ameh E. L, Abantanga F. A et al. (2010). Challenges of training and delivery of pediatric surgical services in Africa. *Journal of Pediatric Surgery*; 45: 610 – 618

Colleges of Medicine of South Africa. (2014). Memorandum of understanding between the Colleges of Medicine of South Africa NPC and the Health Professions Council of South Africa. Available online at www.collegemedsa.ac.za.

Colleges of Medicine of South Africa. (2015). Service level agreement between the Colleges of Medicine of South Africa NPC and the Health Professions Council of South Africa. Available online at www.collegemedsa.ac.za.

Couper I, Mash B, Smith S and Schweitzer B. (2012). Outcomes for family medicine postgraduate training in South Africa. *S Afr Fam Pract*, 54 (6): 501-506

Coverdale J.H, Roberts L.W, Balon R et al. (2013). Writing for academia: Getting your research into print: AMEE Guide No. 74. *Medical Teacher*, 35: e926 - e934.

Daugherty S.R, Baldwin D.C and Rowley B.D. (1998). Learning, satisfaction, and mistreatment during medical internship. *JAMA*; 279 (15): 1194 - 1199

Deci E.L and Ryan R.M. (2000). The “what” and “why” of goal pursuits: Human needs and the self - determination of behaviour. *Psychological Inquiry*; 11 (4): 227 -268

Dicicco-Bloom B and Crabtree B.F. (2006). The qualitative research interview. *Medical Education*; 40: 314 - 321.

Elhalaby E. A, Uba F. A, Borgstein E. S et al. (2012). Training and practice of pediatric surgery in Africa: past, present, and future. *Seminars in Pediatric Surgery*; 21 (2): 103 – 110

Entwistle N. (1990). Approaches to learning and perceptions of the learning environment: Introduction to the special issue. *Higher Education*; 22(3): 201 – 204.

Entwistle N. (1997). Reconstructing approaches to learning: A response to Webb. *Higher Education*; 33: 213 - 218.

Entwistle N and Tait H. (1990). Approaches to learning, evaluation of teaching, and preferences for contrasting academic environments. *Higher Education*; 19: 169 -194.

Entwistle N.J and Peterson E.R. (2004). Conceptions of learning and knowledge in higher education: Relationships with study behaviour and influences of learning environments. *International Journal of Educational Research*, 41: 407-428.

Eva K.W. (2003). On generality of specificity. *Medical Education*, 37:587 - 588.

Frambach J.M, Van der Vleuten C.P.M and Durning S.J. (2013). AM Last Page: Quality criteria in qualitative and quantitative research. *Academic Medicine*; 88 (4): 552

Genn J.M. (2001a). AMEE Medical Education Guide No. 23 (Part 1): Curriculum, environment, climate, quality and change in medical education - a unifying perspective. *Medical Teacher*, 23 (4): 337 - 344.

Genn J.M. (2001b). AMEE Medical Education Guide No. 23 (Part 2): Curriculum, environment, climate, quality and change in medical education - a unifying perspective. *Medical Teacher*; 23 (5): 445 - 454.

Genn J.M and Harden R.M. (1986). What is Medical Education Here Really Like? Suggestions for action research studies of climates of medical education environments. *Medical Teacher*, 8 (2): 111 - 124.

Gravett S. (2005). *Adult learning. Designing and implementing learning events. A dialogic approach*. pp 36. Van Schaik Publishers, Pretoria.

Guba E.G. (1981). ERIC/ECTJ Annual Review Paper: Criteria for assessing trustworthiness of naturalistic inquiries. *Educational Communication and Technology*; 29 (2): 75 - 91.

Haddow G. (2013). Academic library use and student retention: A quantitative analysis. *Library and Information Science Research*; 35: 127 – 136.

Haggis T. (2003). Constructing images of ourselves? A critical investigation into 'Approaches to learning' research in higher education. *British Educational Research Journal*; 29 (1): 89 - 104

Harden R.M and Crosby J.R. (2000). AMEE Education Guide No.20: The good teacher is more than a lecturer - the twelve roles of the teacher. *Medical Teacher*, 22 (4): 334 – 347.

