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UNDERSTANDING THE EXPERIENCES OF STUDENTS WHO ENTER THE MBCHB PROGRAMME FROM EDUCATIONALLY DISADVANTAGED BACKGROUNDS AND EITHER SUCCEED OR FAIL IN PASSING THE FIRST SEMESTER

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

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ABSTRACT

This qualitative study was conducted during 2005 in the Faculty of Health Sciences at the University of Cape Town. Drawing on the theoretical framework of the New Literacy Studies and, in particular, Gee’s notion of Discourse acquisition, I sought to better understand the issues that impacted on success for students from educationally disadvantaged backgrounds who entered the MBChB programme.

Semi-structured interviews were conducted with eleven students to collect data regarding their primary home-school Discourses and their experiences with the secondary Discourses of the supported Problem Based Learning (PBL) curriculum of the first semester of the MBChB programme. Additional data included the analysis of written assessment responses and admissions test scores from the same students. The results of the analysis of the data from the group of five students who had succeeded in passing the first semester of the mainstream MBChB programme were compared with the results obtained from the group of six students who had failed and thus entered the academic support programme, i.e. the Intervention Programme.

Significant findings that emerged from the data analysis were related either to the PBL pedagogy or to the challenges experienced by students for whom English is an additional language.

Those students whose primary Discourses were similar to the secondary Discourses of the MBChB programme at UCT showed evidence of mastery by acquisition, whereas those students with markedly different primary Discourses required that the practices of the secondary Discourses be made explicit in order for learning to occur.

Recommendations are made for facilitation of the mastery of the MBChB secondary Discourses by educationally disadvantaged students.
CHAPTER 1: INTRODUCTION

1.1 Background

This study is set at the University of Cape Town (UCT), an English medium university in South Africa.

Many students have been poorly prepared for the academic challenges of university study as a result of the separate educational systems and differential resourcing for racial groups that existed under the apartheid government. Students who are second language speakers of English from schools disadvantaged in the apartheid era are often not equipped to cope with the academic literacy demands of the MBChB programme.

Since 1992, the Faculty of Health Sciences at UCT has implemented an alternative admissions policy for its MBChB programme. This policy aims to provide access to the programme for students from educationally disadvantaged backgrounds who might otherwise be denied this opportunity, and to increase diversity in the student body so that it is more representative of the South African population. Students accepted via alternative admissions criteria were placed directly into an extended, 7-year MBChB programme which was run concurrently with the mainstream 6-year MBChB programme. The extended academic development programme (ADP) comprised additional academic support in the form of tutorials to address the identified difficulties these students might experience with English, Basic Health Science and academic writing. Although successful in terms of student throughput, the pre-selection of students into the extended MBChB programme proved problematic for several reasons. Firstly, the selection of students relied heavily on scores obtained in the grade 12 (Matriculation/ matric) examinations. The reliability of these scores as predictors of success in tertiary education programmes had increasingly come into question (Sikakana, 2005). Secondly, it became evident that not all of the students assigned to the ADP required academic support, while conversely, some
students admitted to mainstream MBChB in fact did need additional academic support (Sikakana, 2005, Alexander, Badenhorst and Gibbs, 2005). Finally, there was a perception among many ADP students that they had been discriminated against on the basis of race, and they resented their placement in the programme.

UCT receives approximately two thousand applications for the two hundred places available in the first year of the MBChB programme. Matriculation scores are currently the primary criterion used to rank applicants. The highest possible score is forty-eight. This score is calculated by assigning marks for the symbols obtained for English, Afrikaans and the four best remaining subjects (some students even do seven or eight subjects). Eight marks are awarded for a subject A on higher grade, seven marks for a B, six marks for a C, and so on. As a result of the changes in the educational environment at school level, “grade creep” is occurring, i.e. many more students are now attaining high matric scores (forty seven or forty eight) than previously. Matric score alone is thus inadequate as a selection criterion and additional selection criteria have been investigated for use as comparable measures of academic potential.

