EMBEDDING CONTEXTUAL REALITIES IN HIGHER EDUCATION ACADEMIC PRACTICE: TOWARDS ENHANCED STUDENT LEARNING EXPERIENCES

A PORTFOLIO SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE POSTGRADUATE DIPLOMA IN HIGHER EDUCATION

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BY

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DECLARATION

I, Jane Misihairabgwi, hereby declare that this portfolio is my own work and a true reflection of my study, and that this work, or any part thereof, has not been submitted for a degree at any other institution.

Jane Misihairabgwi — January 2018

Name of student — Signed — Date

INTRODUCTION

About myself

I hold a senior lectureship position in the Department of Biochemistry and Microbiology, School of Medicine (SoM), University of Namibia (UNAM). I joined the Department in October 2010, the year the School of Medicine recruited its first student intake and commenced operations. Having served as a lecturer for several years at the University of Zimbabwe after obtaining my PhD degree in Biochemistry, it was my desire to take on the stimulating challenge of being part of the pioneering team at SoM. Armed with great confidence that my academic and research skills were sufficient to make a difference in health education in Namibia and a passion for teaching, learning and research, I was excited to take up the opportunity of lecturing at SoM.

The new position at SoM enlightened me on the importance of considering varied, continually transforming contexts in informing academic practice. With limited knowledge of the contextual realities of Namibia, which are different from those in Zimbabwe, I engaged the same academic practices, which I had deemed successful from my experiences. On reflection, despite my confidence as an experienced lecturer, the new context brought tension and anxiety as my academic approaches and techniques did not seem to work as well as I anticipated. I thus undertook to increase my understanding of the national and institutional contexts in Namibia, particularly the students' university level entry requirements and the academic cultural practices. With the little insight gained, I further undertook to improve my practice, focussing on stimulation of students' interest, reduction of students' workloads and improvement of students' grades.

Despite receiving accolades and recognition for teaching excellence following my changes, I was still left wondering what my role entails and if my experience in teaching, research and community engagement was enough to qualify me in the higher education (HE) knowledge community and as a discourse participant. Having had no training as a teacher and being always ready to take on new academic challenges to increase my knowledge, I enthusiastically applied for enrolment in the first intake of the university's Postgraduate Diploma in Higher Education (PgDHE). I perceived this as an opportunity for me to gain knowledge on enhancing my academic practice as well as to bring me on board as a discourse participant in the HE community of practice.

Portfolio Structure

Considering myself as an explorer, who undertook a journey, my portfolio is written as a guidebook on where I have been and what I have discovered, following critical reflection. The portfolio is structured around the central argument that, with the rapidly changing context of HE, contextual realities should be embedded in academic practices, such as teaching, research and scholarship, supervision and administration, to enhance student learning.

In chapter 1, I discuss the impact of contextual factors in adult education. I found it appropriate to start with this chapter because it gives an overview of theoretical perspectives of adult learning and contextual realities of adult learners, which should be considered in HE practices. The chapter sets the pace for the other chapters that deal with HE practice, such as teaching and learning (T&L), curriculum development, assessment and research.

In chapter 2, I discuss contextual realities impacting T&L, the core business in HE, then consider the impact that my context has on T&L. I proceed with an exploration of the social theories pertaining to students' approaches to learning, which impact teaching practice. Finally, on reflection, I discuss T&L innovations that I have identified, to improve my T&L practices and describe an appropriate T&L philosophy for my context. This chapter links to the chapters that follow, on curriculum development, and assessment, which are integral parts of T&L practice.

In chapter 3, I start by a discussion of the impact that my institutional context has on curriculum development practice. Following an engagement with discourse on curriculum development, I then use the concepts of curriculum responsiveness and epistemic diversity to analyze the Bachelor of Medicine and Bachelor of Surgery degrees (MBChB) curriculum at my institution, followed by a reflection on my practices regarding curriculum development and implementation.

In Chapter 4, I examine the contextual realities impacting assessment practices, followed by an engagement of principles, theories and concepts regarding assessment. I proceed with a discussion of assessment challenges at SoM and conclude with a reflection on my assessment practices.

Chapter 5, on research and research student supervision begins with an examination of contextual realities impacting research and research supervision at UNAM, followed by an

engagement with theory on research supervision. I proceed with a discussion on contextualising research and research supervision and then conclude with reflections on my research supervisory practices.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ACRONYMS

CEQUAM	Centre for Quality Assurance and Management
CPDTLI	Centre for Professional Development, Teaching and Learning Improvement
CRA	Criterion Referenced Assessment
CRP	Centre for Research and Publications
CT&L	Contextual teaching and learning
T&L	Teaching and Learning
HE	Higher Education
HPCNA	Health Professions Council of Namibia
ICT	Information and Communication Technology
MBChB	Bachelor of Medicine and Bachelor of Surgery degrees
MCQs	Multiple Choice Questions
MDPCNA	Medical and Dental Professions Council of Namibia
MoHSS	Ministry of Health and Social Services
MOOCS	Massive Open Online Courses
MRC	Multidisciplinary Research Centre
NCHE	Namibia Council for Higher Education
NHEA	Namibia Higher Education Act
NQA	Namibia Qualifications Act
NQF	National Qualifications Framework
NRA	Norm Referenced Assessment
NSFAF	Namibia Students Financial assistance Fund
ODS	Office of the Dean of Students
OSCEs	Objective Structured Clinical Examinations
PgDHE	Post Graduate Diploma in Higher Education
SoM	School of Medicine
UNAM	University of Namibia
VARK	Visual, Auditory, Read-write and Kinesthetic

CHAPTER 1: UNDERSTANDING ADULT LEARNERS

1.1 Introduction

Higher education (HE) context encompasses the background, structural and cultural setting, environment, resources, beliefs, ideologies and various other circumstances under which HE takes place. Understanding learning in adulthood involves understanding the individual learner, the context in which the learning takes place, and the learning process. Within the changing HE context, adult learners think within the contextual frames of social, cultural, political, and economic forces (Alhassan, 2012). Contextual learning deems the learners' experiences and interests as being essential in linking academic concepts and real world practices (Kapenda *et al*., 2015). Prior to my engagement in the PgDHE program, I did not consider the variation in student populations and other contextual realities to be of any importance in informing teaching and learning (T&L) practices. I also did not value the knowledge of theories pertaining to adult learning in informing practice. Having reflected on my practices, I now believe that learners' experiences and interests form part of an array of contextual factors impacting learning and should therefore be considered in education practices to ensure learning takes place optimally. This chapter begins with an overview of contextual realities impacting adult education, based on the dimensions of structure, culture as agency, as described by Archer (2000), followed by an engagement of some of the theories relating to adult learning, with a critique of Malcom Knowle's assumptions and theories of andragogy. A report of research carried out to profile the first year Medical and Pharmacy students follows, then I end the chapter with a reflection of my role as an adult educator in my context. Subsequent chapters indicate the role of contextual factors in some of the facets of academic practice, which encompass teaching, research, scholarship and knowledge exchange, supervision, academic management and leadership (Fry *et al*., 2015).

1.2 Higher Education Contextual Realities

Contextual factors at international, national, institutional, departmental and disciplinary levels impact academic development, teaching, learning and research in higher education (HE) (Scott, 2000). The contextual factors are intertwined, resulting in complexity in their implications for

academic practices. Further, in a dynamic world in which internationalization and globalization are playing a major role, HE institutions are constantly in transition in an effort to attain global ranking. The successful management of contextual factors that have implications on teaching and learning (T&L), as well as continuous review and renewal of teaching practice, consistent with changing context, though challenging, is essential for effective university practice (Devlin and Samarawickrema, 2009). Considering that HE contextual factors are central to effective T&L, it is imperative that, I, being an educator in a HE institution, acquaint myself with knowledge of contextual factors of major impact in my own context and consider the contextual implications in my academic practice, which mainly entails curriculum design, teaching, learning and research practices.

Archer (2000) makes a distinction between three inter-related dimensions of every social setting that co-exist and interplay, namely structure, culture and agency. In the HE context, the structural dimension comprises of structures which exist in an institution to support effective T&L, such as policies, programs, committees, academic development and quality assurance units as well as more abstract phenomena such as race, gender, social class and knowledge structures in the disciplines themselves. The cultural dimension comprises the values, beliefs, attitudes, ideas, ideologies, theories and concepts underpinning T&L in a particular institution. The agentic milieu comprises people in various positions in the institution, including educators and learners. In my own academic practices, prior to engaging in the PgDHE program, I had not considered that learners' beliefs and expectations also play a role in influencing institutional culture , and should therefore be valued.

Agency pertains to individuals' personal and psychological makeup, their social roles, and it also relates to the capacity people have to act in a voluntary way (Boughey, 2010). Through the actions of agents, structures that support effective T&L can be produced, reproduced and transformed. The interplay of structure and culture conditions the environment that human agents will enter, indicating enabling and constraining factors for the influence of agents. The tenets of Archer's (2007) morphogenetic approach for characterizing social contexts in terms of culture, structure and agency will shape the analysis of my institutional context in this chapter and subsequent chapters discussing the impact of institutional context.

As a result of the inequalities created by colonization, HE is in the process of radical transformation. Namibia is no exception and the demand for access to higher education is growing, with the student massification having enormous implications. The historical and political context of higher education in Namibia is typified by colonial legacies such as limited access, race and gender inequalities. The focus of attention for many policymakers and education reformers over the past decades has been to uncover and redress past inequities and disparities in the resources and education opportunities provided to all learners from different socio-economic backgrounds. To redress the inequalities in access to higher education, increase equity and quality in higher education, the University of Namibia (UNAM) was established by an Act of Parliament on August 31, 1992 as recommended by a Commission on Higher Education. The National Council for Higher Education (NCHE) in Namibia was mandated by Parliament, Act 26 of 2003, to promote access and monitor quality assurance in higher education (NCHE, 2009).

Since its inception, the university has experienced tremendous growth and transformation. Student numbers have doubled or trebled in the past decade and students are no longer drawn predominantly from privileged social groups (Tshabangu *et al*., 2013). Given that Namibia's population consists of 11 major ethnic groups, with varied lifestyles and three quarters of the country's population live in rural areas, major challenges facing the higher education system in Namibia are to develop equitable, regionally and ethnically representative access systems without negatively affecting quality (Matengu *et al*., 2014). Massification is an ongoing exercise nationally, a difficult exercise, given such diverse groups. Consequently, the resulting increased student numbers and diversity requires that educational practices must be able to manage and address such diversity, large numbers and gender imbalances, articulating the need to respect and support the multicultural and multi-ethnic groups, designing curricula and employing pedagogical skills that accommodate a wider range of learning styles and skills, cultural and educational backgrounds and that supports underprepared students disadvantaged by colonialism (Webster and Mosoetsa, 2001; Devlin and Samarawickrema, 2009). As an educator, it becomes necessary for me to address the diverse needs of the learners by being conscious of their learning needs, locating appropriate resources to help learners and making recommendations, and teaching skills that are vital to successful learning.

Despite massification having resulted in escalated enrolments, financial resources to support teaching have not kept up with the growth in student numbers (Tshabangu *et al*., 2013). Educators should be conscious of their teaching budget limitations and procure the relevant learning materials that reflect on the student's learning preferences. Regarding student financial assistance, the Namibia Students Financial assistance Fund (NSFAF) was mandated in 2000 to provide financial assistance to students, in order to enable them to study or to do research and to facilitate the training of students in prescribed courses or fields of study at approved tertiary institutions. Although resources were made available to individuals from historically disadvantaged social groups, to provide them with fair opportunities to participate in higher education, they are limited, and NSFAF is struggling to keep up with the growing massification in tertiary institutions. The bulk of funding for HE is generated from state resources but pressure to expand the revenue base of HE has been evident. Universities have either taken it upon themselves or have been pressured by governments to expand the financial and resource base as resources have dwindled against mounting enrolments and escalating demand. With the fiscal problems, serious shortages of books and journals, lack of basic resources for teaching, and lack of simple laboratory equipment and supplies, such as chemicals to do research and teaching, are some of the common problems faced by institutions across the African continent, the University of Namibia being no exception (Scott, 2000). Such fiscal problems have resulted in students' increased participation in paid work in order to manage the cost burden of HE, decreasing class attendance and self-directed study (Devlin and Samarawickrema, 2009).

Pertaining to institutional structures attending to students' affairs, the Office of the Dean of Students (ODS) at UNAM is the biggest department of the university that houses all structured, non-academic student support programs and services. These programs are designed primarily to ease and guide students' transition from high school life. ODS envisions creating an enabling and conducive environment for students, characterized by quality programs that contribute to the holistic development of students and the community. Support services provided by the office include student accommodation issues, extra-curricular activities, health and counselling services. Knowledge of the learners' needs is essential to be able to direct them to the ODS, should the need arise.

1.3 Theoretical Perspectives of Adult Learning

"Adult learning theories provide insight into how adults learn, and can help instructors be more effective in their practice and more responsive to the needs of the learners they serve" (TEAL Center Fact Sheet No. 11)

Various theories, assumptions and principles make up the adult learning knowledge base, directed at clarifying how adults learn best and their attitude towards learning. The importance of context in adult learning is among the guiding ideas to be considered in thinking about, planning and implementing instruction for adults (Merriam and Caffarella, 1999; Taylor and Hamdy, 2013).

During my initial sessions on the PgDHE program, I was of the opinion that educational theory is not relevant for my practice. Having engaged in a lot of theories, principles and concepts pertaining to adult education, I now appreciate the availability of these evidence-based and/or long term experience-based guiding principles in the discourse on adult learning. Rather than being in a situation where one has no clue where to start when employed as a lecturer, such as my experience when I was employed with no education training, I propose engagement with the theories pertaining to one's field of practice. It is very fortunate that a body of theory exists that can inform practice and the old adage "there is nothing more practical than a good theory" now has meaning in my practice. Taylor and Hamdy (2013) have grouped the theories of adult learning into several categories which form theoretical bases to assist in T&L strategies, such as curriculum development, student assessment and program evaluation. I will engage the theories in various chapters based on their implications for the various academic practices. In this section, I discuss what Taylor and Hamdy (2013) classify as humanistic theories, because of their characteristics of promoting individual development, and being learner-centered. These theories include andragogy and self-directed learning. I discuss the major educational theory of andragogy and its implications for practice in my context, both as a student on the PgDHE program and as an educator, then I give an overview of self-directed learning. Further, I give an

overview of the transformative learning theory, as categorized by Taylor and Hamdy (2013). Socio-cultural T&L theories are discussed in chapter 2.

1.3.1 Andragogy

Andragogy is probably the most well-known perspective pertaining to adult learning. Malcolm Knowles introduced and defined the term "andragogy" as "the art and science of helping adults learn", distinguishing it from "pedagogy", which is defined as "the art and science of teaching children" (Knowles, 1968, 1980, 1984). In andragogy, the learning experience is driven by the learner, whereas, in pedagogy, the learning experience is driven by the teacher. Following debates on whether andragogy represents a theory of learning or a prescription for practice, most theorists have agreed that it represents a set of assumptions more than it represents a theory, and I am in agreement with that notion (Merriam and Caffarella, 1999, Kaufman, 2003). A question that arises from engaging Knowles' notion of andragogy is whether andragogy represents a way of learning that is different from forms of learning embedded in pedagogy. Although first published as a learning theory, Knowles later acknowledged the andragogical model was based on a set of assumptions, rather than on a theory (Knowles, 1984). Knowles also later recognized that "pedagogy-andragogy represents a continuum ranging from teacher-directed to student directed learning, and that both approaches are appropriate with children and adults, depending on the situation" (Merriam, 1993; Alhassan, 2012). Knowles himself mentions that andragogy is a "model of assumptions about learning or a conceptual framework that serves as a basis for an emergent theory." (Alhassan, 2012). There appears to be a lack of research on whether this framework of teaching and learning principles is more relevant to adult learners or if it is just a set of good practices that could be used for both children and adult learners. According to Taylor and Hamdy (2013), many of the principles of andragogy can be applied equally to pedadogy and the authors deem it more approriate to think in terms of a learning continuum, which stretches throughout life, with different emphases, problems and strategies at different times.

Andragogy is based on five assumptions about how adults learn, their attitude towards learning and their motivation for learning, and seven principles of andragogy derived from the assumptions (Knowles, 1968; Merriam and Caffarella, 1999; Kaufman, 2003). The five assumptions posited by Knowles are that the adult learner:

- Is independent and self-directing and can direct his or her own learning.

- Has accumulated a reservoir of experience, which is a rich resource for learning.
- Values learning that integrates with the demands of everyday life.
- Is interested in immediate, problem-centred approaches than in subject-centred approaches.
- Is motivated to learn by internal drives rather than by external drives.

Much debate has been engaged, with regard to Knowle's posited assumptions. According to Jarvis (1987), Knowles was more descriptive than analytical in presenting his ideas and andragogy may be "his own ideological exposition". Several authors argue there has been little empirical research to test the validity of Knowle's assumptions, or to predict adult learning (Merriam, 1993; Merriam and Caffarella, 1999). Jarvis (1987) acknowledges that, while Knowles' concept of andragogy may not be a comprehensive theory, he provided a foundation upon which theory could eventually be developed. Knowles' principles are regarded as guidelines on how to teach adult learners, who tend to be independent and self-directed.

According to Kaufman (2003), the principles derived from the assumptions posited by Knowles are that adult educators should:

- Establish a cooperative learning climate, where learners feel safe and comfortable expressing themselves.
- Assess learners' needs and interests and mutually develop learning objectives based on the learner's needs, interests, and skill levels.
- Engage learners in mutual planning of relevant methods and curricular content.
- Encourage learners to identify resources and devise strategies for using the resources to achieve their objectives.
- Evaluate the quality of the learning experience and make adjustments, as needed, while assessing needs for further learning
- Involve learners in evaluating their own learning to develop their skills of critical reflection.

Botha and Coetzee (2016) argue that adult participation in learning interventions is usually driven by a personal need to find clarity on a specific issue or to prepare for a new job or life

role. Consequently, adults as learners have little tolerance for poorly constructed and delivered learning interventions and will judge the relevance and/or applicability of any learning experience with regard to their personal life experiences and realities (Knowles, 1984; O'Toole and Essex, 2011). In a tertiary institution dealing with adult learners, it is therefore incumbent upon the designers and facilitators of learning experiences, such as myself, to ensure that adult learners perceive or judge their learning as personally valuable, relevant, and applicable (Botha, 2014).

Adults as learners are usually fairly sophisticated and independent, thus possessing the capacity to act independently and self-directed (Botha, 2014; Knowles, 1984). Research supports the dictum that students' motivation and psychological attributes influence their learning self-directedness. Oliviera and Simoes (2006) found that a strong relationship exists between students' self-confidence and their self-directedness, while a weaker, but statistically significant relationship exists between self-directedness and internal control beliefs. In addition, a collaborative relationship between the academic and the adult learner fosters the cultivation of both motivation and autonomy in the adult student (Garrison, 1997; Taipjutorus *et al*., 2012).

Significant concepts in adult learning are the experiential nature of adult learners, the ability to critically think in the context of their complete environment. It is argued that though adults are self-directed and basing their learning on experiences, they need institutional and environmental support to persist to graduation (Kasworm, 2002). Institutional policies, services and the classroom environment play a role in adult learning and influence learner persistence.

Knowles posits that adults want to know why they need to learn something before undertaking learning (Knowles *et al*., 2005). From my experience as a student on the PgDHE program, I agree that the sessions I enjoyed the most were those in which I found immediate relevance and possible application to my practice. I have therefore undertaken to highlight the relevance and importance of subject matter to my students to stimulate and motivate their learning and encourage participation. I have found this approach to be quite successful for the postgraduate students pursuing a Master's degree in Microbiology, majoring in Food Microbiology. However, for First year Medical and Pharmacy students, it has been challenging to explain core science concepts to practice as students may later appreciate the relevance as they proceed to later years

of their education. I have often used case studies to commence discussion on relevant clinical issues.