Health Professions Council of South Africa. (2010). New requirements for the registration of specialists in South Africa. Sub-committee for Postgraduate Education and Training. Accessed online at www.hpcsa.co.za.

Health Professions Council of South Africa. (2013). *HPCSA Act 56 of 1974*. Accessed online at: www.hpcsa.co.za.

Holsgrove G.J, Lanphear J.H and Ledingham I. (1998). Study guides: an essential student learning tool in an integrated curriculum [1]. *Medical Teacher*; 20 (2): 99 -103

Kahu E.R. (2013). Framing student engagement in higher education. *Studies in Higher Education*; 38 (5): 758 - 773.

Kember D, Ho A, and Hong C. (2010). Characterising a teaching and learning environment capable of motivating student learning. *Learning Environment Research*; 13: 43 – 57.

Kent A and De Villiers M. (2007). Medical Education in South Africa- Exciting times. *Medical Teacher*; 29: 906 - 909.

Khursheed I and Baig L. (2014). Students' perceptions of educational environment of a private medical school in Pakistan. *J Pak Med Assoc*; 64 (11): 1244 - 1249.

Krause K-L and Coates H. (2008). Students' engagement in first- year university. *Assessments and Evaluation in Higher Education*; 33 (5): 493 – 505.

Kuh G.D and Gonyea R.M. (2003). The role of the academic library in promoting student engagement in learning. *College and Research Libraries*; 256 – 282.

Leach J and Scott P. (2003). Individual and sociocultural views of learning in science education. *Science & Education*; 12 (1): 91 – 113.

Lee T, Fuller A, Ashton D et al. (2004). *Workplace learning: Main themes and perspectives*. Centre for Labour Market Studies, University of Leicester, Leicester UK. www.clms.le.ac.uk . Accessed on 7 January 2015.

Leedy P.D. (1997). *Qualitative research designs*. Practical Research 7th Ed, Chapter 7. Prentice-Hall, New Jersey.

Mann S. (2001). Alternative perspectives on the student experience alienation and engagement. *Studies in Higher Education*; 26 (1): 7-19.

Mann S.J. (2005). Alienation in the learning environment: a failure of community? *Studies in Higher Education*; 30(1):43 - 55

Maree K. (2007a). *Analysing qualitative data. First steps in Research* (1st Edition) page 105 -106. Van Schaik Publishers, Pretoria.

Maree K. (2007b). *Principles of qualitative data gathering. First steps in Research* (1st Edition) page 78 - 80. Van Schaik Publishers, Pretoria.

Marton F and Saljo R. (1976). On qualitative difference in learning: I – Outcome and process. *British Journal of Educational Psychology*; 46 (1): 4 – 11.

Mayya S.S and Roff S. (2004). Students' Perceptions of Educational Environment: A comparison of Academic Achievers and Under-Achievers at Kasturba Medical College, India. *Education for Health*; 17 (3): 280 - 291.

McLean M, Cilliers F and van Wyk M. (2008). Faculty development: Yesterday, today and tomorrow. *Medical Teacher*, 30 (6): 555 - 584

McMillan W. (2015). Theory in healthcare education research: the importance of worldview. In: *Researching Medical Education*. Cleland J and Durning S. J (ed). Willey and Sons Publishers, California. Pp 15 – 23.

Mitchell M, Srinivasan M, West D.C et al. (2005). Factors affecting resident performance: development of a theoretical model and a focused literature review. *Academic Medicine*, 80(4):376 - 389.

Mulhall A. (2003). In the field: notes on observation in qualitative research. *Journal of Advanced Nursing*, 41 (3): 306 - 313.

Murakami M, Kawabata H and Maezawa M. (2009). The influence of learning environment on medical education: a qualitative research study in the Japanese medical school. *South East Asian Journal of Medical Education*; 3 (2): 45 – 53.