One of the additional selection criteria for admission now being used at UCT is the score attained by prospective students in the Health Sciences Placement Test (HSPT). The HSPT evaluates students’ achievements in four areas: language (PTEEP), maths achievement (MACH), maths comprehension (MCOM) and scientific reasoning (SRT). The PTEEP tests verbal and reasoning skills on a reading, writing, thinking level. This gives an idea of inferencing capacity, discourse structure and relationships in texts (being able to identify the main/key idea and examples or sub-ideas). SRT tests whether the student can identify evidence for claims and assess whether evidence is valid or inadequate, and on what grounds (being able to critique). It also tests visual literacy (graphs, etc), logic and understanding of scientific concepts without using scientific language.
These tests, designed by the Alternative Admissions Research Project, were originally intended to test the potential of ‘black’ students from DET schools. These were students who, because of the unequal apartheid education system, were not scoring well enough in the matric examinations to be admitted to university. The HSPT score is out of a possible total of 40 points. The PTEEP, MACH, MCOM and SRT results reported are according to the decile into which each student’s raw score fell for that component of the HSPT. The first decile is the highest. Research is being conducted, by the departments administering the HSPT (Centre for Higher Education Development, Alternative Admissions Research Project) and the Quantitative Literacy tests (Maths department), to determine the usefulness of the Health Sciences Placement Test and Quantitative Literacy test scores as more reliable predictors of success in tertiary studies than matric scores.

In addition to the rating of their matric and HPST scores, applicants’ leadership qualities and commitment to community service are assessed by means of a Personal Report. Once students have been admitted to the first year of the MBChB programme, further testing takes place during the Orientation programme. The areas of testing include Quantitative Literacy and computer literacy skills. The purpose of these tests is to determine which students are required to attend skills-building workshops/tutorials during the first year of the MBChB programme.

The new MBChB curriculum, introduced in 2002, differs from the traditional curriculum in terms of teaching methodology. There were several reasons for the changes in curriculum. Educational reform of medical curricula had been occurring internationally both at the urging of National Professional Councils and in response to the World Health Organisation’s Alma Ata Declaration on Primary Health Care (1978). The reform process at UCT started with the definition of the type of medical graduate that the programme would aim to produce, i.e.
The curriculum for the MBChB aims to produce a competent, undifferentiated doctor with the attitudes, knowledge and skills to enter the health care field with confidence. This entails a balance between preventive, promotive, curative and rehabilitative health care, in a Primary Health Care setting. It promotes communication skills, teamwork, professional values and competent clinical practice, in the context of the Primary, Secondary and Tertiary Health Care systems. The educational approach equips students with critical thinking and lifelong learning skills (Faculty Handbook).

Introduction of the new Problem Based Learning medical curriculum necessitated the development of a revised academic support programme for under-prepared students, since the traditional ADP would not be compatible with the new pedagogy. To eliminate the stigma previously associated with pre-selection, alternative admission students now enter the mainstream and only those students who fail in the authentic teaching and learning environment of semester one of mainstream enter the new support programme, known as the Intervention Programme (IP) (Alexander, Badenhorst and Gibbs, 2005) (see Fig. 1).

Figure 1: Student flow from mainstream MBChB programme, through IP, and back into mainstream.
The Intervention Programme is designed to support educationally disadvantaged students entering the MBChB programme. For the purposes of this study, the type of school attended and whether English was studied as a first or additional language determined ‘educational disadvantage’. In South Africa, the public school system includes model-C and former DET schools. Former DET schools are generally under-resourced in terms of facilities and teachers. Under the apartheid education system, model-C schools were for ‘white’ students and were very privileged in terms of resources in comparison with the ‘black’ DET schools. Post-apartheid, the income provided by the government subsidy is supplemented at model-C schools by fees from the parents in order to improve the resources available. In order to better understand the teaching and learning environment experienced by the students at the different types of schools, qualitative data was collected during interviews.

1.2 Context for the study

The students who participated in this study were registered for the first year of the MBChB programme in the Faculty of Health Sciences at UCT, either in the mainstream or in the Intervention programme, both of which are semesterised. The mainstream programme is comprised of twelve semesters (over six years) and the IP is comprised of two semesters. The data was collected between October 2005 and March 2006.