Given the assumption that adults believe they are responsible for their lives, are independent and self-directing (Knowles *et al*., 2005), educators should create learning environments in which learners feel safe and comfortable expressing themselves. Botha and Coetzee (2016) state that that self-directedness in adult learning can be perceived as the link between the students' control of and involvement in the officially created learning environment on the one hand, and the students' intrinsic beliefs, attitudes and concomitant learning behavior on the other hand. In my context, where the dominant culture is that the educator is viewed as the primary source of knowledge and direction, there is a challenge in the application of this principle. Brookfield (2003) deemed andragogy to be "culture blind," stating that the concept of self-directed learning and the concept of the students establishing a non-threatening relationship with the teacher as facilitator of learning may neglect races and cultures that value the teacher as the primary source of knowledge and direction. I am in agreement with Brookfield's (2003) observation in my context, as first year students seem to prefer to have very clear instructions regarding what they should do and how they should do it and as a student on the PgDHE, although the facilitators are co-workers in HE, I also was of the opinion that the facilitators were my primary source of knowledge in the field of education and I expected direction from them. Considering self-concept, I argue that not all adult learners will know exactly what they want to learn and some will require a structured outline from the lecturer. I however, plan to engage learners in the curricula content and teaching methods to allow them the opportunity to be self-directing.

Considering that adults are ready to learn and are inclined to learn what they can apply in the present, I have undertaken to use contextual real life examples which students can relate to, in an effort to highlight the relevance. My experience as a PgDHE student has been that there have been learning sessions in which I felt the content being taught was too deep and irrelevant for immediate application in my context and as a result thus I was disinterested. Given that background, I plan to engage my students in curricula content after assessing their needs, interests and skill levels and highlight the relevance of the taught content for their immediate application. Considering the assumption that adults want to learn what will help them perform tasks or deal with problems they confront in everyday situations and those presented in the

context of application to real-life (Knowles *et al*., 2005; Merriam and Caffarella, 1999), I have decided to use case studies to highlight problems and actively discuss solutions with the students. I also plan to introduce small group activities to engage students in practical learning as I personally found that stimulating as a student on the PgDHE program. It is my hope to implement Problem based learning (PBL) in co-ordination with the other biomedical sciences taught to my students. According to Yi Li (2017), PBL seeks to increase problem-solving and critical thinking skills that can be directly related to the field of work.

There are individual differences in background, learning style, motivation, needs, interests, and goals, creating a greater need for individualization of T&L strategies (Silberman and Auerbach, 1998). Hanson (1996) argues that the difference in learning is not related to the age and stage of one's life, but instead related to individual characteristics and the differences in "context, culture and power" within different educational settings. The richest resource for learning resides in adults themselves; therefore, tapping into their experiences through experiential techniques such as discussions, simulations, problem-solving activities, or case-based methods is beneficial (Brookfield, 1986; Knowles et al., 2005; McKeachie, 2002; Silberman and Auerbach, 1998). In my context as an educator, the first year cohort hardly has much experience as most of them enter university from secondary school level. As a student on the PgDHE it was very fascinating to get insight into the various ways of thinking, learning styles and interests of other students and discussions were quite engaging and exciting. Having had this experience, I plan to engage my students in discussions more in an effort to tap into their experiences and maximize on their contributions.

Adult motivation can be blocked by training and education that ignores adult learning principles (Knowles *et al*., 2005). Personally, I engaged on the PgDHE program to increase my knowledge on how to be an effective HE educator and to increase my knowledge on guiding principles for enhanced teaching and learning. Andragogy urges teachers to base curricula on the learner's experiences and interests. Every group contains a configuration of idiosyncratic personalities, differing past experiences, current orientations, levels of readiness for learning, and individual learning styles. Thus trainers should be wary of prescribing any standardized approach to facilitating learning (Brookfield, 1986). Understanding the six assumptions in andragogy prepares facilitators to create successful training.

Transformational learning means reassessing one's perspectives or correcting distorted assumptions. Kasworm (2002) delineates five areas of self and society that influence the adults' navigation through their collegiate experience: work responsibilities, family and significant other responsibilities, financial responsibilities, community responsibilities, student role responsibilities, and responsibilities to self. Often, the role of the student significantly conflicts with the adult undergraduates' other responsibilities.

Although the concept of "andragogy" explains the motivation to learn, Durning and Artino (2011) argue that its main limitation is the exclusion of context and the social mechanism of constructing meaning and knowledge. Context and social factors are crucial in professional education (Durning and Artino 2011).

Concerning adult learning, ideas that have been generated based on andragogy include self-directed learning, experience-based learning, and reflection. The idea of learning as contextual and applicable to specific problems and situations within adult lives is also a current topic within the field (Merriam and Caffarella, 1999).

1.3.2 Self-directed learning

Self-directed learning is a "process in which individuals take the initiative, without the help of others" in planning, carrying out, and evaluating their own learning experiences (Knowles, 1975). Adult self-directed learning involves the organization of T&L so that learning is within the learners' control and learners are able to accept responsibility for their own learning (Kaufman, 2003; Taylor and Hamdy, 2013). Self-directed learning suggests that adults can plan, conduct, and evaluate their own learning. It has often been described as the goal of adult education emphasizing autonomy and individual freedom in learning. A limitation of the self-directed learning concept is failure to take into consideration the social context of learning. It has also implicitly underestimated the value of other forms of learning such as collaborative learning. Within the adult education setting, the teacher can augment traditional classroom instruction with a variety of techniques to foster self-directed learning for individuals or for small groups of learners who are ready and willing to embark on independent, self-directed learning experiences. Self-direction is a critical component of persistence in adult education, helping learners

recognize how and when to engage in self-study when they find they must stop out of formal education (Taylor and Hamdy, 2013).

1.3.3 Transformational Learning

Transformational learning is often described as learning that changes the way individuals think about themselves and their world, and that involves a shift of consciousness (Taylor and Hamdy, 2013). The transformational learning theory explores the way in which critical reflection can be used to challenge the learner's beliefs, perceptions and assumptions (Mezirow 1978, 1990, 1995). The process of perspective transformation includes a critical review of long held perspectives, consideration of personal, professional and social contexts and critical reflection (Taylor and Hamdy, 2013). Mezirow (2000) argues that as individuals reflect on, discuss and challenge their assumptions, they often experience a shift in their frame of reference or view. In my experience as a PgDHE student, my peers, facilitators and I often engaged in reflective discourse, challenging each others' assumptions and encouraging each other to consider various perspectives and indeed, I experienced shifts in some of my views. According to the theory put forward by Mezirow, it is essential that participants engaging in reflective discourse have complete and accurate information about the topic for discussion, be free from bias, and meet in an environment of acceptance, empathy, and trust (Mezirow, 1997, 2000). A criticism often leveled at Mezirow's theory is that it does not account for the effect of the individual's race, class, and gender, or the historical context in which the learning occurs (Taylor, 1998; Cervero and Wilson, 2001; Corley, 2003; Sheared and Johnson-Bailey, 2010). It has also been criticized as hyper-rational, ignoring feelings, relationships, context and culture, and temporal aspects (Silver-Pacuilla, 2003). As an adult educator, in seeking to foster transformative learning within my discipline, I plan to promote a climate that supports students' participation, interaction and self-reflection.

1.4 Profiling First Year Medical and Pharmacy Students

The factors that influence adult undergraduates to persist in their schooling are diverse and complex (Kasworm, 2002; Alhassan, 2012)

"Adult students find that their goals and motives for college attendance are tested, supported, and sometimes diminished by both the collegiate world and their other worlds" (Kasworm, 2002).

Knowledge and good understanding of adult learners' needs and their associated contextual realities is beneficial in structuring academic practices that engage all learners and stimulate their personal growth and reflection (Martin and Sheckley, 1999). A challenge arising in restructuring academic practice is that it may involve transformation of well-established institutional systems to better address the observed students' needs. According to Kasworm and Pike (1994), greater family responsibilities, lower socioeconomic status**,** and lower levels of parental education place older learners at a disadvantage for persisting in college and completing a degree.

Adults are faced with varying difficulties in their learning. In an effort to understand the students' personal contextual realities and apply evidence based embedding of context in my teaching and research practices to enhance student learning, I carried out a study to explore the demographic profiles and learning styles of first year Medical and Pharmacy students. The purpose of research in this context is to propose approaches to learning environment design that will be inclusive of the majority of the student profile. Learners' biographical factors such as age, race, and gender may also have an influence on their learning. Botha (2014) argues that developers of learning environments in higher education should consider learner profiles in the development of T&L in order to optimize the fit between the individual learner and the HE environment so that student success is supported.

1.4.1 Demographic Profiles

Using a structured questionnaire (Appendix 1.1), biographical factors such as age, race, and gender of first year adult learners enrolled for the MBChB and BPharm degrees were determined. A total of 117 students participated in this study.

Based on data obtained from the questionnaire designed to assess the demographic profile of first year Medical and Pharmacy students in 2016, the average age of the students when commencing university studies is 20 years. Ninety four percent of the students commenced university after completing the Grade 12 level of education with 6 % having attained first degrees or diplomas

through the mature age entry program. Four percent of the students are married and it is not surprising that all the married students are female. My own observation is that it is the norm in the African context that females get married at an earlier age than men. According to Hagedorn (1999) family issues are a significant obstacle for female students, citing an 83% probability of quitting their studies.

Prior to conducting the profiling study to determine demographics, I must admit that I did not consider the contextual realities of married students which may present challenges to their learning, such as pregnancy, child-bearing and child care responsibilities. I treated the married students in the same manner as the single students, especially regarding the meeting of task deadlines and in class attendance expectations. McGivney (2004) argues that reasons such as responsibilities to family and children or health issues, often result in some students attending class irregularly (McGivney, 2004). Jarvis (1987) however argues that family commitments may indicate stability and enhance academic focus among the married students. In my experience as a PgDHE student, being a full time worker, I have had to read and complete tasks and assignments at night and during week-ends and that has been very challenging as I could hardly meet submission deadlines. I am grateful for the support from the lecturers and fellow participants on the PgDHE program who encouraged me to soldier on under various external pressures. Having found it challenging to meet task submission deadlines on the PgDHE program, my attitude and practices towards my students have changed and I have become more sensitive, considerate and lenient towards the challenging contextual realities facing adult learners. I have resolved to giving assessments during lecture periods and avoid take home assignments which put students under pressure and result in them rushing through just to be able to submit something for marking.

Work responsibilities, family and significant other responsibilities, financial responsibilities, community responsibilities, student role responsibilities, and responsibilities to self often put adult learners under pressure (Kasworm, 2002). Often, the role of the student significantly conflicts with the adult undergraduates' other responsibilities. Diverse challenges faced by adult learners in HE may include isolation, struggle with technology, a lack of support from their

lecturers and difficulty in interacting with the lecturers and fellow learners. Such challenges may be frustrating and demotivating to learners.

The average family member size of 7 for this cohort is quite high in my opinion. Family obligations may limit the time available which may put student under pressure and frustration, depending on family support, or lack thereof.

Only 23 % of the students managed to secure accommodation at the Health Sciences Campus, with 15 % staying with their parents and 30 % renting their own accommodation. Considering studying conduciveness, 42 % of the students cited that their places of residence were not conducive for studying. The challenge at the Health Sciences Campus is that the Campus is still under construction therefore the temporary library cannot accommodate a large number of students.

Fifty-five percent of the students cited that they received the NSFAF funding for their studies. Fiscal constraints are likely to affect student learning.

Results revealed that the student cohort is very diverse, with 6 different ethnic groups having being recorded among the Namibian students, who formed 91 % of the student cohort, with 9% being foreign students. 52 % of the students cited their first language as being Oshiwambo with only 4 % citing English as a first language. Such observations relating to linguistic and cultural diversity brought insight into the importance of designing and implementating T&L practices tailored to meet students' diverse needs as fairly as possible.

Fortunately, none of the students cited any disabilities, although 31 % cited vision problems. Prior to engaging in discussion on inclusive education on the PgDHE, I had not considered designing T&L activities that are sensitive to student disabilities. I advocate for student profiling questionnaires to be completed during the first year orientation program so that educators are aware of the demographic profiles of their students and can plan accordingly.

1.4.2 Learning Styles

Differences in learning can be attributed to learning style, cognitive style, personality, gender, and culture (Merriam and Caffarella, 1999). Lujan and DiCarlo (2006) suggest that defining learners' preferred modes of learning, in terms of the sensory modalities by which they prefer to assimilate new information, is one way of characterizing of learning styles. Several researchers point out that student motivation and performance improves when instruction is adapted to student learning styles (Murphy *et al*., 2004; Baykan and Nacar, 2007). Researchers studying the learning styles of individuals have argued that the knowledge of how students learn is important in designing curricula and selecting appropriate teaching methods to enhance student learning (Coffield *et al*., 2004). Four sensory modalities of learning: visual, auditory, read-write, and kinesthetic have been defined by Fleming (2002). Questionnaires assessing visual, auditory, read-write and kinesthetic (VARK) student learning styles have been used to guide instructors in selecting of learning and assessment strategies (Coffield *et al*., 2004; Baykan and Nacar, 2007). In order to determine the learning styles of first-year Medical and Pharmacy students, I used the VARK questionnaire, which is attached in the profiling questionnaire in Appendix 1.1.

Considering learning preferences, visual learners prefer the use of diagrams and symbolic devices, read-write learners prefer prints and texts, while auditory learners prefer to hear information and, thus, enjoy discussions and lectures when acquiring new information (Baykan and Nacar, 2007). Kinesthetic learners prefer simulations of real practices and experiences. Some learners have a preference for one of these learning modalities, whereas multimodal learners do not have a strong preference for any single method and learn via two or more of the modalities (Fleming, 2002, Coffield *et al*., 2004).

Considering the recorded learning styles, 62 % of the students preferred a multimodal learning style, while 38 % preferred a unimodal learning style. The majority of the students who preferred a multimodal learning style (32 %) preferred all four learning modes researched, that is visual, auditory, read-write and kinesthetic. Among the unimodal learners, 12 % preferred the kinesthetic learning mode while only 3 % preferred the visual learning mode.

Given that the majority of the students preferred multimodal learning modes, it is necessary to consider that such students prefer information to be delivered in a variety of modes and do not learn by just listening to lectures delivered by the educator and memorization. In order to achieve meaningful learning, these students should discuss, write and relate any new information to their past experiences and knowledge as well as applying it in their lives (Baykan and Nacar, 2007). In my disciplinary context, traditional didactic lectures using power point presentations are mostly used in the first year preclinical modules, assuming all students to be auditory learners, although in the present study only 11 % of the students were found to be single auditory learners. Considering that 62 % of the students in this study were found to be multimodal, I realise the need to design and employ active learning strategies to a greater extent in the first year of our curriculum to enhance learning for all types of learners. To achieve this, I propose drastic reductions in passive lecture hours, preparing a more problem-based curriculum and use of a variety of teaching materials and methods. My proposed recommendations are further elaborated in chapter 2 on teaching and learning.

1.5 Reflection: My Role in Enhancement of Adult Learning

Engagement with theories of adult learning, with a focus on Knowles' assumptions and principles gave me insight and set me on a reflective path of considering my practices as an educator in my context. Having adopted a view of myself as both a learner and an educator, I have come to the realization that, despite the specific learning barriers that adult learners may be battling with, they have a great chance of succeeding in their academic endeavors if afforded the opportunity, assistance and support required. I have therefore increased my flexibility to suit the varied students' circumstances and designed appropriate T&L strategies aimed at enhancing student learning.

Currently, I have attempted to establish a friendly, open, learning climate, where learners feel free to express themselves, participating in a meaningful educational experience. The challenge has been that the class is very large with about 177 students therefore a few expressive students usually participate in discussion. I have used the passive didactic lectures mostly and I am working on implementing alternative teaching methods such as small group discussions to encourage student participation and expression. I have created opportunities for student

engagement by giving interactive sessions, asking questions and making time for students to ask questions. I often ask the class to brainstorm answers to a problem or question with the goal of stimulating thinking and drawing connections between the education content and their own lives, not necessarily identifying specific answers. A common interpretation of this notion of contextual learning is the idea that learning should be "applied" in some sense to a problem that the learners perceive to be important or significant to them (Kapenda *et al*., 2015). I have used some of the concepts of problem based learning to involve learners in diagnosing their own needs and this has this has apparently triggered internal motivation among the learners. Learners have shown a keen interest in formulating their own learning objectives, feeling that they are in control of their learning. My plan is to further involve learners in planning of T&L methods, giving them the chance to select methods that enhance their learning.

Having participated in e-learning technologies on the PgDHE program, I am now in a position to encourage learners to use e-resources for self-directed learning.

1.6 Summary

Having conducted a profiling of my students and noted informative diversities in demographic profiles and learning styles of students, I conclude that such an exercise prior to teaching would be beneficial in informing choice of teaching modes and support for enhanced student learning. Insight into the diverse contextual realities of the student population, which may include socio-economic, cultural and educational backgrounds can be used as a guide in choice of academic practices. In my opinion, some of the major objectives of selected academic practices in adult education should be to direct students to engage in deep, rather surface learning and become reflective, lifelong learners. I therefore advocate for the implementation of learner-centered rather than teacher-centered approaches to teaching and learning.

CHAPTER 2: TEACHING AND LEARNING IN THE HEALTH SCIENCES

2.1 Introduction

Teaching and learning (T&L) forms the core business of most higher education (HE) institutions and has a direct impact on the quality of graduates and institutional credibility. Excellence in teaching is a requirement in many universities, as an institutional marketing tool, as part of an academic educator's case for promotion, and also as provision of accountability for public funding (Ramsden, 2003). University teaching should be focused on ensuring that students are molded and empowered to participate in socio-economic advancement of the nation and engage in diverse advancement activities nationally and internationally.

With the widening range of degrees and courses offered to students of increasingly diverse social and educational backgrounds, experiences, expectations and levels of preparedness, educators are under pressure to demonstrate their effectiveness and efficiency in T&L without sacrificing excellence. In this chapter, using the social realist concepts of structure, culture and agency, I begin with a discussion of contextual realities relating to T&L in my institution and discipline. Guided by socio-cultural theories relating to T&L, I then proceed with a critique of the T&L practices of my disciplinary context. I then discuss the use of modern technologies in T&L, comparing them with traditional technologies. In light of the constraints and enablements in my institutional and disciplinary context, I conclude with a reflection on the role that I see myself fulfilling in T&L to enhance student learning, and a presentation of my designed context-based T&L strategy.

2.2 Contextual Realities Impacting Teaching and Learning

According to Bhaskar's philosophical perspective of critical realism, the situational logics at play in a particular social context are important in examining the possibilities for morphogenesis or morphostasis (Bhaskar, 1998). Critical realism accepts that there exists a reality independent of our representation of it but acknowledges that our knowledge of reality is subject to all kinds of historical and other influences (Case, 2013). Through interrogating institutional discourses, a picture of the institutional culture can be constructed to enable better understanding of events and patterns of behavior within the institution (Quinn, 2012). The drive of UNAM to move from colonial influence might be influencing the realism of the present, thus, the emerging structure

and culture of UNAM may be a genesis of its colonial history and the link between this and its agents over time. The structural and cultural characteristics of the University of Namibia may constrain or enable the implementation of reform geared towards enhanced academic practice. In this section I examine the structure, culture and agency pertaining to T&L activities at UNAM, and more specifically at the School of Medicine.

At national level, policies such as the Namibia Higher Education Act (NHEA)(2003), National Council for Higher Education (NCHE) (2003), the National Qualifications Authority (NQA)(1996) and the National Qualifications Framework (NQF), form part of the structure that influence T&L at UNAM. In an effort to conform to global and international standards, the policies increasingly demand quality, relevance and development activities in the higher education sector for both students and staff. The (NHEA)(2003), one of the main legislation bodies governing Higher education in Namibia, centers its requirements on co-ordination, expansion, quality enhancement and assurance, accountability, accreditation and monitoring. The implications of the NHEA are that the education should be learner driven and qualifications driven by a national qualifications framework which can determine educational equivalencies across and outside of educational institutions. The NCHE is a structural element with discourses centred around equity, redress, efficiency, accountability and quality. Programmes offered by UNAM are subject to registration and accreditation by the NQA and the NCHE.