Musselman L.J, MacRae H.M, Reznick R.K et al. (2005). 'You learn better under the gun': intimidation and harassment in surgical education. *Medical Education*, 39:926 - 934.

Naicker S, Plange-Rhule J, Tutt R C, and Eastwood J B. (2009). Shortage of healthcare workers in developing countries – Africa. *Ethnicity and Disease*; 19: S1-60 – 64

Pai P.G, Menezes V, Subramanian A.M et al. (2014). Medical students' perceptions of their educational environment. *Journal of Clinical and Diagnostic Research*; 8 (1): 103 -107.

Philibert I. (2012). Satisfiers and Hygiene Factors: Residents' Perceptions of Strengths and Limitations of Their Learning Environment. *Journal of Graduate Medical Education*, March 2012: 122 -127.

Polokwane/Mankweng Tertiary Hospital Complex. (2009). *Approved Organization and Establishment Structure for Tertiary Hospital Complex*. Limpopo DHSD.

Republic of South Africa. (2007). The Higher Education Qualifications Framework. Higher Education Act, 1997 (Act No. 101 of 1997). Government Notice No. 30353 of 5 October 2007. Accessed online at www.dhet.gov.za.

Republic of South Africa. (2014). National Qualifications Act, 2008 (Act No. 67 of 2008). Higher Education Qualifications Sub-Framework (HEQSF) Government Gazette 38116 of 17 October 2014. Accessed online at www.che.ac.za.

Ringsted C, Hodges B and Scherpbier A. (2011). 'The research compass': an introduction to research in medical education: AMEE Guide No. 56. *Medical Teacher*, 33: 695 – 709.

Roff S and McAleer S. (2001). What is educational climate? *Medical Teacher*, 23 (4): 333-334.

Schabracq M and Cooper C. (2003). To be me, or not to be me: about alienation. *Counselling Psychology Quarterly*, 16 (2): 53 – 79.

Shenton A.K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*; 22: 63 - 75

Trigwell K and Prosser M. (1991). Improving the quality of student learning: the influence of learning context and student approaches to learning on learning outcomes. *Higher Education*; 22: 251 – 266.

Trigwell K, Prosser M and Waterhouse F. (1999). Relations between teachers' approaches to teaching and students' approaches to learning. *Higher Education*; 37:57 - 70.

Tsai C-J, Chen C-S, Sun F-I et al. (2014). Clinical learning environment measurement for medical trainees at transitions: relations with sociocultural factors and mental distress. *BMC Medical Education*; 14:226

University of Limpopo. (2015). Strategic Plan 2020. UL Press, Turfloop.

Van Heerden B. (2013). Effectively addressing the health needs of South Africa's population: The role of health professions education in the 21st century. *South African Medical Journal*; 103 (1): 21 – 22

Veassuvalingam B and Arzuman H. (2014). Physiotherapy Students' Perception of their Educational Environment: A study to identify the areas of concern for remedial measures at two Schools of Physiotherapy in Malaysia. *Education in Medicine Journal*; 6 (3): e30 – e39.

Vermetten Y.J, Vermunt J.D and Lodewijks H.G. (2002). Powerful learning environments? How university students differ in their responses to instructional measures. *Learning and Instruction*; 12:263 - 284

Vermunt J.D. (2005). Relations between student learning patterns and personal and contextual factors and academic performance. *Higher Education*, 49: 205 -234.

Vermunt J.D and Verloop N. (1999). Congruence and friction between learning and teaching. *Learning and Instructions*, 9: 257 - 280.

Vosniadou S. (2003). Exploring the relationship between conceptual change and intentional learning. In *Sinatra G.M and Pintrich P.R (eds) Intentional Conceptual Change* (pp. 373 - 402). Taylor and Francis, NJ.

Webb G. (1997). Deconstructing deep and surface: Towards a critique of phenomenography. *Higher Education*; 33: 195 – 212.