The current admissions policy allows for the admission of approximately 30 of 200 students via alternative admissions criteria. All students enter the mainstream programme, the first year of which is divided into two semesters. Should students pass all first semester courses, they progress directly to second semester of mainstream. Should students fail any of the first semester courses, they are offered a place in IP. At the end of mainstream second semester, students who pass all courses progress to third semester of mainstream, while those who fail any second semester course may be offered a place in IP or be allowed to repeat second semester of mainstream the following year (depending
on their entry criteria and other factors). First semester of the mainstream MBChB programme has thus been designed as a diagnostic semester in order to identify those students needing academic support. As students’ performance in the first semester courses is what determines whether they continue in the mainstream MBChB programme or enter IP, the validity of the assessments is crucial. For the purposes of this study, investigating factors that influence academic performance, I am assuming that the assessment processes are valid.

The new MBChB curriculum has a learner/student-centred rather than a teacher-centred approach and is a supported Problem Based Learning (PBL) curriculum. Support activities include lectures, tutorials, practicals, dedicated-reading resource packs, critical reasoning activities and quantitative literacy exercises. PBL uses paper cases, which integrate material from several disciplines.

For each PBL case, students meet in groups of ten with a trained facilitator and follow a specific process over a number of sessions (see Appendix 1: STEPS IN THE PBL PROCESS):

- Step one/Clarify and Define involves the clarification of words, terms or phrases that group members are unfamiliar with, and is limited to simple definitions.
- Step two/Identify Key Issues involves deciding on the key issues/problems/questions triggered by the case.
- Step three/Elaboration of Prior Knowledge focuses on the putting forward of ideas, views and explanations for each of the key issues based on group members’ prior knowledge and “common sense”.
- By the end of the first session, students are required to have drawn up learning objectives.
- Students then have time to seek information from the support activities and the reading of textbooks, resource packs and other sources (e.g. internet) to share at the second and third sessions, to participate in the group activity of meeting the learning objectives.
The cases and support materials are compiled by a Design team, and reviewed annually. The Design team members also set and mark the assessments. During first semester, there are four written and one practical assessment. Students are provided with information on how to approach assessments and access past question papers. After each assessment, a marking guide is provided and students are able to consult subject experts regarding any queries they may have. Feedback is given to the class regarding common problems or misconceptions identified by the markers. All students who fail the first assessment are interviewed to ascertain what intervention is needed. Intervention may be in the form of additional assistance with adopting appropriate study methods and timetabling or referral to the Undergraduate office for support with financial, residential, family, social, language or learning difficulties. Appropriate support services that are available include the Language Development Unit, Writing Centre, Numeracy Centre, Impilo Students’ Society and mentors.

As a result of the altered selection process for entry into IP, academically under-prepared students entering first year MBChB are now faced with two major challenges. The first is to make the transition from secondary school to the medical academic Discourse without additional academic support, and the second is to achieve this by way of an unfamiliar pedagogy, i.e. PBL. I saw the supported PBL curriculum as constituting a particular secondary Discourse for students and wanted to understand whether the PBL process facilitated the acquisition of this Discourse for students from perceived educationally disadvantaged backgrounds.

In 2005, three years from the inception of the new model, it emerged that several students identified as “at risk” of entry to the IP on the basis of their matric scores passed first semester. Conversely, a number of students who would previously have entered the traditional mainstream curriculum failed the first semester and entered IP. The question that arises from these observations
is what aspects of the primary or secondary Discourses or student identities promote academic success in these previously educationally disadvantaged students?

In 2002 I worked as a tutor and PBL facilitator in the Department of Human Biology. I tutored in the Anatomy dissection practicals for the last second year class of the old curriculum, while facilitating a PBL group in the first year of the new curriculum. This was interesting as it provided the opportunity to compare and contrast the pedagogies of the two curricula. As a PBL facilitator, I was also able to observe first hand the experiences of the students in my group as they encountered the challenges related to the new teaching and learning activities. In 2003 I started courses offered by the Centre for Higher Education Development (CHED) in Higher Education Studies while facilitating third and fourth semester PBL groups and tutoring in the Anatomy dissection practicals. In 2004 I facilitated a fifth semester PBL group and became the Basic Health Sciences (BHS) Strand convener for the first year courses, joining the Design Teams for the first to fifth semesters. As a result of my reflection on the insight gained from the CHED modules, my interactions with colleagues and students in the MBChB programme, and my own challenges as a student, I wanted to better understand what promoted success, without additional intervention, for those students whose admissions criteria suggested that they would require academic support. I sought, in particular, to better understand the ways in which the new teaching and learning activities that fell within the teaching environment over which I had design control impacted on students' academic performance.