At institutional level, the organizational structure is critical to the attainment of its vision and mission. The University of Namibia's vision is to be a beacon of excellence and innovation in teaching, research and extension services and its mission is to provide quality HE through teaching, research and advisory services to its customers, with the view to produce productive and competitive human resources capable of driving public and private institutions towards a knowledge-based economy, economic growth and improved quality of life. In conformity with the national policies, the university values professionalism, mutual respect, integrity, transparency, equity and accountability. To provide guidance to staff in all T & L processes, an institutional T &L policy exists at UNAM. In recognition of the changing HE context, the policy states that student learning should extend beyond subject expertise to personal and social development to enable graduates to actively participate economically, socially and in community development activities in their contexts. Contextual issues such as equity, social justice for all

across social, economic, ethnic and gender differences are considered in the policy. The institutional T&L philosophy, clearly described in the policy, is based on the principles of 'student oriented teaching' and 'intentional learning', emphasizing the use of interactive, reflective, constructive, experiential, self-directed and creative teaching strategies that encourage active student involvement in the learning process. The UNAM T&L policy was compiled in 2014, although the University started operations in 1992. Before release of the T&L policy, it is highly likely that academic staff tended to approach T&L in their disciplines from a common sense perspective. Culturally, the educator focus is on teaching rather than learning and educators have a lot of disciplinary knowledge but very limited pedagogic knowledge. It may be thus difficult to change the mindsets of educators who were already applying common sense approaches to teaching to implement the T&L policy. Many academics resist engaging in activities aimed at professionalizing academic practice. I only became aware of and read the UNAM T&L policy when I engaged as a student on the PgDHE program, though I joined UNAM as an academic staff member in 2010. Prior to that, I executed my T&L practices without guidance, not adhering to the guidelines stipulated in the policy. I am of the opinion that this is the current status for most educators at the institution. It is challenging to attain quality under circumstances in which academics are ignorant about the policies that guide consistent achievement of quality delivery of education. Some academics may be of the opinion that policies are bureaucratic, difficult to implement, and thus a waste of time to read. A paradigm shift is required to change the culture of resistance to acquaintance with and adherence to institutional policies among academics.

Institutionally, quality assurance, of which assessment is a crucial component, is pivotal in the academic domain, being necessitated by contextual realities such as massification, globalization and internationalization. Consequently, in order to ensure that students receive high quality and relevant education, and that the academic qualifications are widely recognized, the University of Namibia established the Centre for Quality Assurance and Management (CEQUAM) in January 2010. CEQUAM aims at developing the University's quality assurance capabilities, in order to improve and update academic and managerial activities, as well as to administer and facilitate the operations of UNAM's Quality Assurance and Enhancement Policy and Procedures. A major objective of CEQUAM is to improve the Quality standards of academic, research, community engagement and support services activities within the University. CEQUAM operates under the

auspices of the NCHE and some provisions of the NQA. While CEQUAM exists as an important quality enhancement structure, the provision of support to various Departments should be increased and the Centre should sensitize and encourage academics to acquaint themselves with documents available on their website to enable operations to take place within the set performance benchmarks and ensure the culture of quality maintenance and enhancement.

Other enabling structural initiatives designed to strengthen the T&L discourse at UNAM are the recognition of excellence through awarding of meritorious wards to deserving educators. Students have the opportunity to formally recognize lecturers' teaching excellence through the annual student-lecturer forum. I found it quite encouraging to be recognized for teaching excellence in 2017. To ensure quality in T&L activities, peer evaluation is encouraged, a practice which I carried out only through PgDHE requirement. I advocate for monitoring and evaluation of T&L practices by peers. Two of the three evaluations of my teaching carried out by peers in 2017 are attached as appendices (Appendix 2.1 and 2.2). I also had the opportunity to observe one of my peers' teaching and the observation report is attached as Appendix 5.3. Another structural institutional enablement is the availability of a well-equipped library to enable students to access current research and scholarship in their disciplines.

With the changing HE context, addressing diverse student groups and knowledge increasing, new challenges have been presented to educators, necessitating greater emphasis on academic staff development in many institutions (Webster and Mosoetsa, 2001; Quinn, 2011). Many educators tend to depend on traditional mental models of T&L inherited from their own learning experiences, regardless of whether they are suited to their current contexts or not. Hatem and co-workers (2011) argue that teachers remain unqualified if they practice only on the basis of disciplinary qualification, irrespective of how much teaching experience they have. The Centre for Professional development, Teaching and Learning Improvement (CPDTLI) at the University of Namibia, established in 2015, is centered on improved quality of T&L, attained through effective, sustained, site-based and responsive professional development. A key concern for the Centre is the provision of CPD for educators, to improve the quality of T&L in the general education sector and at the University of Namibia. The CPDTLI runs a student-lecturer evaluation system based on completion of a questionnaire interrogating T&L practices by students. Educators are encouraged to reflect on the feedback and use it to improve and enhance

their T&L practices. Thanks to the co-ordination by the CPDTLI, the PgDHE commenced in 2016, truly offering a professionally rewarding and enriching experience. This highlights UNAM's commitment to developing T&L and academic staff, not just through documentation, but also practicing. Higher education educators, like myself, are part of the key beneficiaries. According to Murray (2008), however, the implementation of staff development programs, which introduce lecturers to concepts, schools of thought and theoretical frameworks drawn from the field of education has met with resistance from lecturers in some HE institutions, who are not comfortable with language and concepts from the field of HE studies, perceiving the field of HE as being jargon-ridden and even pseudo-scientific. Murray (2008) believes that all lecturers in HE should be encouraged to take a scholarly approach to their teaching, rather than view teaching as a set of technical skills that they can be trained to execute. In agreement with Murray (2008) and Quinn (2011), it is my belief that, without becoming a HE expert, higher education concepts learnt on the PgDHE program have helped me to gain a more scholarly and analytical understanding of issues pertaining to my teaching, developing my professional competence, given the fact that I have undergone little formal preparation for my role as an educator.

Given the large student numbers and increasing educator duties resulting from increased students' access to HE, the use of e-tools and other web- and electronically enabled initiatives that encourage students to monitor and evaluate their own learning, formatively, should be considered. With student enrolment in my discipline have more than doubled since my appointment at the University of Namibia 6 years ago, administrative work associated with quality assurance and accountability such as record-keeping, reporting, and other forms of "invisible" work have consequently increased. Student consultations and the number of research students requiring supervision have also increased, leaving very little time to rest and relax during workdays. Student massification poses the challenge that educators are expected to deal with an unprecedentedly broad spectrum of student ability and background (Ramsden, 2003). Educators are therefore expected to redesign courses and teaching methods to suit the diverse student population, employ strategies to deal with the large, mixed ability classes, and appropriately apply information and communication technology (Ramsden, 2003).

The University of Namibia is currently harnessing Information and Communication Technologies (ICTs) to improve efficiency and effectiveness in teaching, learning and research

activities. Through eLearning, students are able to pursue education in a flexible learning environment outside of a conventional classroom setting. Implementation of eLearning at the university has the potential to provide a strategy to respond to increase equity, enhance efficiency and improve the quality of T&L. Since 2016, UNAM is actively providing training courses to educators to support them in the use of eLearning technologies and encourage implementation. Having been part of the PgDHE program, it is my intention to become an early adopter in the implementation of eLearning processes and take the lead in sharing my experiences with the wider university community. Rather than avoiding the workplace demands by exiting or moving into managerial posts, Webster and Mosoetsa (2001) encourage that academics should respond in innovative ways by introducing mixed mode of service delivery by use of information technology. It is imperative that I familiarise myself with, understand and capitalise on new ways of interacting and communicating with students and be capable of teaching on-campus, off-campus and in blended environments, employing technologies and pedagogies suited to the context and student cohort, as suggested by Devlin and Samarawickrema (2009).

At the school level, the mission of SoM is; "To produce health professionals whose knowledge, professional skills, and practice in medicine are in tune with the needs of society." The vision of SoM is to be a leader in the development of human resources for health and a leader in relevant translational research.

The traditions and culture of the University of Namibia and the disciplinary culture have been largely modelled on the British University system, which has largely evolved due to increasing technology (Fry *et al*., 2015). A contextual challenge resulting from this model is the varied English language proficiency among students, since English is the official language of instruction. Such a scenario requires consideration in designing T&L and assessment approaches to enable fairness among the student population. To bridge the English proficiency gap, UNAM runs the English for Academic purposes as a first year module for students whose English proficiency requires upgrading.

Structurally, my discipline, Biochemistry, is located within the academia, with strong links to the professional world. This structural situation has the potential for constraining contradictions over

competing curriculum development ideas and varying views on what is required for accreditation. An advantage is the potential for economic support accruing through industrial funding of research and in some cases corporate funding of laboratories and teaching venues. The connection between university funding and performance is an international phenomenon (Ramsden, 2003). Desirable graduate attributes include employability, lifelong learning, preparing for an uncertain future, and acting for the social good (Bosanquet *et al*., 2010). Adapting to change, promoting change, communicating effectively orally and in writing, and community leadership have also been recently cited as crucial. UNAM's T &L policy strongly emphasizes the need to nurture responsible, employable citizens who will contribute meaningfully to the socio economic development of the country. SoM envisions producing a 7 star doctor, who has the attributes of being a caregiver, decision-maker, communicator, community leader, manager, innovator and researcher, and a life-long learner (UNAM, 2015). Educators are thus urged to pay attention to the knowledge, competencies, skills and attitudes that graduates require to function in rapidly changing societies, on the African continent and globally. Communities require graduates who are not just capable professionals, but also sensitive intellectuals and critical citizens.

As educators, our task is not simply to disseminate knowledge to students but to also induct students into the making of knowledge (Boughey, 2008). The UNAM T &L philosophy requires students to be able to learn, integrate and apply their learning, become lifelong learners and acquire appropriate attributes for living, working and managing change (UNAM T&L policy, 2014). It is imperative that the discipline emphasises practical application and problem solving rather than knowledge reproduction. Governments, employers and students are concerned about the capability of university graduates and not how well educated or socialised they are. According to Jenkins and Walker (1994), the capabilities which are currently valued by employers and governments are research skills, information processing skills, information processing skills, co-operative problem solving skills and entrepreneurial initiative.

In my discipline, Medical Biochemistry should incorporate students' previously learned knowledge with medical applications and fill in the gaps with new knowledge. This way of teaching is very likely to get students excited because it teaches them new knowledge and the applications of Biochemistry knowledge to, not only today's medicine, but also future medicine

(Ashfar and Han, 2014). It is essential that, I as an educator, focus on teaching medical biochemistry in ways that show medical relevance.

Medically relevant biochemistry is one that gives students just enough information to be able to understand the basic mechanism of why a biochemical defect results in a disease and potential avenues of diagnosis and treatment. Considering what 'counts' as knowledge in any particular academic context', Jacobs (2013) argues for discipline-specific approaches to academic literacy, focusing primarily on knowledge generation and who has power of decision over what it constitutes. According to Jacobs (2010), discipline specialists play a major role in developing academic literacies. Most students can effectively learn and understand medical applications of biochemistry if the applications are presented to them in contextualized ways through uncomplicated medical cases. This approach to teaching medical biochemistry and the development of associated skills for employability would be aligned to the institution's policy of 'holistic development of students and community'.

2.3 Teaching and Learning Practice: Related Theories

Historically, T&L are regarded as innate abilities or commonsense activities that do not require any theoretical underpinnings in many HE contexts (Light and Cox, 2000; Clegg, 2009; Hatem *et al*., 2011; Badat, 2013; Vorster and Quinn, 2016). Consequently, there has been no formal induction into the T&L field for many educators. UNAM holds a week long induction program for new academics once a year. Although the program is enlightening as far the operations of the university are involved, there is no depth covered as far as T&L theories, approaches and activities are concerned. Personally, despite having attended the UNAM induction and having been a HE educator prior to joining UNAM, I was confronted with a situation in which I was clueless on how to proceed with the T&L activities in the existing context and I resorted to teaching the way I was taught, using didactic lectures with very little student engagement. It would have been useful to me if I had been provided with a set of guiding principles based on evidence, or at least on long term successful experience. Fortunately, having enrolled for the PgDHE program, I realize that a body of theory exists that can inform T&L practice in various contexts and I have been encouraged to engage in theoretical perspectives, a practice I did not do before. Through engagement in the PgDHE program, I have learnt to accept that having a PhD

degree in one's discipline does not translate to having the knowledge of T&L at university and being an effective teacher. I believe that, despite being discipline specialists, academic staff would greatly benefit from T&L training for effective practice. The majority of the lecturers have disciplinary knowledge but not pedagogical knowledge. While acknowledging disciplinary knowledge, academics need to appreciate, and be capacitated with the knowhow on effective T&L approaches. As Wright (2004) suggests, "all pedagogy has its roots in a particular learning theory", therefore, knowledge of theories underpinning T&L practices is crucial if quality learning is to be attained. According to Kaufman (2003), the various educational theories can provide guidance to T&L practices in particular contexts.

There are numerous learning theories which inform teaching for quality learning, some of which I have discussed in section 1.3. Socio-cultural theories, which are classified in their own category by Taylor and Hamdy (2013), view T&L as enabling participation in knowing, and knowledge as being constituted by the flow of meaning produced between the more knowledgeable people when they communicate with the less knowledgeable (Wells and Claxton 2002; Maphosa *et al*., 2013). According to Swales (1990), any grouping that regularly communicates about particular issues for particular purposes develops shared ways of talking about and understanding those issues, and the group members become participants in a discourse community, sharing an increasingly specialised discourse that is obscure to outsiders. Northedge (2003b) views learning as acquiring the capacity to participate in the discourses of an unfamiliar knowledge community, and teaching as supporting that participation. Participation in specialized discourses occurs to varying degrees; in some cases, being at surface level, just to take advantage of a useful concept, while in other cases, becoming deeply engaged in debate (Northedge, 2003a). With regard to socially recognized knowledge, to be knowledgeable is to be capable of participating in the specialist discourse of a knowledge community. Participation does, of course, require relevant information and specialist concepts, but these do not constitute the knowledge of the community, they enable it (Northedge, 2003a). Biggs (1999) argues that the definition of teaching and strategies employed influence the learning approaches adopted by students. Students may use inappropriate or low level teaching activities, resulting in a *surface* approach to learning, or high level teaching activities appropriate to achieving the intended outcomes, resulting in a *deep*

approach to learning. Good teaching supports appropriate learning activities and discourages inappropriate ones.

An understanding of how knowledge is processed or created to ensure effective learning would be beneficial in informing the selection of appropriate teaching methods and approaches. In this section, I will focus on the behaviorism and the constructivism theories.

2.3.1 Behaviorism

Behaviorism posits learning as acquisition of new behavior or observable change in behavior, being characterized by absorption of a predefined body of knowledge and by a passive recipient who responds to environmental stimuli (Piaget, 1976). According to this theory, correct behavioral responses are transmitted by the lecturer and absorbed by the students. Student conditioning, repetition and positive reinforcement would be appropriate teaching strategies in the behaviorism theory. Practices are guided by a behaviorist approach in which teaching is approached from a common sense perspective where it is believed that no education training is necessary for effective teaching. Approaches to T&L clearly define the roles and responsibilities of the lecturers and students in T&L. Lecturers are pitted as "knowers" or experts in the knowledge system and are expected to transmit knowledge to the students, without giving the students and opportunity to participate in knowledge construction. Students play the role of listeners, readers and writers, not as generators of knowledge and they have no opportunity to develop identities as members of the knowledge community. In the context of Health education, the level of participation of the students is peripheral, especially at first year level but progresses to being generative in the clinical phases where students are engaged in independent research modules in which there is active, competent engagement. A scaffolding framework is in place in the training of the students to become medical doctors and pharmacists. Behaviorism has been criticized for being too teacher-centered and directed and void of meaningful learning as it does not offer students the chance to develop deep meaning and understanding, but instead promotes superficial learning of skills (Piaget, 1976; Vygotsky, 1986). Learning is more individualistic than collaborative.

2.3.2 Constructivism

Constructivism posits learning as the effect of mental construction, whereby learners actively combine their prior knowledge with new information, to construct meaning and formulate their understanding (Piaget, 1976; Christie, 2005). Learners have various interpretations and processes of knowledge construction. In this theory, learning is viewed as an active process, a social activity, contextual, centered on constructing meaning and views the learner as a responsible agent in their knowledge creation. In the constructivist classroom setting, the focus shifts from the teacher to the students. Rather than being viewed as the transmitter of knowledge, the teacher is viewed as a guide who facilitates learning, while the learner participates in knowledge creation by bringing past experiences and cultural factors. Kaufman (2003) suggests that learners should be given opportunities to reflect on their practice, and this involves analyzing and assessing their own performance and developing new perspectives and options.

Constructivism has important implications for T&L. UNAM's T&L policy is centered on a constructivism theoretical approach, encouraging student-centered rather than instructor-centered approaches to teaching. Two types of constructivist theories have been distinguished, cognitive and social constructivism.

2.3.2.1 Cognitive constructivism

Cognitive constructivism posits that learning takes place when the mind constructs its own knowledge. Learners assimilate and accommodate knowledge, integrating new experiences into their already established mental frameworks then reframing their mental representation of the world to incorporate their new experiences (Driscoll, 2000). According to Powell and Kalina (2009), learning takes place according to stages of cognitive development, with increased maturity leading to an increased learning ability, or developed ability to acquire more complex knowledge. The implication of cognitive constructivism for T&L is that the lecturer facilitates learning by providing an environment that promotes discovery, assimilation and accommodation of new knowledge. Cognitive constructivism is criticized for focusing too much on the individual's internal construction of knowledge, neglecting the contextual social environment in which learning takes place. The theory promotes one of the core purposes of HE, which is to

form and cultivate the cognitive character of students. The goal is to produce, through engagement between dedicated academics and students, highly educated graduates that ideally "can think effectively and critically", have "achieved depth in some field of knowledge", and have a "critical appreciation of the ways in which knowledge and understanding of the universe, of society, and of ourselves is gained" (Badat, 2013)

2.3.2.2 Social constructivism

Social constructivism posits that social interaction plays a pivotal role in knowledge creation and that knowledge is the result of social processes (Gergen, 1995). The theory emphasizes how meanings and understandings grow out of social encounters, integration of students into a knowledge community, and the role of language in the process of intellectual development. Learning is a taken as social phenomenon and students learn better when they share ideas through conversation, debate, and negotiation. According to Kaufman (2003), one of the principles to guide good teaching is to let the learner be an active contributor to the educational process, applying his or her current knowledge and experience in new learning situations. Learners should be given opportunities and support for practice, accompanied by self-assessment and constructive feedback from teachers and peers.

Knowledge is tested by explaining it to peers, and, through discussion and critical engagement, concepts are developed, examined, shared and clarified. A teaching and learning agenda based on social constructivism considers the context in which learning takes place, with lecturers employing T&L approaches that promote collaborative learning and teamwork, such as experiential learning, problem-based learning, team-based learning, case-based learning, group discussions and research. Northedge (2003b) argues that through repeatedly sharing in meaning making with speakers of the specialist discourse, students come to internalize the frames of reference which are taken for granted within the knowledge community. Lecturers, as the disciplinary experts, should provide guidance in understanding concepts and should be actively involved in the learning process of students by creating a community of practice. Learners should be given opportunities to reflect on their practice, analyzing and assessing their own performance and developing new perspectives and options (Kaufman, 2003). Graduates are

expected to be independent, self-directed, lifelong learners, who can apply their knowledge and abilities to many different contexts and fields.