Whitfield M and Fahrson S. (2001). Why do students not complete a Master of Family Medicine Degree? *SA Fam Pract*; 23 (3): 7-10

Wolfinger N.H. (2002). On writing field notes: collection strategies and background expectancies. In *Qualitative Research, vol. 2 (1):85 - 95*. SAGE Publications, London.

World Federation for Medical Education. (2003). *Postgraduate Medical Education WFME Global Standards for Quality Improvement*. WFME Office, Copenhagen, Denmark. Accessed online at www.wfme.org

World Health Organization. (2011). Transformative scale up of health professional education. An effort to increase the number of health professionals and to strengthen

their impact on population health. Health Systems and Services. WHO, Geneva. Accessed online at www.who.int/hrh/resources/transformative_education/en/.

Youssef W.T, Wazir Y.M.E, Ghaly M.S et al. (2013). Evaluation of the learning environment at the Faculty of Medicine, Suez Canal University: Students' Perceptions. *Intel Prop Rights*; 1: 102. Doi:10.4172/ipr.1000102.

Zepke N and Leach L. (2010). Improving student engagement: Ten proposals for action. *Active Learning in Higher Education*; 11 (3): 167 – 177.

Zyngier D. (2008). (Re) conceptualising student engagement: Doing education, not doing time. *Teaching and Teacher Education*; 24: 1765-1776.

ADDENDUM 1: HREC – 2 NOTICE OF APPROVAL



UNIVERSITEIT • STELLENBOSCH • UNIVERSITY
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Approved with Stipulations Response to Modifications- (New Application)

04-Jun-2015
Ooko, Francis FO

Ethics Reference #: S15/02/047

Title: Registrars' perceptions of the learning environment at a tertiary teaching hospital in South Africa: a cross sectional exploratory study.

Dear Dr Francis Ooko,

The **Response to Modifications - (New Application)** received on 27-May-2015, was reviewed by members of **Health Research Ethics Committee 2** via Expedited review procedures on 04-Jun-2015.

Please note the following information about your approved research protocol:

Protocol Approval Period: 04-Jun-2015 -04-Jun-2016

The Stipulations of your ethics approval are as follows:

1. In stead of validity and reliability, the concepts of trustworthiness and others be used as is applicable to qualitative research.

Please remember to use your **protocol number (S15/02/047)** on any documents or correspondence with the HREC concerning your research protocol.

Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:

Please note a template of the progress report is obtainable on www.sun.ac.za/rds and should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Translation of the consent document to the language applicable to the study participants should be submitted.

Federal Wide Assurance Number: 00001372
Institutional Review Board (IRB) Number: IRB0005239

The Health Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 Part 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Contact persons are Ms Claudette Abrahams at Western Cape Department of Health (healthres@pgwc.gov.za Tel: +27 21 483 9907) and Dr Helene Visser at City Health (Helene.Visser@capetown.gov.za Tel: +27 21 400 3981). Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.
For standard HREC forms and documents please visit: www.sun.ac.za/rds

If you have any questions or need further assistance, please contact the HREC office at 219389207.

Included Documents:

Data gathering instrument

Participant information and consent form

Response to modifications: Protocol Synopsis

Protocol

Declaration S van Schalkwyk

Checklist

CV S van Schalkwyk

Declaration F Ooko

Protocol Synopsis

Response to modifications: Protocol

Response to modifications: Cover letter

CV F Ooko

Response to modifications: Protocol_track changes

Application form

Sincerely,

Mertrude Davids

HREC Coordinator

Health Research Ethics Committee 2

Investigator Responsibilities

Protection of Human Research Participants

Some of the responsibilities investigators have when conducting research involving human participants are listed below:

1. Conducting the Research. You are responsible for making sure that the research is conducted according to the HREC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research.

2. Participant Enrolment. You may not recruit or enrol participants prior to the HREC approval date or after the expiration date of HREC approval. All recruitment materials for any form of media must be approved by the HREC prior to their use. If you need to recruit more participants than was noted in your HREC approval letter, you must submit an amendment requesting an increase in the number of participants.