In order to gain understanding of the past Discourses of students and the transition process required to master the multiple Discourses of the MBChB programme, I chose primarily an interpretive, qualitative methodology. Acquiring the Discourses of the MBChB programme requires learning the cognitive and linguistic rules of the academic disciplines involved (Paxton, 2004) and the PBL pedagogy. In this study I thus sought to understand the factors promoting or
hindering acquisition of the Discourses. Issues explored as possibly influencing academic success included:

- difficulties with language and communication that students experienced as a result of English being an additional language (EAL) for those having been taught at school in Afrikaans, Xhosa, Zulu, Sotho, etc
- the teaching and learning style experienced at secondary school
- the opportunities to read and write (in their mother tongue, in vernacular English and in specific academic languages) before coming to university
- dealing successfully with social and affective challenges (see Appendix 2: Interview questions for students).

1.3 Objectives of the Study

There have been studies published which investigate student adjustment to university in various disciplines (Liebowitz 2001). In addition there have been studies, which focused specifically on the Sciences. Studies in tertiary science education and the language of science have been published (Clerk and Rutherford 2000, Adendorff and Parkinson 2001). Paxton conducted her in-depth qualitative study in the discipline of economics, examining the development of economic literacy amongst students and the way in which past Discourses influenced the students in the acquisition of the new academic Discourse of economics. Paxton aimed to discover how the students' past Discourses could be harnessed to allow students a smoother transition to tertiary studies and to impact on the way that economic literacy is taught at university (Paxton, 2004).

Paxton's study rested on the assumption that it is necessary to understand more about the linguistic and cultural resources that students bring with them to university if we aim to understand the difficulties that students encounter when they attempt to gain access to the new academic Discourses and to provide students from diverse/ educationally disadvantaged backgrounds with increased access to tertiary education (Paxton, 2004).
My motivation in doing this study was to understand the context from which students entered the MBChB programme and thus inform my own practice as a teacher so that I can facilitate the successful acquisition of the academic Discourses by the students. It is hoped that the study may also enable colleagues working in similar fields to better understand and address the needs of students from diverse backgrounds.

1.4 Research Question

The research question is:
What are the experiences and language and learning challenges of students who enter the MBChB programme from educationally disadvantaged backgrounds and either succeed or fail in passing the first semester?

This research question incorporates the following subsidiary questions:

- What are the issues in the teaching and learning environment of the first semester course that may impact on success (e.g. the Problem Based Learning format which draws on prior experience, scaffolding provided by support activities such as tutorials, lectures, guided readings and practicals)?
- What are the difficulties that students encounter in acquiring the new, MBChB academic Discourses?
- What are the personal, home background and schooling issues that may impact on success amongst this particular group of students, i.e. what past literacy and learning practices are students drawing on? (Paxton, 2004)
- How can the knowledge acquired during this study be used to enhance students' access to the MBChB Discourses?
1.5 Overview of Thesis

Chapter 1: Introduction

Chapter 2: Theoretical Framework
This chapter will describe the theories that guided my data collection and data analysis. The theories described include the New Literacy Studies theories and the socio-cultural theories of knowledge, in particular Gee's (1996) Discourse theory. I will also refer to both international and South African perspectives on student learning and identity and the challenges students experience related to the use of English as an additional language.

Chapter 3: Research Design and Methodology
This chapter will describe the methodology used in this study. Ethical approval for the study was obtained from the Research Ethics Committee of the Faculty of Health Sciences, UCT. Ref: 300/2005. Written consent was obtained from all students included in the study (see Appendix 3: Consent form). Anonymity has been ensured by means of the use of pseudonyms and confidentiality has been strictly upheld. The Methodology chosen is primarily qualitative. The main study included data from students who had successfully passed the first semester. This data included written assessment scripts, interview transcripts and quantitative information such as matriculation scores and Health Sciences Placement Test Scores. This triangulation of evidence was collected to strengthen the validity of conclusions drawn from the data. The comparative study included the same types of data from students who had failed the first semester and entered the academic support programme.