2.3.3 Contextual Teaching and Learning

Contextual teaching and learning (CT&L) has different definitions, each of which is based on different perspectives (Hayes, 1993; Granello, 2000). CT&L has been defined as a teaching methodology that relates academic concepts to real-world conditions and encourages students to see how what they learn relates to their lives (Putnam, 2000; Williams, 2007). CT&L thus enables learners to connect what they learnt in class to real life contexts in which the new knowledge and skills can be applied (Macaulay *et al*., 2009). Mayer (1998) expands that view further by noting that in CT&L, learning is attached to the context in which the knowledge is constructed, and knowledge is seen as inseparable from the context and activities within which it develops. Thus, connecting content with context is important to bring meaning to the learning process (Macaulay *et al*., 2009, Kapenda *et al*., 2015). However, there are some challenges in the implementation of CT&L. Finding relevant culture sensitive ways to contextualize disciplinary content is difficult in heterogeneous classrooms where learners came from different social and cultural backgrounds (Barnes and Venter, 2008) and numerous authors have pointed out that teachers regard the integration of everyday contexts as time consuming and an impediment to their pace of completion of the prescribed curriculum (Ng and Nguyen, 2006; Makari, 2007; Barnes and Venter, 2008; Gainsburg, 2008).

Macaulay and co-workers (2009) investigated the effect of using "contextualized" and ''blended'' learning to teach Biochemistry, a subject widely perceived as being difficult, to second year dietetic students. Contextualized content was presented via problem solving exercises, case-studies, and by the use of virtual laboratories which introduced content material through real life situations highly relevant to their later clinical practice. ''Blended'' teaching involved presentation of contextualized content in a number of different modalities, such as lectures, on-line, in small and large groups and in tutorials, catering for the different student learning styles and allowing for student self-assessment through interactive quizzes with immediate feedback. The researchers reported that student responses to this Biochemistry course were positive, with 89% finding it intellectually stimulating (Macaulay *et al*., 2009). In light of

the positive responses reported by Macaulay and co-workers (2009), I believe that the employment of contextualized and blended learning is worth piloting in my context.

2.4 Use of e-technologies in Teaching and learning

Reflecting on my undergraduate years, traditional didactic lectures were conducted using overhead projectors with write-on transparencies, which were challenging to read as some lecturers' handwriting was illegible. Fortunately, printable transparencies were then developed and lecturers would print out typed notes on the transparencies. However, since the printable transparencies were a little more expensive, they would be recycled after erasing with organic solvents and they would at times be smudged. The quality of projection depended on the overhead projector and because of fiscal constraints, cheaper projectors were used and much time was spent on lens-focusing for satisfactory image projection and bulbs would have short life spans, in which case the chalkboard was used. Chalkboard lectures took longer due to time spent in writing on the board. A few copies of the prescribed textbooks were available therefore photocopied handouts of relevant chapters were given out and charts and pictures would often be pinned up on noticeboards and we would often scramble to get a view of the noticeboard. Fortunately, with the increasing technological advances, I have not had to use the same technologies since my appointment as an educator at UNAM SoM.

Technology presents new opportunities for providing adults rich learning experiences in the andragogical tradition, directly catering for adults' desire to be self-directed in their learning (Knowles *et al*., 2005). The Health Sciences campus is technologically well-equipped, with computers, LCD projectors and smart-boards being available in all lecture theatres. Wi-fi connection is available on campus and students can access internet while off campus using provided 3G data cards and laptops. Despite the technological advancement of the campus, resource utilization is low. In a study of ICT usage for T&L in Namibia, Simon and co-workers (2015) reported limited ICT usage and recommended continuous training for teachers to keep them up to date with the new and necessary ICT tools and also update their skills. UNAM is currently running several training courses for developing academic staff in the use of e-technologies.

While traditional teaching technologies may have been cheaper and less demanding on the lecturer's technical knowledge, they are not as effective in stimulating students' interest in the subject matter as modern technologies in which power-point presentations, videos, simulations, games and animations stimulate students' interest and enhance understanding. More content is covered in a shorter time when using modern technology as no writing time is required compared to blackboard writing. The availability of e-books, online test and quizzes and e-Learning platforms such as Moodle, Mahara and Panopto enables the students to study and revise away from the campus. In contrast to traditional technologies, the use of modern technology requires keeping abreast with the advancement in technology, more preparation time, and the use of computers, laptops and other electronic gadgets too frequently may be straining to the eyes.

A challenge to consider regarding the role of the educator is that lecture notes for various subjects are readily available and accessible to students on the internet and massive open online courses (MOOCS) are abundant. My role as an educator needs a shift from being a knowledge transmitter to developing approaches that enhance student learning and promote the culture of life-long learning.

2.5 Reflection: Contextualizing my Teaching for Enhanced Learning

Before my learning experiences on the PgDHE program, I would have defined effective teaching as being able to effectively transmit knowledge to learners through effective communication, engaging them in interactive ways such that the majority of the learners are able to grasp the taught content and achieve high grades. I must admit that I did not consider the ways in which students learn and the contextual realities impacting learning in planning my T&L activities. I held the view that generic reading and writing skills could be transferred from one context to the next without considering social interaction. However, after my experience of being a learner on the PgDHE program and having engaged various T&L theories, my perspectives regarding lecturer and learner roles and approaches to T&L have changed. I have now embraced the habit of critically analyzing my practices, recognizing my successes and failures, and continually struggling to improve. In the ever changing educational contexts, Quinn (2012) emphasizes the importance for educators to critically examine whether their curricula, assessment and teaching methods ensure access for the diverse student population. Having no training in pedagogy, most

educators in my Department teach the way they were taught, employing mainly didactic lectures and a few case studies. Teaching methods are limited by large classes and tutorials are often organized to enable small group discussions to enhance student learning. Field trips and laboratory sessions are held to provide practical and hands-on experience to learners.

Being on a quest to provide students with the highest quality of education possible, I used to work under pressure, spending quite a large proportion of my time reading widely in my discipline to prove myself knowledgeable and trying to compile lecture material in the best "transmissible" manner. However, the pressure has reduced as I have learnt and employed new teaching strategies such as interactive quizzes, and incorporated new technologies into my traditional didactic lectures. Employment of a diversity of teaching technologies is necessary to stimulate and encourage student participation and give ownership to students in knowledge construction (Macaulay *et al*., 2009). Being now aligned to student-centered learning, focusing on T&L methods that facilitate learning, I now advocate for the replacement of didactic authoritarian pedagogue with learning facilitation. I advocate for student profiling, as I highlighted in chapter 1, followed by designing context based approaches to T&L. It is imperative that I assess the feasibility of application of various T&L techniques in my context. I have attempted to apply a "flipped" approach (Fry *et al*., 2015) to teaching, whereby I send my power point presentations to students to go through prior to the scheduled lecture session then use the lecture session for active discussion of appropriate case studies and areas of difficulty. A challenge with employing this approach has been that, due to the high workload from other modules, students hardly have time to go through the presentations beforehand.

I plan to employ contextualized and blended approaches to my practice, by using case-based, problem-based and team-based learning approaches, bringing together the traditional face-to-face learning with on-line learning activities, to enhance student understanding and accommodate the range of learning styles. The use of e-learning technologies would be necessary to allow students to study and engage in self-assessment off campus, then discuss during the lecture sessions. A constructivism approach to T&L would improve student participation in the generation of knowledge and encourage critical thinking and active participation. Rather than reproducing practicals, they can be designed to generate new knowledge.

I have realized that effective teaching requires tireless effort in terms of planning and execution, to create a challenging, nurturing, stimulating and motivating environment for students. There is a great temptation to do just the bare minimum required as far as teaching is concerned and direct efforts to disciplinary research and publications. Effective teaching is apparently less defined by knowledge and skills than by attitude towards students, the subject and work. I believe in creating a welcoming learning environment in the lecture theatre, allowing for freedom for all students to express their opinions and ideas without reservation. Each student should feel that he or she is an important, integral part of the group and engage in collaborative discussions in the creation of knowledge.

Taking time out of my way-too-busy schedules for students who need consultation, is imperative. The UNAM T&L requires display of consultation hours for students who may need to consult. I have however used an open door policy most of the time as I may not be able to be fixed in my office at any specific times due to my multidisciplinary teaching and research activities in collaboration with various other institutional departments.

As a learner on the PgDHE, I appreciated the way most facilitators allowed us to share in decision-making as far as decisions impacting our learning were concerned, giving us the opportunity to assume leadership roles as learners. Although I emulated this practice, I found this quite difficult to implement in my undergraduate classes. PgDHE facilitators encouraged teamwork, sharing of ideas and collaboration, removing the competitive spirit which I feel dominates HE contexts and encouraging us to learn from our peers, which I found very helpful. The PgDHE sessions provided opportunities to discuss challenges I would probably have kept to myself and to map possible solutions or ways to address the challenges.

Considering my role as a teacher, in agreement with Harden and Crosby (2000), I believe that “a good medical teacher is more than a lecturer”, having a broad range of roles as illustrated below:

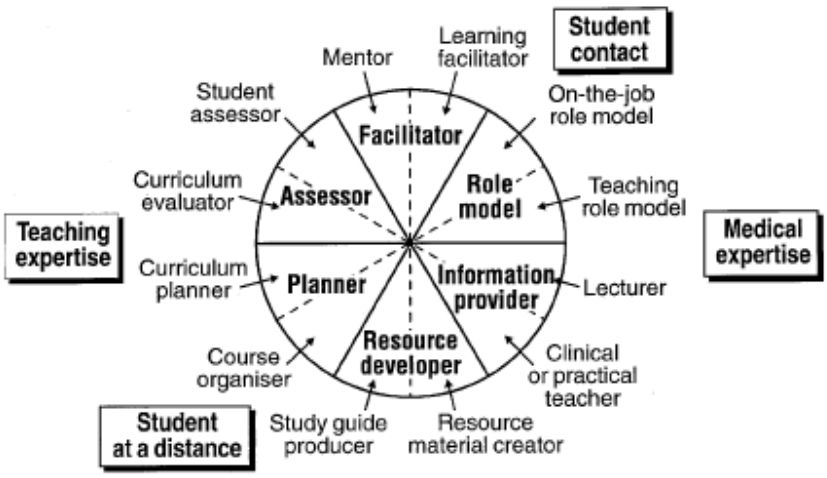

Figure 2.1 The twelve roles of the medical teacher (Adapted from Harden and Crosby, 2000).

Harden and Crosby (2000) have identified twelve roles for the medical teacher, which have been categorized into six areas as presented in the model above, with some roles requiring more medical expertise and others more educational expertise and some roles having more direct face-to-face contact with students and others less.

2.6 An Appropriate Teaching and Learning Philosophy For My Context

Bearing in mind that 'medical students are tomorrow's doctors', and that medical practice requires life-long learning, my T&L philosophy is based on the principles which foster acquisition of self-directed, independent learning skills and life-long learning attitudes. Rather than transmitting knowledge to students, I believe the teacher's primary role is to guide, coach, mentor and facilitate the students' learning, motivating them to think, yearn to learn more, set the pace of their learning and apply their knowledge. The teacher should design experiences through which students acquire new knowledge and develop new skills. (Barrows and Tamblyn 1980; Davis and Harden 1999). This role of the teacher is underpinned by the constructivist approach to learning, allowing students to construct knowledge which is constantly evolving (Brooks and Brooks 1993).

My philosophy has its basis in the 'learner-centered teaching ', 'student oriented teaching' and 'intentional learning' principles, putting emphasis on teaching strategies that stimulate curiosity

and encourage active involvement in the learning process. Being cognisant of the fact that students exhibit different learning styles and abilities, I believe that I should plan innovative, flexible, motivational learning experiences that will both challenge and allow every student to think and grow, encouraging peer interaction to enable students to productively collaborate and cooperate with each other. It is important that I provide students with varied learning opportunities, in order to support each individual student, enabling the diverse students to deepen their knowledge and understanding, and develop skills and personal attributes which will enrich their lives and enhance their achievement and employability, such as reflective practice and life-long learning. In my context, I concur with Macaulay *et al*. (2009) that an integrated blend of contextual components would help students to apply their knowledge, master and integrate biochemical concepts that are fundamental to understand metabolism, and to appreciate the relevance of Biochemistry for practice. In agreement with Hatem and co-workers (2011), I believe that effective teaching is defined, not by technique, but by whether learning and understanding have been achieved.

Teachers should focus on establishing positive learning environments that are conducive, inclusive, comfortable, interactive and supportive, paying attention to the contextual realities of student diversity, large classes and limited resources. The atmosphere should allow for open exchange of ideas among students. Teaching approaches should recognise the diverse student body in terms of, among other things, experiences, capabilities, preparedness, beliefs and learning styles, removing any fear of being ridiculed among students. I believe that to be effective as an academic educator, knowledge and understanding of student learning and development is essential. In light of the social and cognitive constructivism theories of learning (Kaufman, 2003), I believe that it is my responsibility to probe and engage students' prior knowledge, experiences, interests and abilities. Martin-Kniep (2007) states that in student-centered approaches, students should be viewed as partners in the T&L process, thus students' experiences and prior learning should be harnessed to enhance T&L.

I believe effective teaching requires expertise and being up to date in my discipline, understanding knowledge creation and linkage to other disciplines. I also recognize the importance of understanding basic andragogic principles to inform the teaching practice such as employment of well researched and informed teaching approaches in my context. It is thus

imperative that teachers take a scholarly approach to academic practice, reflecting on their teaching, discussing teaching issues, trying new teaching methodologies and reading and applying literature on T& L in their disciplines (Hatem *et al*., 2011).

I believe a teacher should demonstrate leadership, so that students can emulate even what is not taught in the curriculum, such as dedication, responsibility, accountability and the scholarly approach to learning. The teacher should model or exemplify the knowledge, skills and attitudes that should be learnt. Campos-Outcalt *et al*. (1995), McAllister et al. (1997) and Bandura (1986) suggest that role modelling is one of the most powerful means of transmitting values, attitudes and patterns of thoughts and behavior to students, as well as influencing students' career choice. I direct my effort towards treating all people with dignity and respect, and I expect my students to do the same.

2.7 Summary

The context in which T&L practices are implemented should be seriously considered in designing T&L approaches for enhancement of student learning. To cater for the diverse student body and grant students an opportunity to participate in knowledge communities, educators need to shift from the widely perceived role of knowledge transmission to supportive, facilitator roles, designing appropriate context-based T&L activities. The use of varied T&L methods caters for the students' different learning styles and needs and integrates in and out of class learning.

CHAPTER 3: CURRICULUM DEVELOPMENT IN MEDICAL EDUCATION

3.1 Introduction

Curriculum plays a major role in determining graduate employability, institutional distinctiveness and global ranking (Fry *et al*., 2015). The continually changing context in which HE institutions operate necessitates regular curriculum reviews to ensure the curriculum is 'fit for purpose' in the diverse contexts as well as being globally acceptable. In this chapter, my focus is on curriculum development as part of an integrated approach to T&L. I begin with an analysis of my institutional and disciplinary contexts in relation to curriculum development, implementation and associated challenges. I proceed with a discussion of curriculum theory, using it as a basis to critique existing structures and culture underpinning curriculum development at UNAM. I then analyze the curriculum for the Bachelor of Medicine and Bachelor of Surgery degrees (Medicinae Baccalaureus et Chirurgiae Baccalaureus) (MBChB) at SoM using Luckett's model of an epistemically diverse curriculum and the notion of curriculum responsiveness. I conclude by conceptualizing my role as an educator in curriculum development, implementation and quality enhancement.

3.2 Contextual Factors Impacting Curriculum Development and Implementation at UNAM

As indicated in Chapter 2, T&L practices encompass curriculum development and implementation, thus the contextual factors affecting T&L practices, as described in section 2.1 also impact curriculum development. In this section, I will discuss contextual realities that have a direct impact on curriculum development and implementation.

According to D'Andrea and Gosling (2005) various factors at the macro, meso and micro level influence curriculum development and implementation. Political, social and economic influences have an impact on curriculum development at the macro level, institutional culture, policies, location, resources and student demographics impact at the meso-level and the ideas, beliefs and professional knowledge of academics impacts at the micro-level. External factors such as professional bodies, employers and accreditation agencies can also play a part in curriculum design and development.

Nationally, the NCHE, introduced in section 2.2, has a documented quality assurance system, detailing accreditation requirements in relation to curriculum development for HE institutions

(NCHE, 2009). Key requirements pertaining to curriculum development are that the proposed curriculum should be developed with involvement of relevant stakeholders, should be constructively aligned with other T& L activities, enabling achievement of intended learning outcomes of the program within the set time, and should be responsive to students' learning needs, national, labor-market and socio-cultural needs of Namibia.

In an increasingly globalized labor market, as medical practice develops and the evidence base grows, demands for particular skills and attributes of graduates from employers are continuously changing, necessitating frequent curriculum transformation to meet the required employability demands (Devlin and Samarawickrema, 2009). Factors related to the expectations of employers and accreditation by professional, statutory and regulatory bodies impact curriculum development practices at HE institutional level in Namibia. For the MBChB curriculum, the Health Professions Council of Namibia (HPCNA) and the Medical and Dental Professions Council of Namibia (MDPCNA) are particularly influential in the design of the curriculum as they are involved in the certification of MBChB graduates.

Particular graduate attributes that are required for employability ought to form part of the curriculum. In agreement with Devlin and Samarawickrema (2009), I argue that the incorporation of government, employer, students and other stakeholder expectations into curricula development and approaches to teaching is imperative in order to develop curricula that are fit for purpose. The curriculum should be organized at societal level, considering the expectations of politicians, government and special committees; at institutional level, guided by set institutional policies and other documents; and at instructional level, with the disciplinary expert and educator planning and teaching students, taking into consideration learning theorists and subject matter specialists' views. Clarence-Finchman and Naidoo (2013) argue that although the perceived and real expectations of potential employers' influences curriculum development, it is crucial to recognize that the employer is by no means a homogeneous body with shared perceptions and unified expectations and needs. While employer requirements need to be incorporated into the curriculum, it is crucial to balance this with the academic autonomy required to conceptualize a curriculum which moves beyond the needs of a multi-faceted and heterogenous industry (Clarence-Finchman and Naidoo (2013).

Institutionally, curriculum is designed according to UNAM T&L and Assessment policies, which are in conformity to national accreditation bodies. At faculty and disciplinary levels, curriculum development and implementation lies within the hands of the subject experts. Current institutional essential considerations for curriculum development include a needs assessment to assure the curriculum targets a specified issue to be addressed rather than producing knowledge that may be contextually irrelevant. Instructors develop their own curricula which are tested, evaluated, refined and improved on over the years in line with the changing context. Curriculum templates developed over the years are used as guides and curriculum review is effected at 5 year intervals.

3.3 Conceptual Concepts, Theories and Principles

Curriculum definitions range in complexity from simple course outlines to more elaborate conceptions giving recognition to learning activities, experiences and outcomes (Barnett and Coate, 2005; Fraser and Bosanquet, 2006). My definition of curriculum, prior to engaging the content of the Curriculum module was that it is a prescribed systematic T&L framework determined by subject experts, which guides the relevant content to be covered and the core knowledge to be acquired by the students. I did not consider any social component in the definition of curriculum. Being content-centered, I perceived my role as the subject expert, to be that of determining the appropriate content to be taught, with no insight into what students want to know or already know and I examined the taught content according to my own criteria, mainly crediting recall of disciplinary knowledge rather than practical application. I am now in agreement with Luckett (2001), who states that a curriculum is of "contextualized social practice", explained as "an on-going social process comprised of the interactions of students, teachers, knowledge and milieu". Barnett (2009) states that curriculum is more than content, it is rather an educational vehicle "for effecting changes in human beings through particular kinds of encounter with knowledge".