3. Informed Consent. You are responsible for obtaining and documenting effective informed consent using **only** the HREC-approved consent documents, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed informed consent documents. Keep the originals in your secured research files for at least fifteen (15) years.

4. Continuing Review. The HREC must review and approve all HREC-approved research protocols at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period**. Prior to the date on which the HREC approval of the research expires, **it is your responsibility to submit the continuing review report in a timely fashion to ensure a lapse in HREC approval does not occur**. If HREC approval of your research lapses, you must stop new participant enrolment, and contact the HREC office immediately.

5. Amendments and Changes. If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, number of participants, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the HREC for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written HREC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the HREC should be immediately informed of this necessity.

6. Adverse or Unanticipated Events. Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research-related injuries, occurring at this institution or at other performance sites must be reported to the HREC within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the HRECs requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch University Health Research Ethics Committee Standard Operating Procedures www.sun025.sun.ac.za/portal/page/portal/Health_Sciences/English/Centres%20and%20Institutions/Research_Development_Support/Ethics/Application_package All reportable events should be submitted to the HREC using the Serious Adverse Event Report Form.

7. Research Record Keeping. You must keep the following research-related records, at a minimum, in a secure location for a minimum of fifteen years: the HREC approved research protocol and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the HREC

8. Reports to the MCC and Sponsor. When you submit the required annual report to the MCC or you submit required reports to your sponsor, you must provide a copy of that report to the HREC. You may submit the report at the time of continuing HREC review.

9. Provision of Emergency Medical Care. When a physician provides emergency medical care to a participant without prior HREC review and approval, to the extent permitted by law, such activities will not be recognised as research nor will the data obtained by any such activities should it be used in support of research.

10. Final reports. When you have completed (no further participant enrolment, interactions, interventions or data analysis) or stopped work on your research, you must submit a Final Report to the HREC.

11. On-Site Evaluations, MCC Inspections, or Audits. If you are notified that your research will be reviewed or audited by the MCC, the sponsor, any other external agency or any internal group, you must inform the HREC immediately of the impending audit/evaluation.

ADDENDUM 2: LIMPOPO DEPARTMENT OF HEALTH APPROVAL



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Stols M.L.

Ref:4/2/2

Dr. F. Ooko
P.O. Box 1554
Polokwane
0700

Greetings,

RE: Alienation And Engagement As A Framework For Characterizing Registrars' Perception Of Their Learning Environment: A Cross-Sectional Exploratory Qualitative Study.

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
 - Research must be loaded on the NHRD site (<http://nhrd.hst.org.za>) by the researcher.
 - Further arrangement should be made with the targeted institutions.
 - In the course of your study there should be no action that disrupts the services.
 - After completion of the study, a copy should be submitted to the Department to serve as a resource.
 - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
 - The above approval is valid for a 3 year period.
 - If the proposal has been amended, a new approval should be sought from the Department of Health.

Your cooperation will be highly appreciated.


Head of Department

26/06/2015
Date

18 College Street, Polokwane, 0700, Private Bag x9302, POLOLKWANE, 0700
Tel: (015) 293 6000, Fax: (015) 293 6211/20 Website: <http://www.limpopo.gov.za>

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ADDENDUM 3: TREC APPROVAL NOTICE



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 2212, Fax: (015) 268 2306, Email:noko.monene@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE

MEETING: 02 September 2015

PROJECT NUMBER: TREC/141/2015: PG

PROJECT:

Title: Alienation and engagement as a framework for characterizing Registrars' perception of their learning environment: A cross-sectional exploratory qualitative study

Researcher: Dr F Ooko
Supervisor: Prof SC Van Schalkwyk
Co-Supervisor: N/A
Institution: Stellenbosch University
Degree: Independent Research


PROF TAB MASHEGO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

Note:

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
- ii) The budget for the research will be considered separately from the protocol.
PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.