Chapter 4: Analysis of Qualitative data: Student Writing in Assessments and Interview Data
Interview data and students’ written responses to test (assessment) questions were analysed using the theoretical framework of grounded theory. The patterns
and trends that were identified during data analysis will be described. Qualitative
data from successful and unsuccessful students will be compared.

Chapter 5: Implications and Recommendations
Trends from the data analyses will be linked with the theoretical framework for
the study. Implications for teaching and learning within the programme and
recommendations for further research will be presented.

References

Appendices
Appendix 1: Steps in the PBL Process
Appendix 2: Interview Questions for Students
Appendix 3: Consent form
Appendix 4: Interview questions for staff
Appendix 5: Examples from Resource packs
Appendix 6: Data from Interviews with Hulisani and Dube
Appendix 7: Assessment 3 case
Appendix 8: Assessment 2 case
Appendix 9: Qualities of UCT Medical Graduates
CHAPTER 2: THEORETICAL FRAMEWORK

My research will seek to understand the experiences of students who enter the MBChB programme from educationally disadvantaged backgrounds and to understand the reasons for their success or failure. In particular, it will focus on how students adapt to the academic Discourses of medicine.

The supported PBL curriculum of the MBChB programme at UCT is an example of a secondary academic Discourse that the students in my study are expected to master. Actually, the MBChB programme comprises multiple Discourses, as it includes several academic disciplines and the PBL pedagogy.

In linguistics, discourse is any piece of text written or spoken that is longer than a sentence. Gee, however, broadens the notion of discourse. He describes Discourse as:

composed of ways of talking, listening, (often, too, reading and writing), acting, interacting, believing, valuing, and using tools and objects, in particular settings at specific times, so as to display and recognize a particular social identity (1996, 128).

Gee (1996) describes primary Discourses as the home Discourses, acquired early in life, which form the base from which later Discourses are acquired. Secondary Discourses are those that are acquired from social institutions outside of the home. Gough (2000) states that Gee’s (1996) distinction between primary and secondary Discourses applies in every culture and language. The academic Discourse is thus a secondary Discourse. It is important to be aware of and value the primary and other Discourses that students may bring with them when entering university, as Discourses are closely linked to social identities.

In acquiring the Discourses required for the MBChB programme, students are acquiring secondary Discourses (Gee, 1996). I shall describe the features of the
MBChB academic Discourse from various perspectives. I shall listen to what the students tell me about the Discourse and the challenges they experience as they attempt to master it. I shall draw on what I understand to be the Faculty version of the Discourse, as outlined in the MBChB Graduate Profile, and on my personal experiences as a lecturer, tutor and facilitator within the Discourse.

The purpose of this study is to better understand both the primary Discourses from which students come and the tacit and explicit features of the secondary Discourses that they enter, in order to facilitate mastery of the secondary Discourses.

There are two principles which explain how people gain entry to or mastery of secondary Discourses. These are the Acquisition Principle and the Learning Principle.

2.1 The Acquisition Principle

Gee contends that, for the most part, people master a Discourse through acquisition and not through learning. He concludes that

thus literacy (fluent control or mastery of a secondary Discourse) is a product of acquisition, not learning, that is, it requires exposure to models in natural, meaningful, and functional settings, and (overt) teaching is not liable to be very successful (1996, 144).

Gee describes teaching that leads to acquisition as

a master-apprentice relationship in a Discourse wherein the teacher scaffolds the students’ growing abilities to say, do, value, believe, and so forth, within that Discourse, through demonstrating her mastery and supporting theirs even when it barely exists (1996, 145).
2.2 The Learning Principle

Teaching that leads to learning, however,

uses explanations and analyses that break down material into its analytic
bits and juxtaposes diverse Discourses and their practices to each other.
Such teaching develops meta-knowledge (1996, 145).

In many educational environments, these are not discrete but represent parts of
a continuum whereby some teaching and learning activities integrate both types
of teaching. Elements of the pedagogy of the MBChB programme are close to
the acquisition end of the continuum, such as PBL, and others depend on the
learning principle, e.g. lectures and practicals. My study will explore students’
experiences of both types of curricular activities.