The content of the curriculum defines the core subject or disciplinary knowledge to be acquired in a specified time limit and guides T&L methods and assessment. It specifies the academic requirements for graduation and highlights the essential knowledge required for students to prepare for their practice as well as stimulating further reading and research to update knowledge

which is ever increasing. While knowledge should be considered in curriculum development, Maton (2013) believes that in every discipline, there is always what counts as legitimate knowledge and there are always 'knowers', who claim to produce or possess the legitimate knowledge. Luckett (2010) argues that, irrespective of the discipline, both knowledge and knowers should be considered in T&L practices, as students need the foundational or disciplinary knowledge to enable them to use and understand the discourses of the discipline. According to Quinn and Voster (2015), students should be offered opportunities to engage with the powerful knowledge of the field, relating the concepts with context and developing the kind of thinking in the discipline.

The numerous conceptions of curriculum can be organized into three broad curriculum paradigms, each with its own unique perspectives on knowledge and T&L practices.

3.3.1 Traditionalist Paradigm

The traditionalist paradigm refers to curriculum as a product, constituting a set of objectives to be achieved through certain T&L practices, without adequately recognizing the wider socio-economic, political and cultural contexts impacting curriculum development (Fraser and Bosanquet, 2006). This paradigm is well linked to the teaching theory of behaviorism discussed in chapter 2.2, which views the lecturer as the subject expert who transmits knowledge to students (Luckett, 1995). The curriculum in content-based and teacher-centered, with the student taking on a consumption role, with limited influence on curriculum construction (Fraser and Bosanquet, 2006). Knowledge is regarded as being context-independent and assessments are designed to examine knowledge recall, encouraging a surface approach to learning (Quinn, 2012). Culturally, I am of the opinion that curriculum is viewed as a product in my Department due to the laid down curriculum documents that are only reviewed at 5 year intervals. Changes in curricula are often made only at module level, based on the experience of individual lecturers and their perceptions of relevant knowledge, rather than on research into student learning or teaching practices. Curriculum review meetings in my department at UNAM are mainly centered on content.

3.3.2 Hermeneutic Paradigm

The hermeneutic paradigm has been referred to as a 'practical paradigm' since curriculum development takes into consideration contextual realities such as the students' learning abilities and learning environment (Schwab, 1996). The paradigm is student-focused, promoting curriculum design which enhances students' thinking, understanding and self-reflection. In sync with the learning theory of social constructivism, this paradigm views knowledge as being a social construct. The role of the lecturer is mainly to facilitate learning by developing a context based curriculum suited to the changing HE context (Luckett, 1995). As stated in section 2.2, UNAM's T&L philosophy is centered on student-centered principles that promote interactive, co-operative, experiential and constructive learning strategies, being in sync with the hermeneutic paradigm of curriculum development. Hermeneutic curricula exhibit both macro and micro alignment, and assessment may be both formative and summative.

The perspective of curriculum as a process is associated with the hermeneutic paradigm (Luckett, 1995). Curriculum development is democratic, with learners being given an opportunity to co-construct the curriculum with educators according to their needs and motivations. The teacher takes responsibility for framing and structuring the process to ensure rigour in terms of disciplinary and societal expectations of the curriculum (Bovill et al., 2011; Vorster and Quinn, 2015).

3.3.3 Critical paradigm

According to Luckett (1995) the critical paradigm entails challenging reality, through exposing that which seems "natural" as being "cultural". Students learn by uncovering hidden meanings or power behind events through debate. The role of the lecturer will be to empower students with knowledge to effect social change. Implementing a curriculum in the critical paradigm can also be viewed as praxis, mainly because it brings theory and social action together by means of dialects (Luckett, 1995).

3.5 Constructive Alignment

In the curriculum development process, lecturers usually design a small part, being either a module or part of a module. Biggs and Tang (2011) point out that when designing curriculum, it is important to consider the whole program to allow students to perceive coherence and

progression of the program, rather than fragmentation. Constructive alignment aims to ensure that teaching, learning and assessment relate directly to intended knowledge, attributes or skills (Biggs and Tang, 2011). Biggs and Tang argue that in order to encourage students to take a deep approach to their learning, teachers need to develop a constructively aligned curriculum which uses a constructivist approach where students are seen as constructing knowledge, in a curriculum in which intended learning outcomes of the program are aligned with the teaching environment and assessment modes (Biggs and Tang, 2011). The student constructs his or her own learning through relevant learning activities while the teacher creates a learning environment that supports the learning activities appropriate to achieving the desired learning outcomes.

3.5 Curriculum Responsiveness

With the legacy of colonialism being a central factor, African higher education institutions have been historically shaped by colonialism, organized according to the European model, with limited access, use of the language of the colonizer as the language of instruction, limits on academic freedom and autonomy and limited curriculum (Teferra and Altbach, 2004). With the continually changing contextual realities in HE, curricula development requires responsiveness to suit the new realities. As illustrated in figure 3.1 below, Moll (2004) shows how curriculum should be responsive to the economic and policy environments, institutional and cultural environments, knowledge and disciplinary orientations and the learning needs of students.

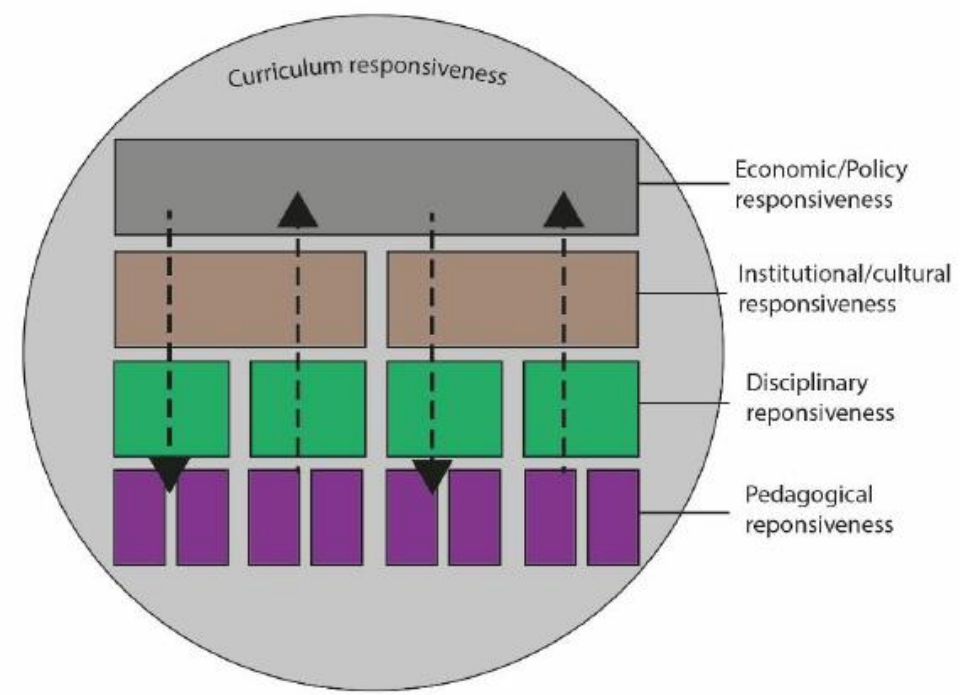

Figure 3.1: Multi-faceted stratified model of curriculum responsiveness (Adapted from Moll, 2004)

Economic responsiveness refers to the need to meet society's broad expectations that HE will contribute to national economic needs in terms of training sufficient numbers of qualified people for each key sector of the economy (Moll, 2004). The SoM MBChB curriculum is economically responsive in that one of the curriculum key objectives is to promote affordable health care service delivery by strengthening health care systems which are sustainable, cost-effective and efficient. The 7 graduate attributes that SoM strives to achieve, as stated in section 2.3, are in sync with skills demanded by employers and professional bodies, showing economic responsiveness of the curriculum.

At institutional level, as discussed in section 3.2, the curriculum design should be underpinned by the institutional curriculum development guidelines, which in turn are in alignment with national policies and guidelines. For medical education, governing bodies include the NCHE, NQA, MDPCNA, Ministry of Health and Social Services (MoHSS) and the Health Professions Council of Namibia (HPCNA). Cultural responsiveness implies that HE curricula should be designed to teach students to live and work constructively in Namibia and in the religiously,

socio-culturally and politically diverse global context (Ogude *et al*., 2005). Cultural responsiveness takes into account students and society's cultural diversity, offering appropriate, learning pathways for students that enable them to value and understand diversity, and practice in their professions without discrimination and prejudice. Some of the principles that UNAM's T&L policy upholds, that promote cultural responsiveness in T&L practices are the employment of internationally and cross-culturally recognised teaching methodologies and recognition of equity and diversity of beliefs and understandings (UNAM, T&L Policy, 2014). From the SoM perspective, the MBChB curriculum is culturally responsive in that students engage in community based education and electives in which they encounter and learn to work in culturally diverse communities and environments. One of SoM's key objectives, stated in the MBChB curriculum is to develop academically and professionally qualified medical doctors in sufficient numbers for manning various health care delivery systems nationwide, serving the diverse population and strengthening culturally relevant and acceptable health care systems.

Disciplinary responsiveness pertains to knowledge production and selection in particular disciplines (Ogude *et al*., 2005). Curriculum needs to be responsive to the nature of the underlying knowledge discipline by ensuring that students are inducted into disciplinary ways of producing knowledge. It is important to be aware of new developments within the field and incorporate these into the curriculum. Given the abstract, context independent nature of knowledge in the biomedical sciences such as Biochemistry, the curriculum is not likely reflect specific cultural influences or viewpoints and may be deemed to be unresponsive, culturally. In many of the science subjects, established 'truths' are often perceived as being universal and consistent, without much scientific interrogation.

Considering pedagogical and learning responsiveness, the lived realities and learning needs of the students should be taken into account in curriculum development, fostering epistemological access and personal development (Gamble, 2003; Moll, 2004). Scott (2009) argues that in circumstances of diversity linked to inequalities, focusing on access alone has strongly negative consequences for learning outcomes. Accommodating the diverse intake required for development means ensuring that the educational process, in terms of curriculum design and teaching practices, is aligned with the students' legitimate learning needs, so that they have a reasonable chance of succeeding. In designing the MBChB curriculum, learning responsiveness

was catered for in that, the concept of a 5 star doctor, adapted from the World Health Organisation was further improved to include research and lifelong learning, which were identified as additional competencies for the Namibian context. UNAM therefore aspires to produce a 7 star, rather than a 5 star doctor.

T&L approaches should be designed to cater for any articulation gaps arising from disadvantaged backgrounds. Luckett (2001) suggests that cognitive and epistemic access can be widened by increasing the epistemic diversity of the curriculum. Figure 3.2 below illustrates Luckett's model for an epistemically diverse curriculum.

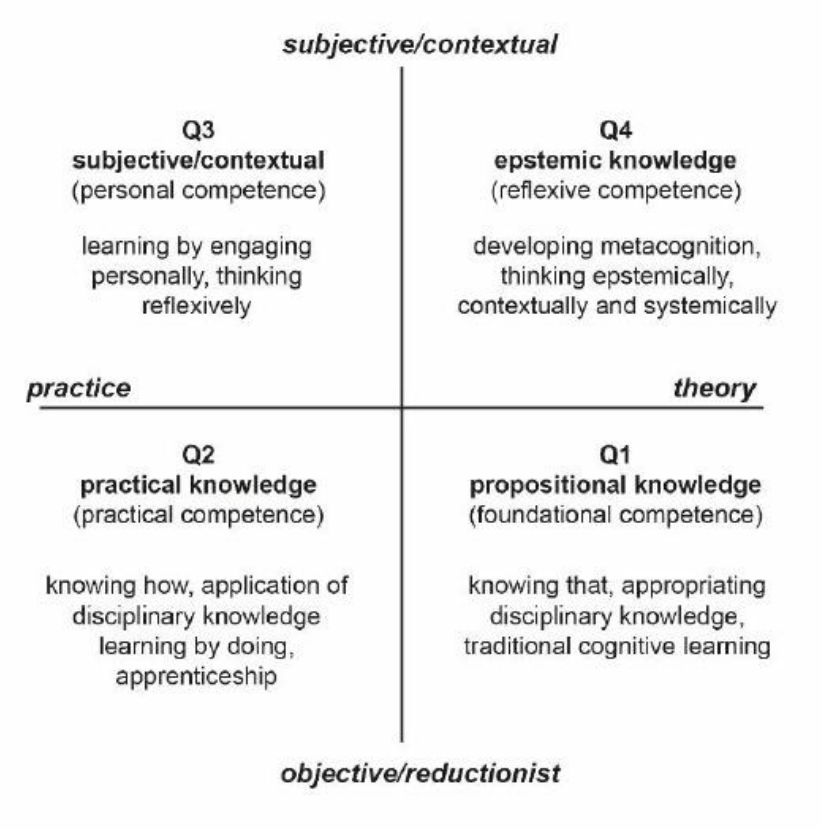

Figure 3.2: Diagram to illustrate a Model of an Epistemically Diverse Curriculum (Adapted from Luckett, 2001)

Luckett proposes that all HE curricula should contain four kinds of knowing, with emphasis and combinations of the four being dependent on contextual factors such as the nature of the qualification and contextual realities of the implementation environment (Luckett, 2001). The first 2 ways of knowing, presented in quadrants 1 and 2 are objective in nature, with quadrant 1

being propositional knowledge, which is intended to foster foundational competence and quadrant 2 being practical knowledge, which is intended to foster practical competence. The remaining two ways of knowing address learning from an ontological perspective (Gamble, 2003). Quadrant 3 represents experiential knowledge, which is intended to foster personal competence and quadrant 4 represents epistemic knowledge, which is intended to foster reflexive competence.

In the HE context, decolonization is associated with getting rid of academic practices originating from colonizing forces that subvert, exclude or devalue the colonized (Luckett, 2010; Shay, 2016). Makgoba (1997) and Luckett (2010) argue that Africanization can be considered a dimension of curriculum responsiveness, considering contextual realities that are peculiar to Africa in curriculum development. Responsiveness to Africanization entails according of recognition and value to indigenous knowledge systems which were previously devalued and deemed irrelevant in curriculum development (Luckett, 2010). Colleagues in the sciences are often of the opinion that cultural and epistemic diversity are not relevant to curricula in their disciplines, believing that scientific knowledge is neutral.

3.6 Analysis of UNAM MBChB Curriculum

In this section, I provide an analysis of my institutional MBChB curriculum using Luckett's model of an epistemically diverse curriculum, as described in section 3.6 above (Luckett, 2001). I consider the curriculum's epistemological, cognitive and ontological access for students. A critical analysis of the curriculum documentation of the MBChB program reveals that the program aims to engage students in knowledge from all four of Luckett's quadrants, with a main focus on knowledge from quadrants 2 and 3.

The stated purpose of the MBChB program is to produce health professionals whose knowledge, professional skills, and practice in medicine are in tune with the needs of society. The curriculum is designed taking into account the hierarchical nature of the knowledge of the discipline. The curriculum consists of a pre-clinical and a clinical training phase, spread over six years. According to Luckett's model, the pre-clinical phase, which is usually the first 2 years, is mainly suited to Q1, with a main focus on fostering foundational competence through traditional cognitive learning and to a smaller extent to quadrant 2, due to the laboratory practical components of some of the modules in which students are expected to attain practical

competence. Through the pre-clinical phase, the student is expected to have attained scientific knowledge as a basis for medicine. In my disciplinary context of Biochemistry, students are required to grasp the molecular, biochemical and cellular mechanisms that are important in maintaining the body's homeostasis. Students also engage in practicals and field trips, allowing them the opportunity to gather, analyze, evaluate and interpret data and to grasp scientific methods used in the disease diagnosis and therapy. Students have the opportunity to assess the significance and limitations of the findings of standard laboratory tests and investigations.

In addition to the biomedical science modules Anatomy, Physiology and Biochemistry, the students also engage in institutional core modules offered in the first year of their study which include English Communication and Study skills, English for Academic Purposes, Computer Literacy and Contemporary Social Issues. Other modules engaged in at first year level to bridge the science articulation gap are Mathematics, Physics, Chemistry and Statistics.

The clinical phase, which is usually year 3 to year 6 of the MBChB curriculum, is suited to quadrants 2, 3 and 4, with the main focus being in quadrants 2 and 3. This phase of the curriculum has modules related to population medicine which give an opportunity to students to gain *experiential knowledge* in real-world contexts and introduces students to be dutiful to society and g. Students in this phase are required to develop competence in applying the knowledge on biological and non-biological determinants of illness and health and determine the economic, social, cultural, and psychological factors that contribute to the development and/or continuation of diseases. Application of knowledge takes into account the contextual realities of the environment. The curriculum is culturally responsive in that students are required to evaluate health care needs of individuals, groups, and communities and the efficacy and quality of healthcare provision services and respond appropriately. Through community based education, students get an opportunity to assess the impact of illness upon families and the importance of family factors in the prevention, treatment, and rehabilitation of patients. Students undertake translational independent research projects which inform evidence based clinical and health practice and may advocate for health practices which are relevant to societal needs as direct outcomes of research evidence. Luckett (2001) argues that self-reflective exercises will enable students to view knowledge as a social, context based, construct and not just as authoritative, being transmitted by the lecturer.

The clinical phase is followed by a 2 year post-qualification medical internship period jointly supervised by SoM staff and MDPCNA, a statutory body responsible for pre-registration of medical students, registration and certification of medical doctors. The post-qualification phase is suited to quadrants 3 and 4, fostering personal and reflexive competence.

Graduates at this stage are engaged in self-directed and life-long learning through engaging in medical practice and are expected to think epistemically, contextually and systematically. Based on the curriculum documentation, altruism and professionalism are cited as crucial graduate attributes at this stage. During their internship phase, medical graduates are required to be compassionate, respectful, effective communicators, applying logical and probabilistic approaches to health problems, ethical standards and carrying out the crucial tasks of obtaining clinical history and accurately writing clinical records. Graduates are also required to take responsibility in the management of a defined range of common, acute, chronic, intractable, and terminal clinical conditions and community health problems. It is during this internship phase that graduates equip themselves with and hone their professional skills for life long application.

Since the MBChB degree prepares people for professional practice, with the ultimate goal being that students should operate in quadrant 4, I am in agreement with Quinn and Voster (2016), who argue that integration of the knowledges and competencies of the four quadrants described above is essential. T&L approaches for the various modules should allow for students to operate in all four quadrants simultaneously, with different emphases and levels of epistemic and cognitive complexity as the program progresses (Quinn and Voster, 2016). Given that medical education is a lifelong learning process, I advocate for self- directed and life-long learning to be considered as skills that all modules should strive to impart in the students in all four quadrants of Luckett's model.

3.8 Reflection: My Role in Curriculum Development

Reflecting on the Curriculum Development Module, it is clear that my initial conception of curriculum was more as a product, rather than as a process. As Neary (2003) describes, I was more focused on curriculum plans and intentions, without much focus on the activities and effects, which are emphasized in the process model. My perceived role was that of delivery of the curriculum I perceived my role to be that of delivery of the curriculum. After engaging in theory on curriculum development, I have begun to consider curriculum development as a

process in which academics, students and other stakeholders are key agents in curriculum interpretation, construction and contextualization, rather than a product (Luckett, 2001). In the process of curriculum development, varied contextual realities peculiar to the diverse participants are taken into account, in sync with Cornbleth's definition of curriculum as a contextualized social practice and a continual social process that takes into account interactions of various stakeholders (Cornbleth, 1990).

Having been of the view that curriculum is content-centered, I often found myself delivering a 'stuffed' curriculum, always under pressure to 'transmit' vast amounts of knowledge. I have however, lightened my burden by identifying and focusing on the fundamental concepts of the modules I teach, selecting relevant, core content for my taught modules. I now also view curriculum as being student-centered, focusing on learner understanding and attributes. It is imperative that I design T&L activities that promote student learning. In compilation of my teaching framework, I now believe that I should consider the students' setting and needs, and incorporate appropriate teaching methodology and assessments. Besides implementation of the curriculum, it my role to reflect on, evaluate and review the expected outcomes, updating, improving and redesigning the curriculum at specific intervals as and when necessary, in response to the continually changing HE context.

Having benefited helpful insight in curriculum development during discussions on the PgDHE program, I advocate for curriculum development worskshops to enlighten fellow staff members. Since staff members rarely get the opportunity to discuss their expectations, experiences, hopes and fears regarding the programs they offer, workshops will provide a platform for fruitful discussions.