The challenge for non-mainstream students, which in South Africa are
predominantly ‘black’ students from working class backgrounds, and for their
teachers, according to Gee, is thus that one is not in a Discourse unless one has
mastered it and mastery comes about through acquisition, not learning. For many
students, the acquisition of the university-based secondary Discourse is
facilitated by the fact that their primary Discourses have adopted features of this
Discourse (which their parents have already mastered), and by the lesser conflict
they feel in acquiring and using this Discourse. For other students, however, the
acquisition process can be more challenging. Facilitating factors in their family
and school may be absent or their primary Discourses may conflict with the
secondary Discourse. It is likely that this is the case for many of the MBChB
students in this study who failed in the mainstream. These students may be
further disadvantaged by the fact that traditional classrooms are poor at
facilitating acquisition. According to Gee, teachers of secondary Discourses can
facilitate acquisition by making classrooms constitute active apprenticeships in
academic social practices. In theory, the PBL methodology used at UCT values
and draws on students’ primary Discourses by encouraging students to share
their prior knowledge regarding key issues. My study will explore whether this happens in practice. It will explore both the social contexts (primary Discourses) from which the students come as well as the social structures and practices of the new Discourse to which they are seeking to gain entry. I will seek to understand whether/how students' primary Discourses and the "classrooms" of the MBChB programme may assist them in acquiring the MBChB programme Discourses with the valuing of critical reasoning skills and self-directed, life-long learning.

Some research has already been done on aspects of the new supported PBL curriculum at UCT. Van Pletzen (2006) describes English as additional language (EAL) students' reading experiences in the first semester of the MBChB programme and the challenges encountered "such as the ... highly individual and potentially undermining processes of making sense of texts across unfamiliar disciplines and genres" (2006, p114). Psychosocial texts were reported by the students to be less accessible than anatomy texts largely because they "direct thought inwards (and) may frequently call into question individual readers' identities, experience of life in society, or even entire life-worlds" (2006, p121). Alexander, Badenhorst and Gibbs (2005) describe the skills development and learning activities that are available to students during the Intervention Programme, which have been designed to mediate access to texts. Students in IP are supported in the transition from simple to more complex tasks, based on the progression recommended by Cummins (1996). Cummins advocates the promotion of academic language acquisition by a progression of academic tasks from context-embedded, cognitively undemanding to context-embedded, cognitively demanding, and then to context-reduced, cognitively demanding. Setati (1998) and Kapp (2001) provide insight into the challenges experienced by EAL students at university as a result of "code-switching" practices at DET schools in South Africa.

Lave and Wenger (1991) argue that knowing includes the ability to participate centrally in a community of practice and that learning "is a matter of changing
patterns of participation" (1991, p49). Wenger (1998) describes the important role of imitation in the journey from novice to expert/master of a Secondary Discourse. This highlights, for me, the pivotal role of the PBL facilitator in promoting students’ participation in both the PBL and disciplinary Discourses of the MBChB programme. Process facilitators promote acquisition of the PBL Discourse and facilitators who are clinicians or either medical or social scientists promote acquisition of the disciplinary academic Discourses. Wenger also states that being a member of a community of practice changes one’s identity. As such, teachers are partners in the meaning-making process who can “open a window” into another way of being (1998, p10).

Northedge (2003) sees the goal of teaching as “enabling participation in knowing” rather than merely transmitting information. He describes the teacher’s role, as subject expert and “established and fluent member of the relevant academic community”, as enabling learning by lending the capacity to participate in meaning, designing well planned excursions into unfamiliar discursive terrain, and coaching students in speaking the academic discourse” (2003, 169-180).

Wells (1992) extends the notion by saying that the goal of learning is not just the development of the learner’s meaning potential, conceived as the construction of discipline based knowledge, but the development of the resources of action, speech and thinking that enable the learner to actively participate effectively and creatively in further practical, social and intellectual activity (1992, 48 as cited by Paxton, 2004).