3.8 Summary

The varied HE and student contextual realities require consideration in curriculum development and implementation to ensure optimal inclusion of students in the disciplinary knowledge communities. Curriculum development should promote ways of "knowing, acting and being" that are appropriate in specific personal, social, historical, cultural and institutional contexts (Dall'Alba and Barnacle, 2007). Using the notion of curriculum responsiveness and Luckett's model for an epistemically diverse curriculum, an analysis of the MBChB curriculum

demonstrates how the degree program is designed to meet its purposes. The challenge lies in auditing if the conceptualized curriculum is being appropriately put into practice and achieving the desired outcomes.

CHAPTER 4: RETHINKING ASSESSMENT PRACTICES

4.1 Introduction

Assessment is integral to and almost inseparable from T&L and it is essential that educators consider and adapt assessment procedures to their own unique contexts (Biggs, 1999; Dunn et al., 2004). Grades allocated and feedback provided on assessment drives students' progress (Dunn *et al*., 2004). Culturally, students are often assessment centered rather than learning centered. The question commonly asked during student interactions is "What mark did you get?" rather than "Did you understand the concepts?" Despite having been an educator for many years, assessment has always been a challenge for me as I have often wondered which type of assessment to use and whether it accurately gives feedback of students' learning. In this chapter, I begin by an analysis of the contextual factors related to assessment in my institution using the concepts of structure, culture and agency (Archer, 1996, 2007). I examine institutional structures relating to assessment in my institution, the prevailing assessment culture, and the roles of various agents in relation to assessment processes and practices, highlighting the institutional enablements and constraints within which the challenges of assessment are experienced, followed by a critique of assessment practices and challenges of assessment in my discipline. I proceed with a discussion of key theories and concepts from discourses on assessment.

Having conducted face to face interviews among lecturers in the School of Medicine to determine the challenges faced by lecturers in the assessment of student learning and presented my findings at the Academic conversations meeting held at UNAM Main Campus (Appendix 4.1), I use the feedback concerning challenges faced by the lecturers in assessing student learning to make informed recommendations for educators and the institution. I conceptualize contextualized assessment practices for my own context and reflect on my views on assessment and on my role in enhancement of student learning through application of appropriate, context-based approaches to assessment.

4.2 Contextual Factors Impacting Assessment Practices

Globally, assessment provides an indicator of academic standards and credibility of HE T&L (Dunn *et al*., 2004). Only upon engagement in the PgDHE program did I read and become clear about assessment policies prescribed by relevant national bodies. Nationally, HE program

assessment design has to conform to assessment criteria set by the accreditation bodies previously stated in Chapters 2 and 3, that is, the NCHE and the NQA. NQA requirements are centered on quality and accreditation, based on set HE qualification guidelines. The NQF enables a culture of transparency in terms of learning outcomes and assessment. Compliance to assessment criteria at the national level is critical for program credibility and credibility of the institution as a whole. Assessment criteria include the appropriateness of methods used for assessment, the need for both internal and external moderation, the qualification level of staff that will perform the assessments, as well as information provided to students about the assessment.

Pertaining to assessment, institutionally, CEQUAM ensures that assessments are valid, reliable, justified and feasible. With the ongoing massification, the practical reality of assessing larger student cohorts using different technologies has been necessitated.

UNAM's assessment policy serves to guide staff in assessment and evaluation processes to ensure international recognition, national legitimacy and credibility of academic programs, adhering to NCHE, NQA and NQF guidelines. According to the policy, assessment is defined as "a structured process in which evidence is gathered to make judgements about an individual's performance in relation to agreed and defined criteria". The policy documents fairness, transparency, reliability, validity, and clarity as criteria for effective assessment and requires that students be provided with a learning guide explaining specific assessment procedures. The policy emphasizes the importance of communication of assessment criteria, methods, rules, dates, times, venues and feedback. Equality and diversity are recognized, with special assessment conditions being documented in the University's policy on people with disabilities. Pertaining to examination rules and procedures, threats to assessment quality such as dishonesty and plagiarism are handled based on the University's rules and regulations. To ensure quality, internal and external moderation of examinations as well as examiners' board meetings are procedural and are important to assess that assessments are in alignment with the set criteria. Moderation is mainly carried out for scrutiny of final assessments to ensure consistency, fairness, mark allocation, and adequate coverage of and alignment with the learning outcomes of the specific module. In my view, the UNAM assessment policy promotes CRA for enhanced learning rather than generally viewing students as passive learners. While the institutional

assessment policy is very comprehensive, I personally became aware of the existence of such a document when I enrolled on the PgDHE program and I believe many academics may be unaware of the policy and thus do not implement it. Despite the policy stating that the faculties, centers and schools are responsible for ensuring planning, implementation and monitoring of assessment strategies as well as training academics in assessment procedures, there is no explicit assignment of responsibilities among the hierarchy of faculty personnel thus the responsibility is often neglected. I therefore advocate for the inclusion of explicit hierarchical guidelines on planning, monitoring and evaluation of policy implementation to ensure adherence.

The student profiling results of the study carried out as described in Chapter 1indicate that student cohorts are of diverse age groups, socio-economic and educational backgrounds as well as international locations. Given such diversity, a selection of appropriate assessment methods that take into account student diversity is necessary, while ensuring that assessment is targeted at what learners understand and not what they can memorize. Although Carter and co-workers (2011) argue that assessment techniques need to be culturally and linguistically sensitive in order to determine the academic achievement and potential of diverse students, this has been a challenge in my context given the diverse ethnic groups and the use of the English language as the national language, with students manifesting varying proficiency levels. I have often wondered whether I should assess students' writing and expression. I believe that there is a need to provide sufficient opportunities for students to express themselves although this has been challenging given the large classes. I have often found myself trying to manage cultural differences, language and communication problems and differing expectations, perspectives and motivations. Inclusive assessment requires valuing all students in a cohort as learners (Dunn et al., 2004). Considering equity in assessment tools, I realized the need to rethink assessment strategies to ensure fairness among the diverse student population, while still ensuring global and international credibility of the assessment strategies. I have undertaken to using examples in assessment that relate to diverse cultures, ethnicities, religions, experiences, gender and race to prevent any students from feeling alienated. Ryan (2000) proposes the provision of a range of assessment strategies so that student understanding can be gauged in a variety of ways, and allowing students to negotiate appropriate assessment strategies among the options provided. Inclusive assessment considerations that I had not considered prior to engagement on the PgDHE

program are that quite a high number of students may have to work to enable them to pay for their education, have family responsibilities to juggle and thus would require greater flexibility with task submission deadlines. As a student on the PgDHE program, I realized the importance of flexibility of task submission deadlines as I could hardly meet the set deadlines although I was putting in utmost effort to do so. According to Dunn *et al*. (2004), many stresses and strains associated with studying revolve around assessment practices and lack of flexibility for students with other responsibilities to attend to. I have resolved to involving students in negotiating assessment tasks and times that are appropriate and fair for the majority of the student population, to avoid advantaging students with better resources (Morgan and O'Reilly, 1999).With individual students having differing preferences for learning styles, I urge educators to take into account those preferences in the design of assessment tasks.

With the increasing use of technology and diversity of assessment methods, the need to adapt traditional assessment practices to suit new modes of learning is imperative (Dunn *et al*., 2004). The advent of ICT has allowed for speedy feedback on formative assessment, encouraging reflection and self-assessment, which are critical to lifelong learning. The introduction of e-learning technologies at UNAM has made possible the use of the Moodle platform for T&L, and the Urkund plagiarism software for detecting plagiarism, ensuring assessment quality. Formative assessment tasks can now be readily facilitated using auto-graded quizzes (Taylor, 2001). A challenge with the use of online technologies in my institutional context is that, having no training in ICT, some students are not technologically competent and may find exploring technology to be time consuming. Staff development is also crucial in the area of technology advancement. Other challenges associated with adopting online T&L approaches are that some students do not have accessible internet services off-campus and the local internet often fails.

Culturally, many academics depend on traditional assessment strategies inherited from their own learning experiences, due a lack of any training on appropriate assessment strategies. One of the impacts of applying the traditional approach is that students avoid a 'deep approach' to learning by concentrating on how to survive the assessment procedures, studying only what they think will be assessed (Ramsden, 1992). While reasons for assessment vary from discriminating between students**,** judging student performance**,** accreditation of students**,** provision of feedback

to students on their learning**,** receiving feedback teaching and providing feed-out to stakeholders, the use of summative assessment approaches in my discipline points the main reason for assessment in my discipline as being to judge student performance rather than to enhance student learning. Biggs (2011) refers to this approach as a measurement model, usually employed in summative assessment driven contexts such as is apparent at UNAM. The measurement model encourages a culture where teaching, learning and assessment are separate processes, with assessment being the most important (Biggs, 2011). One of the impacts of applying the measurement model is that students avoid a "deep approach" to learning, tending to be assessment driven and focusing on simply passing tests and assignments. Prior to engagement on the PgDHE program, the measurement model is what I used, rather than focusing on enhancing holistic student learning, as that is what I inherited from my own experience as a student. I had an inclination to summative rather than formative assessment, mainly focusing on analyzing the cognitive levels of assessment tasks using Bloom's taxonomy. However, having now been educated on the importance of assessment for learning rather than of learning, I have developed assessment strategies to enhance student learning such as in class assessments with immediate feedback. I propose that educators nurture a culture of 'assessment for learning' rather than 'assessment of learning' to change this behavior (Sambell *et al*., 2013). Assessment for learning would encourage students to become life-long learners who practice self-reflexivity and self-regulation. I would thus urge educators to reflect on why they assess, what they assess and how they assess for best practices in student assessment.

Considering the assessment methods in my context, tests and final examinations tend to be theory-based in the pre-clinical years with oral examinations and objective structured clinical examinations (OSCEs) and a final independent research project being implemented in subsequent clinical years. The MBChB assessment structure is in sync with Miller's pyramid of assessment as presented in the illustration below:

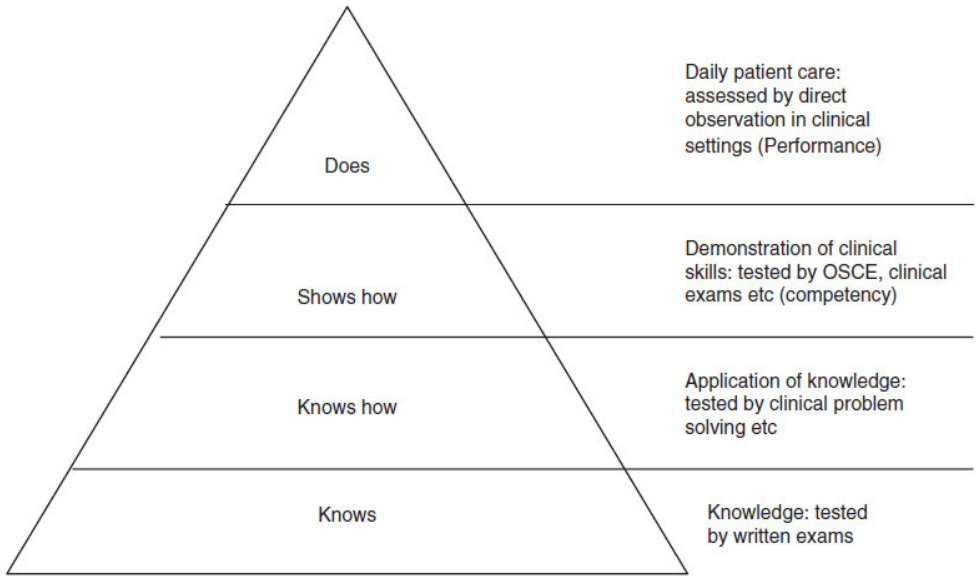

Figure 4.1 Miller's pyramid of assessment (Miller, 1990)

My disciplinary context mainly falls in the two lower levels of the assessment pyramid above, with a focus on imparting theoretical and practical knowledge to students. Practical assessments are scheduled as in-course assessments, contributing to what is institutionally referred to as continuous assessment (CA). A CA assessment system with no fewer than four summative tests scheduled for each module per semester exists. Assignments and practical reports also commonly contribute to the CA mark, and a culture of summative testing prevails. A dominant belief held by lecturers is that they still need to be the only assessor. Academics need to be innovative and use a range of assessment approaches and methods to enhance students' learning. Instead of perceiving assessment as being about grading, I urge educators to perceive assessment as an opportunity for diagnosing students' misunderstandings and addressing them to enhance student learning. Peer and self-assessments enhance student learning and encourage students' self-judgement, self-reflection and self-development (Boud *et al*., 1999; Makoni, 2000; Brown and Race, 2013). One contextual reality resulting from massification has been increases class sizes and cohorts, leaving educators looking for quick and easy assessment strategies that are appropriate for large classes, usually with limited resources. Currently, my Department has resorted to using Zipgrade, an automated marking system for multiple choice questions. I

currently use in-class quizzes for formative assessment and plan to use the online quizzing using Socrative, which I learnt about on the PgDHE program.

While it could be argued that continual testing encourages students to work consistently, there are a number of important downsides to consider. Race (2002) warns that students' lives can become overwhelmed by assessment, compromising deep approaches to learning as students focus on grades. In my own experience, over-testing in this way adds a counter-productive measure of stress to the lives of students. When assessments are compulsory and too numerous, student workloads are overwhelmingly high and dampen the enthusiasm for the learning process.

4.3 Key Principles, Theories and Concepts of Assessment in Higher Education

According to Johnston and Costello (2005), noticing, representing, and responding to learners' work makes assessment a social practice, supported by trust, sensitivity and motivation as characteristics that support the social practices of assessments. Ramsden (1992) argues that assessment exerts influence over the learning approaches that students employ. According to Gibbs (1999), deeper approaches to learning are encouraged by assessments that require students to actively engage with tasks of varying complexity over extended periods of time, while surface approaches to learning, tend to result from assessments that are limited to tasks of lower cognitive demand. Surface approaches may also be a coping strategy resorted to by students when assessment is perceived as an end, rather than as a means to the end of student learning (Gibbs, 1999). Before considering any transformation in assessment practices towards the goal of enhanced learning, it is pertinent to first engage key principles, concepts and theories of assessment.

While the question of why students are assessed might seem to be simple common sense, there are many opinions regarding the roles and purposes of assessment, making the task of defining assessment a challenge (Dunn *et al*., 2004). Boud (2007) cautions against the traditional view of assessment as solely an activity of measuring achievement and confirming learning outcomes, arguing that it casts the student as a passive recipient, subjected to assessment, over which he or she has no control. To be able to make informed decisions about how to assess students, educators need to take into account roles and purposes of assessment in order to conceptualize what is important. The choice of assessment method, approach and the assessment conditions should be guided by the role and purpose for the assessment. Prior to engagement in the PgDHE

program, I did not interrogate the reasons why certain assessment approaches have been adopted in my discipline and I agree with Dunn et al (2004) that educators should be able to point out the implications of assessment practices to be able to instigate any change for improvement. Biggs and Tang (2011) argue that assessment should be constructively aligned to other T&L practices, as described in section 3.3.3, for it to provide a positive learning experience for students. Assessment strategies should be designed as part of the curriculum development process (Biggs and Tang, 2011). However, in my disciplinary context, the prevailing culture is the view of curriculum as a content-based product thus academics hardly reflect on and change practices.

Literature review reveals an array of roles and purposes for assessment which include, but are not limited to diagnosing student difficulties, measuring improvement over time, motivating students to study, judging mastery of essential skills and knowledge, ranking students' capabilities in relation to the whole class, evaluating teaching methods and effectiveness of the course and encouraging the tacit learning of disciplinary skills and conventions (Luckett and Sutherland, 2000; Dunn *et al*., 2004). Luckett and Sutherland (2000) assert that the purpose of an assessment should determine its design, pointing out main assessment strategies that are distinguished based on the roles and purposes of assessment. Diagnostic assessment is used to determine students' readiness for learning, to identify students' strengths and potential gaps in knowledge, and to inform decisions around remediation strategies. Formative assessment, which also has a diagnostic purpose, takes place during the process of teaching and learning and is considered to be a forward-looking assessment for learning because of its potential to improve or enhance student learning by providing feedback and encouraging students' reflective practice (Johnston and Costello, 2005; Yorke, 2003). According to Dunn *et al*. (2004), formative assessment should provide students with feedback, providing an opportunity for students to improve their performance on the same task based on the feedback they receive from the educators. Feedback engages students in active learning, informs future learning and has a positive emotional and motivational impact on learning. Formative assessment plays a significant role in encouraging a student-centered approach as opposed to a teacher-centered approach.

Prior to engaging on the PgDHE, I must admit that I was unware of the requirement for feedback provision to allow students to improve the same tasks so what I considered to be formative assessments were actually all summative because I allocated final grades, regardless of

whether students used what they learnt from the assignment to complete other tasks. I am in agreement with Butler (1988) that once a final grade is given on a formative assignment, together with formative comments, students are highly likely to attend only to the grade and ignore the formative comments. My experience is that I spent lots of hours marking assignments and giving written feedback but I realize students may not pay any attention to those comments as none of the students approached me for clarity on any of the given comments. I would however, make all formative assessments compulsory, whether graded or ungraded, or use class periods for ungraded formative assessments, given that students prioritize their efforts to graded assessments (Dunn et al., 2004). Based on a curriculum designed using the scaffolding principle, formative asssessments would provide the basis of the teaching and learning activities in the module, leading ultimately to summative assessment (Biggs, 1990). Having been a student on the PgDHE, I found formative assessment quite motivating in completion of my assignments and tasks as I looked forward to the feedback from facilitators and mentors which guided me to improve my learning. I therefore resorted to using to giving tasks to be completed in pairs or individually which are then discussed as a class before the summative assessments are given. Summative assessment is used to establish students' levels of achievement in meeting the assessment criteria in order to ultimately inform decisions about competence or graduation (Biggs, 1999). Ideally, summative assessment culminates at the end of an incremental series of learning activities, so that formative learning leads to summative assessment. Some authors have advocated for summative assessment to be strategically combined with formative assessments in order to more effectively promote the goal of transformative student learning (Knight, 2001; Boud, 2007) while Newble and Cannon (1995) argue that formative assessments ought to be kept separate from summative assessments. Institutionally, continuous assessment, which is conducted on an on-going basis, is used to help in making decisions on the students' preparedness to do a summative assessment and makes provision for the weighting of summative assessment opportunities.

Dunn *et al*. (2004) argues that student assessment is largely qualitative and therefore subjective. Assessment theory distinguishes two main approaches to assessing student performance, norm-referenced assessment (NRA) and criterion-referenced assessment (CRA) (Luckett and Sutherland, 2000). NRAs are designed to compare each student's performance with the

performance of others in the same cohort (Biggs and Tang, 2011). Student ranking is based on a normal distribution curve, in which the student majority performs around the midpoint curve, weaker performers are represented at the tail end of the curve, and the top performers are represented at the leading edge. NRA is the practice in my disciplinary context. At the end of each semester, departments need to report on the success rates of all modules, with academics being expected to give explanations should the averages be too low or too high. Before engaging in the PgDHE program, I always assumed that ranking students according to the performance of others indicated how well students have learned. Departmental examination boards sometimes use the bell curve to determine if marks should be adjusted upwards or downwards to conform to the preconceived notion that marks should be normally distributed. Such an approach disguises the absolute performance of students, given that if the student cohort performs exceptionally well or poorly, this will not be reflected in their grades as the actual grades are adjusted to suit normal distribution based on the performance of the other students (Dunn *et al*., 2004). Another downside of NRA is that it is not appropriate to use for small student cohorts as the likelihood of obtaining a normal distribution curve is extremely low thus grades are not reliable indicators of performance. Biggs (1999) argues that NRA is suitable for large groups of more than 300. In my context, student cohorts are less than 300 thus NRA, which is the commonly used approach, is not appropriate.

NRA is criticized for being insensitive to changes in student learning since performance is not referenced against pre-set criteria and changes in learning quality over time will be difficult to detect (Knight, 2001). In the Namibian context, where some students have been denied access to education in the past, NRA may lead to discrimination against such students. Inclusivity should be considered as assessment should not discriminate on the basis of special learning needs, cultural background, or any attribute other than the quality of learning that has been achieved. (Luckett and Sutherland, 2000).

In contrast to NRA, CRA judges students' individual performance against pre-ordained, explicit criteria, independent of the performance of other students (Carlson *et al*., 2000; Dunn et al., 2004). Because assessment criteria are explicit, students are able to judge their performance against the set criteria and the approach can potentially ensure fairness, transparency and reduce students' feelings of powerlessness as far as assessment is concerned. Boud and Falchikov

(2007) advocate for application of CRA approach, arguing that life-long learning and self-monitoring skills are developed if students are given the opportunity to learn to make judgements on their own and their peers' work. Designing assessment underpinned by a CRA approach can contribute to success and enhancement of the quality of learning. CRA can potentially improve the validity and reliability of assessment (Makoni, 2000). Drawbacks of CRA application may be various interpretations of set criteria by assessors and students, vague and imprecise use of language in criteria, or set criteria being too complex and unmanageable (Knight, 2001). Due to the difficulty of specifying all criteria in sufficient detail, performance standards may need to be conceptualised, formulated and made accessible to assessors and students, in what is called standards-referenced assessment, and students' performance is categorized according to the pre-ordained standards (Dunn *et al*., 2004; Sadler, 2005). The distinction between assessment criteria and standards would have to be made explicit to students. Sadler (2005) distinguishes the two by defining criteria as desired attributes, properties or characteristics of student performance, for example 'evidence of wide reading' and standards as fixed reference levels by which performance is judged, and emphasises the need for both in ensuring high quality assessment and grading. Standard-referenced assessment categories are often organized in an ascending scale, such as fail, pass, credit, distinction and high distinction, indicating performance bands and their implications. The grading of the PgDHE portfolio is based on a standards-referenced approach and this has been very explicit and encouraging in compiling my portfolio to meet standards which are clear and unambiguous.

Principle concepts in assessment discourse include validity, reliability, transparency, and authenticity. Fairness, inclusivity and affordability are also important concepts. Using the ideas of Gibbs (1999), Carlson *et al*. (2000), Brown and Race (2012) and Luckett and Sutherland (2000), I consider validity, reliability and inclusivity to be the most salient of these concepts due to the relevance in my institutional and disciplinary context therefore I direct my focus to a discussion of the named concepts.

Validity pertains to the accuracy and appropriateness of a given assessment in a given context, with respect to clearly stated outcomes (Killen, 2003). Key points to consider when analyzing the validity of an assessment are whether it measures that which it claims to measure, whether the 'marks' obtained for the assessment provide an accurate indication of understanding of the key

concepts and whether a valid inference or prediction be made from this mark or not (Killen 2003). Ensuring alignment between learning outcomes and assessment criteria so that assessment methods are 'fit for purpose' is important for assessment validity (Luckett and Sutherland, 2000). Assessment conditions, such as design, instructions guiding assessment execution, degree of ambiguity and given time restrictions play a role in determining the validity of assessment. It is vital to employ assessment tasks that relate to the professions and communities that contextualize them and have a basis in core skills and requisite graduate attributes (Dunn *et al*., 2004). Self, peer and group assessments may also be methods of choice to enable self-monitoring and reflection among students.

Reliability refers to the extent of consistency of an assessment, with the same judgements being made in equivalent or similar contexts, based on set standards. Assessment results are generalizable and observer-independent (Knight, 2001; Race, 2002). UNAM ensures inter-marker reliability, pertaining to consistency across markers by the appointment of internal and external examination moderators to audit the assessment processes. In my disciplinary context, I propose that inter-marker reliability be ensured as there are several assessors assessing the same module.

4.4 Challenges of Assessment at the School of Medicine

Shumway and Harden (2003) emphasize the major role played by assessment in medical education as it certifies competent physicians who can take care of the public. In an interview of educators in the School of Medicine regarding the challenges they are facing in relation to the assessment of student learning, most of the answers were related to difficulties associated with large classes (Appendix 4.1). I adopt the definition of a large class as "one in which characteristics and conditions present themselves as inter-related and collective constraints that impede meaningful teaching and learning" (Onwu and Stoffels, 2005). A major challenge is the limitation of assessment methods for large numbers of students, resulting in the use of convenient rather than appropriate methods. Most lecturers were considering using Multiple Choice Questions (MCQs) for easier marking, although they wished to test the students' writing and expression skills by various other assessment methods such as essay writing and short answer questions. MCQ's can be very reliable; however, as argued above, a MCQ test may not test whether students are able to think critically, or encourage personal development and

informed judgements. A reflective essay would be more valid in relation to the purpose and outcomes of a course where students are meant to engage in complex and critical thinking. Macgregor *et al*. (2000) argues that, historically, assessments for large class settings expect little more than memorization of terms and concepts as evidence of student learning. In the current context, it is imperative that educators design a variety of appropriate assessment methods which encourage and improve learning rather than considering the summative approach and being concerned about final student grades. In assessment for learning, educators can use self and peer assessment, using a variety of in-class assessments with immediate feedback and guidance (Burke, 2005). Questions should be set in such a way that the verbs used require answers at the different levels of thinking of Bloom's Taxonomy (Botha *et al*., 2005).

Large classes also reportedly posed the challenges of hindering timely feedback, high likelihood of peer copying of assignments among students, difficulty in assessing individual participation in group assignments and difficulties in adding interactive dimensions to assessment procedures.

In my experience, challenges that I have faced are that students are not very keen on take home assignments and tend to rush through them, being often swamped with assignments in most of their other modules. I have often accused students of being unable to understand given assignment requirements, though I have not supplied any grading rubric. A rubric would provide guidance and a starting point in assignment writing for students. I would argue that if criteria were set and understood by lecturers and students, students would have the opportunity to make an informed decision about the effort needed to complete the assignment. My experience with providing written feedback to students on take home assignments has been that students apparently do not pay attention to the provided feedback, most do not even fetch the marked assignments and do not attend facilitation sessions where the feedback is discussed. I have therefore resorted to giving in-class quizzes and assignments and providing immediate feedback.

A challenge cited by the younger educators was being accused of unfair assessment by students or their parents who were dissatisfied by grades or marks or grades awarded. Given the subjectivity of some assessment challenges, threats of violence and legal battles are some challenges of concern. The provision of explicit rubrics and standard referenced assessment may be useful in addressing the above challenge.

In the clinical years, where OSCEs are used as assessment methods, the shortage of skilled staff to assess students as well as translators is a major contextual realities. OSCEs are difficult to standardize, compared to written exams given the patient variability and weariness of the few examiners available.

4.5 Reflection On My Assessment Approaches

Having engaged in assessment discourse, I realize the need for a transformation of my cultural practices and perception regarding assessment to enable enhanced student learning. Rather than viewing assessment as a way of summatively determining achievement of learning outcomes, I am now more inclined to designing and employing assessment tasks that engage students in active learning and inspire them to reflect on their learning and proceed with life-long learning. I have become an advocate for the implementation of CRA in place of NRA to reduce the competitive aspects of assessment between students and encourage determination to succeed against pre-set standards. I plan to set and document assessment criteria before student learning commences. By using both graded and ungraded formative assessment tasks, it is my hope to discourage the students from viewing assessments as being only for grades and marks and engaging in surface learning, but as a means to enhance their learning, thus engage in deep learning. I aim to create a learning environment that rewards meaningful enquiry and eschews reproducing approaches to assessment tasks (Dunn *et al*., 2004).

Brown and Race (2013) argue that deployment of a variety of assessment methods is necessary to address the diverse learning styles of students. Looking at assessment from the perspective of the learner, I realize that it is necessary to consider the psychological effects of assessment on students and do everything in my power to lessen the anxiety raised by assessments. I have become conscious of the need to avoid measuring failure, and stereotyping students as having certain levels of ability, as such practices demotivate students. I view assessment as a way of receiving feedback on my teaching and my focus is now on employing assessment practices which motivate students. The practice of stereotyping students as having certain levels of ability is often common among educators and has demotivating effects on students.

As far as assessment methods are concerned, given the large numbers of students of 177 in the modules I teach, I changed my formative assessment strategies from essay-type assignments which were burdensome to read, mark and provide timely feedback. To reduce this burden,

over the past two years, I have been using peer-assessments of in-class quizzes and my experience is that they have been very engaging for the large number of students and students apparently enjoy participating in assessment as judges rather than always being judged. As Taras (2002) argues, the practice takes away the predominant students' view of assessment and feedback as being exclusively the "domain of the lecturer". The in-class quizzes have the advantage that immediate feedback can be given and discussed among students, encouraging an interactive dimension. Brown and Race (2013) argues that timely feedback will contribute to effective learning by allowing students the opportunity to reflect on their learning. Now that I have received training in most e-learning tools, I plan to commence and advance the use of online platforms like Moodle and Socrative for quiz assessments this year. The use of online platforms for assessment apparently provides an opportunity to make assessments more interactive and takes away the anxiety associated with assessment among students. Other advantages of using Moodle include the integration of the plagiarism detection software, Urkund and immediate generation of marks.

Timely feedback is essential to improve learning and can used for directing, motivating and consolidating learning (Brown and Race, 2010). I have often had students approaching my office to enquire on feedback for tests and assignment and have often not prioritized that, being more focused on providing the required mark rather than giving students a chance to improve their learning. This apparently seems to be the practice with most educators in my disciplinary context. I would advocate for the practice of not assigning marks to every assessment, to relax the assessment process among students. I plan to provide immediate feedback on assessments given, to allow students to improve their formative assessment marks before summative assessment. Students should be encouraged to improve their study methods and not merely memorize lecture notes to attain high marks.

In order to enhance and assure quality in relation to assessment in my Department, information dissemination is necessary to develop transparency regarding assessment procedures and to encourage the alignment of assessments to learning outcomes. I advocate for the inclusion of well laid out assessment criteria in the student module guide and for peer moderation of set tests, assignments and practical write up which contribute toward the continuous assessment mark.

Research regarding assessment practices would be a starting point for encouraging transformative assessment practices. Seminars, discussions and training on assessment would be useful in redirecting perceptions of educators. Having engaged in the PgDHE program, I will present a seminar on assessment practices, giving insight on how the Department can improve assessment practices at the Departmental Journal club. I will highlight the importance of implementing a variety of assessment methods to enhance learning, focus on formative rather than summative assessment and timely feedback for enhanced learning. I will also implement and encourage the use of ICT to allow assessment during learning. Discussions in this area have already begun at departmental level.

4.6 Summary

Engagement with various assessment principles and strategies shows that for enhanced student learning, assessment strategies should be constructively aligned with teaching and curriculum development practices. Considering the assessment theories, CRA would be ideal compared to NRA as it allows for transparency in the assessment system and gives opportunity for students to judge their performances against set criteria and consequently reflect on their learning. In addition to considering the principles of validity, fairness, authenticity and reliability in the design of assessment strategies, variation in assessment methods should also be considered, to cater for the varied learning styles and competencies of students. Having realized that most assessment challenges at SoM are a result of the large student numbers, it is imperative that lecturers rethink their assessment strategies and employ methods that allow for student engagement and participation in the assessment process, replacing the currently dominant assessment language of marks and grades (Boud, 2007).

CHAPTER 5: HEALTH SCIENCE RESEARCH AND RESEARCH SUPERVISION

5.1 Introduction

Research in the health sciences sector is essential to enable evidence based practices in health education and practice (Brink *et al*., 2009). In order to carry out quality research that yields valid, reliable results that can inform practices in their contexts, it is essential for researchers to be equipped with the knowledge of setting research priorities, proposing and justifying research engagements and applying reliable and robust analytical methods to validate their findings. Although I perceived myself to be an experienced, competent researcher and research supervisor based on my experiences prior to engaging in the Health Science Research and Research Supervision modules, the changing HE context and new knowledge acquired have made me cognisant of the need for transformation in my research practices, especially as a research student supervisor. I particularly gained a lot of useful knowledge from the sessions on selection and employment of appropriate data analysis methods.

I commence this chapter with an analysis of my institutional context in relation to research and student supervision, with a critique of the practices using the tenets of structure, culture and agency (Archer, 2000). I proceed with an elaboration of the contextual realities of research and research supervision, their implications for student learning and their role in necessitating transformation from traditional research practices. I then proceed with a discussion of the setting of research priorities, encouraging research prioritization based on contextual realities, followed by an overview of student supervisory styles, conceptualizing styles for assuring the quality of student supervision in research within my institution and disciplinary context. Finally, I present a conceptualization of my role and reflections in research student supervision.

5.2 Contextual Realities Impacting Research and Research Student Supervision at UNAM

Research makes up 30 % of the core duties of academic staff members at UNAM. The institution supports undertaking context based research, which is intended to create and disseminate new knowledge, and foster socio-economic development through addressing society challenges. To enable academic staff to fulfil their research role, the institution has enabling structures such as

the Centre for Research and Publications (CRP), Multidisciplinary Research Centre (MRC), Centre for postgraduate studies, well-equipped libraries enabling access to research journals, and well-equipped laboratories in the various disciplines.

Duties of the CRP include research coordination and administration, academic staff capacity building through training workshops and information dissemination, and strategically positioning the institution globally. CRP is also responsible for facilitating research collaborations and actively engaging with stakeholders to ensure relevance of research focus areas. Pertaining to institutional research project funding, CRP manages a research budget for funding research projects. Calls for funding opportunities are regularly distributed to UNAM academic staff. Project funding is competitive and annually allocated. Research and Publications Committee representatives within Faculties are responsible for attending meetings to present research proposals which have been approved at Faculty level on behalf of their peers. With the dwindling institutional finances, the routine annual calls for proposals has not been consistent, for example, there was no usual call for research project proposals for potential funding in 2017. Considering my situation, in the absence of institutional research grants, research resources were extremely scarce, and I personally was under pressure to source funds from external donors to enable research activities to progress. Given the limited and competitive nature of institutional research grants, it is difficult for early career researchers to establish themselves in the research arena. I therefore propose the awarding of research seed grants specifically directed at funding early career academics as well as the introduction of support services such as research mentorship for early career academics. UNAM has a mentorship policy, one of the purposes of which is to create a mentorship culture to enhance professional development among its staff members (UNAM, 2014b). Regarding staff to staff mentorship, a limitation in the implementation of the mentorship policy is that the Faculties and Departments are required to assign mentors to staff members "as deemed necessary". The responsibility of determining who requires mentorship is however unassigned. In my opinion, explicit channels of seeking mentorship should be in place. My suggestion is that at the beginning of each academic year, senior staff that are willing to be mentors should indicate their availability and junior staff requiring mentorship should indicate their willingness.

The MRC at UNAM is another structure available for strengthening research collaboration nationally, regionally and beyond. The center creates opportunities for collaborative supervision of graduate students. I have been fortunate to collaborate in several projects with MRC and I currently supervise undergraduate and postgraduate research projects in collaboration with Departments with similar research interests.

The UNAM Centre for postgraduate studies is an institutional structure responsible for the coordination and monitoring of UNAM's postgraduate programs, which all have a research component, ensuring uniformity and adherence to set guidelines by students and their supervisors. Postgraduate supervision has recently become subject to external scrutiny to ensure quality and timely completion (Taylor, 2012). UNAM has set policies and guidelines which supervisors and supervisees need to familiarize themselves with. To meet the need for supervisors and supervisees to be aware of the guidelines, the Centre for postgraduate studies often runs short courses, workshops and seminars on research and supervision, and the guidelines are explicitly stated in a prospectus which is readily available online. The UNAM postgraduate studies prospectus mainly covers admission of research students, progress and review arrangements, evaluation mechanisms and assessments without much on research supervision such as the responsibilities of research supervisors and time allocations for supervision. The terms of the supervisory relationship are left entirely to the discretion of the research students and supervisor, meaning that supervisors and students have to develop their own time schedules and roles. Although this approach has worked well in my research supervision experiences so far, it has the potential to be problematic, depending on the nature of individual students I may supervise in the future. According to Abiddin and co-workers (2009), a lack of clarity between student and supervisor with regard to expectations and responsibilities can adversely affect progress towards the completion of the degree. I found the PgDHE session discussions on best practices in research student supervision, rights and responsibilities of students and their supervisors quite insightful and informative. I give more details on research supervision in section 5.3. Coupled with the knowledge gained in some guiding theories and concepts of research supervision, I am currently on a journey to improve my supervisory skills.

Culturally, even though institutional research support is limited by lack of or low funding, publishing remains a universal tool of measuring research productivity and a yardstick for

academic promotion. In my experience, research carries more perceived value than teaching / scholarship and I agree with Quinn (2011), who argues that resources, rewards and recognition are in abundance for research, whereas the opposite has been true for T&L. However, my observation is that due to the overwhelming T&L workloads and administrative duties resulting from short-staffing at UNAM, very little time is available for research, especially among the early career academics. On the other hand, senior academics apparently devote most of their time to their established research activities and less time to T&L (Webster and Mosoetsa, 2001). With students facing financial difficulties to be able to engage in HE, such a scenario may lead to students feeling that they are not getting 'value for money'. Another downturn resulting from lack of sustainable institutional or national research funding is that research is usually focused to areas with available external funding rather than meeting the national and community needs. Although globalization has apparently fashioned research priorities, we could also consider globalization to have the positive effect of increasing the chance for more opportunities for international research collaboration, a benefit to individuals, institutions and society as a whole. In order to increase institutional research output, I advocate for incentives such as recognition of high research achievers by giving research awards and publishing rewards in the form of money that can be channeled towards continued research activities.

In an effort to address national health challenges and provide solutions in healthcare delivery, at Faculty level, SoM promotes innovative research activities, community engagement and research partnerships. The school is well equipped with state of the art laboratories and equipment. One of the 7 graduate attributes listed for the medical doctor graduating at UNAM is to be an innovator and researcher. At undergraduate level, students are expected to carry out an independent research project, supervised by staff in the school. Health research at UNAM is regulated by the MoHSS, to ensure that it is relevant, feasible and ethically sound. The process of obtaining approval to commence research activities is however lengthy and delays research project implementation.

With regard to student supervision, when I joined the school, students selected research projects of their choices and supervisors were randomly appointed to supervise the projects, regardless of their areas of research interest and expertise. In that scenario, skills and resources to support the students' topics were often inadequate and consequently, the research project execution was very

challenging for both students and their supervisors. Several authors point out that candidates are more likely not to complete or to delay completion where supervisors have little expertise in the topic or a personal interest or are pushed to spend time with the student (Cohen, 2011; (McAlpine *et al*., 2012), thus the system needs to ensure the right supervisors. I am of the opinion that effective supervision requires supervisors to be knowledgeable and skilled in the research field. To date, I have supervised 12 undergraduate independent projects with very little knowledge on research methodology, particularly of appropriate statistical tests to employ in the varied research projects. I also spent quite a lot of time reading in the students' chosen fields to be able to guide the projects. The current practice has been that potential supervisors indicate any project topics they may want students to engage in. This practice, in my opinion, is better, as both students and their supervisors have the opportunity to work in their chosen areas of research interest. The quality of supervision has a major impact on the learning experiences of students and their chances of timely completion (McAlpine *et al*., 2012).

5.3 Student Research Supervision: Concepts, Models and Styles

Student research supervision is a complex teaching task that requires substantial time and energy commitment by both supervisors and students (Abiddin *et al*., 2009; Chiappetta-Swanson and Watt, 2011). Research supervisory practices play a major role in determining the institutional research profile. Good supervisory practices are essential in nurturing and fulfilling students' research potential while poor supervision can have a significant impact on students, not only limiting the quality of their work, but also their motivation (Abiddin *et al*., 2009). The responsibilities of supervisors and their research students as well as the student-supervisor relationship play a role in determining students' approaches to learning and motivation. While, historically, being an active researcher was sufficient to qualify one as a research supervisor, Abiddin *et al*. (2009) argues that, with the increasing developments in research education, supervisors need to have a wide range of additional knowledge and skills. The ability to respond effectively to changing contextual realities such as cultural and social diversity among the student population is necessary if supervisors are going to offer research candidates high quality learning experiences. According to Moses (1994), supervisors should at least have an equivalent degree to the one the student is studying for and, if this is not the case then, they must have a

solid background of research involvement and publications. Numerous authors have pointed out criteria such as research competence, an established research record, reflective practices, evidence of continued contribution to disciplinary development as being attributes of an effective supervisor (Moses, 1994; Brown and Atkins, 1988; Frischer and Larsson, 2000).

Abiddin *et al*. (2009) argues that there is no single formula for the supervisor-student relationship and poses that the relationship is dependent upon the characteristics of the persons involved, disciplinary differences in the ways knowledge is advanced, and the different learning tasks facing students due to the demands of their field. In addition, relationships may be influenced by difficulties arising from the risks and uncertainties of research projects that students have to cope with, which may be compounded by personal contextual realities (McAlpine *et al*., 2012). Among the numerous opinions regarding the responsibilities of supervisors, many authors agree that the main responsibilities are to give constant guidance, personal, professional and career support, and reassurance to the student and to keep the student's morale high (Moses, 1994; Phillips *et al*., 2000; Abiddin *et al*., 2009; Kylie and Taylor, 2015). Though supervisors may not be trained counsellors, they need to be able to offer personal support to candidates in navigating the research journey (McAlpine *et al*., 2012). Haksever and Manisali (2000) define personal support as help unrelated to the research such as motivation, socializing, help in organizing accommodation and other things that may be required. In my opinion, the level of support rendered in this aspect may be highly dependent on the students' openness in sharing personal issues and the supervisors' approachability. I would encourage supervisors to adopt flexible personal support strategies depending on the individual students' requirements, which are influenced by the attributes of the particular students (Hill *et al*., 1994). Research students are highly diverse in terms of academic ability, personality attributes, motivation and attitude (Abiddin *et al*., 2009; Chiappetta-Swanson and Watt, 2011). Hence, how supervisors respond to students will be partly conditioned by the various factors, and applying the same non-flexible strategy for each student may not always work effectively (McQueeney, 1996). Indirect research-related help includes facilitating networking by providing both industrial and academic contacts, ensuring availability and accessibility of equipment and initial help in locating relevant references (Haksever and Manisali, 2000; Kylie and Taylor, 2015). Direct research-related help includes critical analysis of work, assistance with choice and application of research methods, advice on presentations and writing, and precise direction and help with

project management (Kylie and Taylor, 2015). According to Connell (1985), it is incumbent upon the supervisor to bridge gaps in communication during the various stages of research by requesting regular meetings or updates. To be able to guide students, supervisors should be aware of institutional and any other student support structures available. At UNAM, the Center for postgraduate studies provides academic support services to postgraduate students such as dissemination of information on the various study programs, support for supervision-related queries, academic counselling and pastoral care, enrolment and registration, examination procedures, ICT empowerment and access to electronic resources for study purposes.

Traditionally, postgraduate research sponsors and quality assurance agencies across the globe require, or encourage team supervision, in which each student has two or more supervisors. While this can have benefits, such as covering a wider range of expertise and availing a wider variety of relevant networks and contacts, it can also lead to issues, including conflicts of approaches, standpoints, roles, interests and styles (Taylor and Beasley, 2005). For that reason, the relationship needs to be actively managed by agreeing on roles and expectations at the start of the research project and reviewing them during the course of the project, to ensure that the supervisory team remains fit for purpose. It is a UNAM requirement that postgraduate research students should be supervised by at least two supervisors. One key advantage of having more than one supervisor for a research project is the useful back-up available, should the primary supervisor become incapacitated or leave the university.

With research student supervision being increasingly cast as a specialist form of teaching and supported learning, knowledge and understanding of good practices in research student supervision would benefit supervisors in their practice (Kylie and Taylor, 2015). In analyzing success in supervision, focus is often directed at supervisors' predominant styles of supervision and how far they meet candidates' needs. Earlier in the 20th century, Welch (1980) suggested three supervisory styles. One style is a highly directive, very structured approach, in which the student is given a lot of advice in the early stages of the research project then the control level diminishes as the student gains confidence and ability. Connell (1985) argues that as research progresses, students move from looking to supervisors for direction and guidance towards forming a critical friendship. The second approach is highly directive at the beginning and at the end of the research project, with a highly non-directive period mid-way. The third approach is

highly directive, with close monitoring of the student throughout the project (Abiddin *et al*., 2009). In my experience, both as a supervisor and a supervisee, I am in agreement with Moses (1994), who argues that at each stage of the research progress, students are likely to need different forms of guidance and direction at various stages of their research projects. Particular guidance would be required during the proposal development, data collection and analysis, and thesis compilation stages.

Gatfield (2005)'s model of supervisory styles, a more recent one, and one of the best known, distinguishes a structural dimension, in which supervisors perceive their roles as organization and management of the research project, from a support dimension in which supervisors perceive their roles as personally supporting candidates through the ups and downs of life as a researcher. The two dimensions are dichotomized into low and high to yield four paradigms of supervisor styles as presented in Figure 5.1 below (Gatfield, 2005).

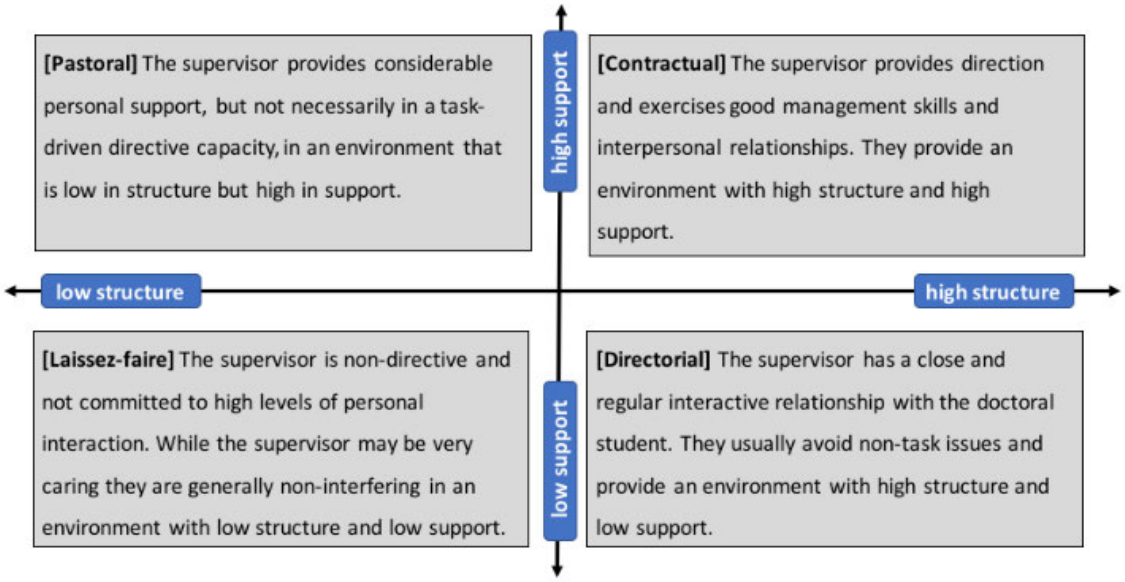

Figure 5.1 Perceptions of supervisory roles (Adapted from Gatfield, 2005)

According to the Laissez-faire style, the candidate is assumed to be capable of managing both the research project and themselves. This supervisory style follows the Laissez-faire leadership pattern, in which the leader, in this case the supervisor, gives the student total freedom of action, hands out materials but largely avoids participating in critical analysis and direction of the

students' work unless requested to do so (Frischer and Larsson, 2000). I would not advocate for the adoption of such a supervisory style, given that research projects at various stages have various expectations and requirements which need expert guidance, especially in project management. Such a supervisory approach has been associated with low quantity and poor quality of work. The pastoral style assumes that candidates are capable of managing the research project but need personal support. Again, I would not agree to such an assumption based on the reasons stated. The directorial style assumes that the candidate needs support in managing the research project but not in managing themselves. I was of the opinion that this would be the ideal relationship, especially with doctoral students who are older than me that I supervise, but based on my experience, I believe that the best style for all graduate students would be the contractual style, which assumes that candidates need support in both managing the project and in managing themselves at various stages of their research projects. Supervisors are encouraged to use a repertoire of styles and not stick to one style to meet the individual needs of candidates (Kylie and Taylor, 2015). Hence, how supervisors respond to students will, in part, be conditioned by these different factors and applying the same rigid strategy for each student may not always work effectively (Burgess *et al*., 1994). I have often adopted the strategy of closely monitoring and directing students who I have perceived to show low intellect and motivation.

In my experience as a graduate research student, my supervisor adopted the contractual style at the initial stages of my project, which I felt holistically met my needs during the first few years of my engagement as a student. He then proceeded to vary the supervisory style to the pastoral style as I developed as an independent researcher. While adopting a friendly and open approach to supervision, he allowed me to manage my project, though he continued to provide guidance and personal support when the need arose. Having emulated my own postgraduate research supervisor, I have tended to use his supervisory style. However, I plan to embed contextual realities pertaining to various students in my supervisory style and, as Hill (2011) suggests, I am in the process of evaluating my practice and where appropriate, enhancing it.

5.4 Setting research priorities

My institutional context is such that health research is still in infancy due to the few operational years of the Faculty of Health Sciences so far. Consequently, research options far exceed the

available resources, making research priority setting a key component of research planning. Ball and co-workers (2016) cite research prioritisation as a valuable strategy used to ensure that research projects are directly aligned with the needs and preferences of research end users, increase the likelihood that research projects elicit a meaningful impact, and that research results can be implemented in a sustainable, feasible and acceptable manner. Academic freedom is limited as academics cannot undertake research in their own interest areas, being directed by funding opportunities and operating in fear of government's potential intolerance of controversial, new or unconventional ideas.

Globally, there is a move for universities to support 'research-informed' teaching, therefore there have been significant moves in the field of research in relation to T&L (Brink, 2009). Badat (2013) argues that any programme on developing teaching and learning capabilities has to include building competence for research on teaching and learning, producing knowledge on pedagogy, the curriculum, assessment and student learning. I must admit that before engaging in the PDHE program, my research focus was directed at community research and it never crossed my mind that I could also be engaged in educational research to improve knowledge base, teaching and learning in my context, having been of the perception that education research should be for those educators in the field of education. Following engagement in discourse on choosing a research project and setting priorities, I managed to select three research ideas related to enhancing teaching and learning in the teaching of Biochemistry. Following a guided prioritization list incorporating key learning points, relevance, impact and feasibility of the research as well as available literature and methodology, one main idea was selected for pursuing research. A completed guide on testing research ideas is attached (Annex 5.1). Data collection has been collected for the research and is currently under analysis, and a paper for publication is currently under compilation. I plan to be further engaged in research for enhanced student learning in my discipline.

Having research interests in nutritional health and toxicology of indigenous Namibian foods, my research focus is on mycotoxin and cyanogenic glycoside occurrence, exposure and human health risks for consumers. After engaging in ground rules for research discussed in the PgDHE, I set the research priority with the aim of providing knowledge in an area of health interest in which no research has been carried out in Namibia and it is my hope that the results I obtain will

set a basis for further research in the area. After engagement in the PDHE, having perceived the importance of wide reading and critiquing literature in my area of interest, I embarked on compiling review papers in my area of research interest. Having applied for and been awarded a research grant for a 3 month research visit to Austria in June 2016, I was able to carry out a thorough literature search, compiled and submitted review articles. I am happy that I successfully published 2 review articles in 2017 and 1 research paper in 2016 (Appendix 5.2). The review papers are comprehensive and contextual, thus the information has been used in contextual teaching for the MSc Microbiology lectures in Food safety, Food Microbiology and Food Biotechnology. Thanks to the PgDHE sessions on Mendeley Reference Manager for inserting citations and bibliography, I did not have to spend much time manually entering references into my compiled papers. I was able to import papers and other documents from my desktop with ease.

5.5 Choosing a Statistical Test

While aware of numerous statistical tests available to researchers, I had very limited knowledge on the choice of statistical tests to employ in my own research context, prior to statistics sessions held on the PgDHE program. I have since learnt that some important considerations in selecting a statistical test to use include the purpose of the analysis, the kinds of data, the scales of data, the number of groups in the sample, the assumptions in the tests and whether the samples are independent of each other or related to each other. With the knowledge gained in the Research in Health Sciences Module, I was able to advise my research students on the selection of data analysis methods to employ and how to apply them.

5.6 Reflection On My Student Supervisory Practices

"The role of the supervisor is to provide a high-quality research and learning environment for the graduate student. The supervisor, through mentoring and advising, develops a professional interpersonal relationship with a graduate student that is conducive to scholarly activities, intellectual enhancement and promotes the student's professional career."

James and Baldwin, 1999

Over the two years of my engagement on the PgDHE program, at postgraduate level, I supervised 1 Master of Science in Microbiology student in 2016 and I am currently the main supervisor of 2 PhD students in the area of Biochemistry and Microbiology and co-supervisor of 2 PhD students, 1 majoring in Pharmaceutical chemistry, and the other in Chemistry. At undergraduate level, I currently supervise 3 independent research projects at SoM and 2 final year research projects in the Department of Chemistry and Biochemistry at the Faculty of Science.

Reflecting on my practices, I now perceive my major supervisory roles to be a guide, mentor, critic and friend appointed to guide my research students and to provide them with appropriate support to carry out their research projects effectively, move through the system swiftly and graduate in record time. I believe that I should guide and direct the student in all project aspects, from proposal writing, project planning and execution, through to thesis writing and submission, to enhancing, monitoring and evaluating the student's learning experience. Guidance will entail ensuring that my students are competent in the use of facilities, equipment and resources needed for their research projects, advising on the necessary progress report submission and study completion dates at successive stages of the work so that the thesis may be submitted within the scheduled time, preparing students for their viva, and advising on any subsequent corrections they may have to undertake; participation in relevant development and training workshops, conferences and meetings, external engagement, networking, publish or disseminate research findings in appropriate ways.

Students' motivation vacillates with time as they experience research challenges and they may become demotivated and lag behind in their research progress. Considering my role in monitoring students' progress and timely completion of their research studies, as a supervisor, I should be aware of the institutional policies and procedures for monitoring student progress and of the indicative signs that students are falling behind such as constantly changing their work plans, avoiding communication with their supervisors and avoiding submitting work (Manathunga, 2002). Ahern and Manathunga (2004) suggest that helping the student to re-plan the research project as a series of small steps could be effective if procrastination arises from affective causes. In the social domain, if procrastination arises, the authors offer solutions of establishing research or reading groups or seminars as a way of incorporating their candidates

into a supportive research culture. If funds are available, I advocate for boosting students' morale by availing opportunities for them to attend seminars, conferences and symposia and present their research findings.

It is my role to request progress reports as appropriate, and give timely feedback with constructive criticism to ensure that the projects are on track. In the past, research degrees were seen as "doing" the project, following which the student "wrote it up". Recently, however, there has been a shift towards incorporating academic writing and feedback as an integral part of the research process from project commencement (Kylie and Taylor, 2015). Such a strategy encourages candidates to reflect upon what they have done to date; builds a foundation for the future; gives supervisors the chance to see what has been done and to advise on how to proceed; and develop skills in academic writing early in candidature. Feedback is necessary although this can be a cause for apprehension among candidates because criticism is often taken personally (Mcalpine *et al*., 2012). It is vital that supervisors think carefully about how and when they give feedback. Taylor and Beasley (2005) have suggested that this should involve ensuring that the setting is appropriate; setting out expectations; summarizing what the supervisor thinks the student has written to check understanding; praising the successful parts; identifying the less successful ones; inviting comment from candidates; summarizing the discussion; and maintaining a record. Candidates need to know when they can expect to receive feedback and the feedback should be timely for them to progress on their projects. In giving constructive criticism, issues in scientific writing including plagiarism, authorship and replication are important points to highlight.

Rather than guiding the students in the University regulations and guidelines governing research integrity, academic misconduct, and ethical standards, I felt it was the students' responsibility to read and adhere to the stated guidelines but with time, I realized my role in ensuring the student is aware of, knowledgeable and adheres to the guidelines.

Communication is key to a successful student-supervisor relationship. It is thus necessary that I maintain regular contact with my students, get to know them, carefully assess their needs and clarify student-supervisor role expectations. The student should however, take the initiative in

raising problems or difficulties and should take responsibility in maintaining regular contact, reporting regularly in adherence to agreed actions and deadlines and being honest when reporting on progress. Scheduling regular meetings and being accessible to the student when advice may be needed is very important in keeping communication channels open. I have found that engaging in training and other development events to help me undertake the role of the supervisor effectively has been quite beneficial. I expect my students to operate at a much more independent level, as projects progress for postgraduate students compared to undergraduates and taught Masters' students.

As a friend, I have found myself taking on the role of counsellor, taking an active interest in students' future careers, and advising them in circumstances when academic and personal challenges such as illness, marital problems, financial problems and career doubts arise. Having no training as a counselor, my help has often been in offering a listening ear, support and assistance in directing my students to appropriate help providers, rather than finding solutions to the challenges. I have played the role of inspiring and motivating my students to remain positive and focused under the circumstances. (James and Baldwin, 1999), offering considerable pastoral support to students who have difficulties that affect the progress of their research, which may relate to personal or medical problems, family matters, or employment and financial issues. I also advise students on the structures available in the University to support them should they encounter difficulties, thus it is my duty to be knowledgeable out the support structures available. I believe in giving students opportunities to contribute their own ideas and theories related to their research projects and allowing them to pursue these without going way off line. In this way, students feel comfortable and free to bring their ideas forward.

I've often needed to remind myself that rather than changing things on early writing drafts, I should give directions to my students to effect the changes themselves. Given the widely common poor English proficiency and writing skills I have encountered among my students, I plan to advise my students to take English courses where possible.

5.7 Summary

A strong institutional research culture should be incentivized if evidence-based academic and professional practices are to be implemented in the Namibian context and globally. Because successful research student supervision is dependent on a healthy, productive supervisor-supervisee relationship, it is imperative that supervisor and supervisee roles are explicitly set out and adhered to when research projects commence. Engagement with theories, policies, procedures and methods governing research practices is essential in informing principled practice.

CONCLUSION

Through my engagement on the PgDHE program, I became very much aware of the national and institutional context and the huge impact it has on how I conduct my academic practices. I recognised that facets of academic practice include teaching, research, scholarship and knowledge exchange, supervision, academic management and leadership, and academics are obliged to pursue excellence in these facets. Although I felt overwhelmed with the reading expectations in the beginning, through theoretical and conceptual engagement on the program, my confidence in teaching, research and community engagement has grown. My experience as a learner on the PgDHE program has availed an opportunity for me to interrogate my understanding of academic practice and enlightened me into new ways of thinking, arguing and writing, which are appropriate to the HE field. I believe that I have been encultured into the new discipline and have become a member of the HE discourse community and that it is now my duty to champion appropriate academic innovations that positively influence academic practices in my context. As documented in the various chapters of this portfolio, it is evident that with the continually changing context of HE, institutions and educators need to rethink their academic practices when it comes to T&L and research to keep in tune with the changes. The professional capabilities of academics are being consistently challenged and require continual development and enhancement.

The contact sessions allowed opportunities to engage in critical discussions with my peers and it was interesting to realize the varied pre-conceived peer ideas surrounding different topics and to appreciate the wealth of knowledge and experience in the cohort. Having had the opportunity to place myself in the shoes of the HE learner, my attitude towards my learners has definitely improved. Critically reflecting on barriers to my learning and practices that enhanced my learning and promoted a deep approach to learning, I used the experience to design appropriate strategies to enhance my students' learning.

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