As a result of such active participation, our view of ourselves, that is our identities, are changed.
Wells' notion of learning as enabling the learner to participate in social and intellectual activities and construct an altered view of themselves connects with McMillan's (2005) investigation of student identity as a conceptual tool for understanding teaching and learning. McMillan describes the tension which exists for undergraduate 'working class African students' at the University of the Western Cape between what constitutes knowledge at university (secondary Discourse) and what constitutes knowledge within their own communities (primary Discourses) with respect to acquisition and authority. McMillan's study suggests that working class students are not as well positioned to interpret the academic cultural context at the university as are students whose primary Discourses are congruent with the dominant social culture at the university. The working class students were, however, convinced of their potential to succeed if they were mentored into the culture of the university. My study will thus include students' experiences of mentoring and changing identity. Social identity is related to ethnicity, gender, class and specific relationships of power. Pertinent to this study, Thesen (1997) found that students described themselves in ways that were discrepant from the institutional categories used to identify and define students (race, gender, class, ethnicity, language). She called for a more nuanced understanding of identity and argues that

identity can be seen as the dynamic interaction between the fixed identity categories that are applied to social groupings (such as race, gender, ethnicity, language) and the way individuals think of themselves as they move through the different discourses in which these categories are salient (1997, p488).

Norton Peirce's (1995) notion of social identity is a poststructuralist one, i.e. seeing identity as subject to change, a site of struggle and not singular or static. Melanie Walker's (2006) work seems to complement Norton Peirce's (1995) theory of social identity, her key concept being that identity is not fixed, and
therefore can be worked with by mentoring to facilitate acquisition. Walker describes the experiences of learning of two young working class women entering university. She suggests that when students from culturally marginalised groups struggle to succeed they might misinterpret the problem to be within themselves rather than the result of a clash of Discourses. Such students then come to believe that they are less able to think intelligently and contribute something of value and may also lack the confidence to approach educators for assistance. These identified feelings and beliefs will be explored in the interviews with students in my study. Case and Marshall (2007) have also written about the change in identity that is required for successful Discourse acquisition. Thus theorists agree that the socially and culturally distinctive student identities that have been produced and enacted within primary Discourses are not fixed. Students build an academic discursive identity as they actively participate in the community of a secondary Discourse, for example the first year MBChB class at UCT. Brickhouse (2007, p15) writes that “learning happens as individuals become particular kinds of people” and is accompanied by a process of identity development. The use of authentic case scenarios in PBL should thus encourage students to engage with their identities as aspirant medical practitioners.

Bette Davidowitz and Birgit Schreiber (2007) highlight the aspects involved in adjustment to university and the value of assisting students in developing the necessary life skills required for successful adjustment.

Drawing on the above theoretical framework, I will seek through this study to better understand the teaching and learning environment experienced by the students at school, the challenges experienced by the students in the secondary Discourses of the MBChB curriculum and the ways in which mastery of the MBChB Discourses may be facilitated.
CHAPTER 3: RESEARCH METHODOLOGY

3.1 Central Research Question

My central research question is:

What are the experiences of students who enter the MBChB programme from educationally disadvantaged backgrounds and either succeed or fail in passing the first semester?

The following subsidiary questions will be addressed:

- What are the issues in the teaching and learning environment of the first semester course that may impact on success (e.g., the Problem Based Learning format which draws on prior experience, scaffolding provided by support activities such as tutorials, lectures, guided readings and practicals)?
- What are the difficulties that students encounter in acquiring the new, MBChB academic Discourses?
- What are the personal, home background and schooling issues (primary Discourses) that may impact on success amongst this particular group of students, i.e., what past literacy and learning practices are students drawing on? (Paxton. 2004)
- How can the knowledge acquired during this study be used to enhance students' access to the MBChB Discourses?

3.2 Research Paradigm

Kuhn described a paradigm as “the entire constellation of beliefs, values and techniques shared by members of a given scientific community” (1970, p10, as cited in Scott and Usher. 1996). As such, it follows that the researcher’s beliefs and values will influence the purpose, data gathering and analysis of the study.
Many studies in the basic health sciences are located within a positivist paradigm, which regards research as neutral and prizes objectivity. In the positivist paradigm, it is believed that there is only one reality and the knower/researcher and known/subject are seen as independent from one another. Generalizations from research studies conducted in the positivist paradigm and causal linkages are considered possible (Lincoln and Guba, 1985). As a result, the focus of research is on methods and outcomes rather than on the research process. The paradigm that focuses on the research process and on meaning is the naturalistic paradigm. An example of this type of research is the case study. The assumption in the naturalistic paradigm, in contrast to the positivist paradigm, is that reality is not single and objective, but is multiple, is constructed by individuals and is time- and context-bound (Lincoln and Guba, 1985). Generalization from research findings may not be as straightforward in this paradigm as it is with research conducted in the positivist paradigm. There are, however, advantages to adopting a naturalistic (e.g. case study) research strategy. Nunan (1992) describes the following five advantages:

- Firstly, the fact that the research is conducted in real life situations makes it easier for other practitioners to identify with the issues raised and determine whether the findings are applicable within their contexts.
- Secondly, several viewpoints (or multiple realities) are presented, thereby providing support for alternative interpretations.
- Thirdly, if the research is well conducted, it may provide a database for use by subsequent researchers, as is also the case for research in the positivist paradigm.
- Fourthly, such research provides insights (understanding of experiences and meaning making) that can be useful for staff development, evaluation of the teaching and learning environment and policy decision-making.
- Fifthly, data from research conducted in the naturalistic paradigm is presented in a format that is often more accessible to multiple audiences, which contributes to the democratization of knowledge and decision-making.
Flyvbjerg (2001) suggests that the wealth of detail from real-life situations that is provided by research conducted in the naturalistic paradigm is useful for other researchers because it both supports a nuanced view of reality and contributes to the researcher’s learning process in the development of the skills needed for sound research. It is the richness of detail described by the naturalistic/qualitative/interpretive researcher that allows other researchers to assess the validity of the reconstructions and judge whether the findings will fit other settings, thereby contributing to the transferability and generalizability of the research findings (Davis, 1995).

Davis (1995) indicates that procedures can be set in place to ensure the credibility, dependability and transferability of naturalistic research. Since such research typically involves a study of people, she suggests “prolonged engagement” and “persistent observation” (1995, p445) over a period of a year or more. Following these suggestions would allow the necessary time required to build trust, learn the culture of those being researched and identify possible misunderstanding on the part of any of the research participants. Davis describes the cyclical process, characteristic of interpretive studies that involves data collection, the analysis of data, a reflective process of hypothesis formation and testing, followed by subsequent, more focused data collection (Lincoln and Guba, 1985, cited in Davis, 1995). Through this process, a study protocol may require revision both in terms of the questions being asked and the theoretical perspectives applied to the study. This has indeed been the case in this study.

My prolonged engagement with students as a tutor, facilitator, lecturer, advisor and then researcher allowed me to realize that data from successful students would be insufficient on its own to understand the complexities of the hindrances to success experienced by those students who were not successful. As a result the main study was broadened to include a comparative study group of students who had not been successful in passing the first semester examinations and my research question, as stated in 3.1, developed from the initial question “What are
the factors promoting success for alternative admissions students in passing the first semester of the MBChB programme?"

A critical issue for this study was the choice of students against whom the main study group would be compared. The first group considered were those students admitted to mainstream MBChB on the standard admissions criteria and who were successful in semester one. Comparing the primary Discourses and experiences in meeting the challenges of the supported PBL MBChB curriculum of the two groups of successful students may have been helpful in identifying similarities that were associated with success. The second group considered was those students admitted via alternative admissions criteria and who were not successful in semester one. The latter group was chosen because it was thought that comparison against this group would be most illuminating with respect to those features that promoted success for educationally disadvantaged students.

My research question (3.1) indicates that I am also interested in improving educational practice. Merriam (1988) suggests that

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  case study is often the best methodology for addressing problems related to educational practice in which understanding is sought to improve practice and to gain an in depth understanding of the situation and its meaning for those involved (1988. xiii)
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Yin (1984) states that case studies are the strategy to adopt when asking “how” or “why” research questions. Consequently, I have chosen to use primarily an embedded multiple-case study design that follows a replication logic in a naturalistic (interpretive, qualitative) paradigm as my methodological approach when exploring the experiences of students who enter the teaching and learning environment of a first semester university course from educationally disadvantaged backgrounds.
3.3 Principles of research emerging from the naturalistic paradigm

The data from my study will be analysed by identifying and comparing trends that emerge from the successful and unsuccessful groups of students. Case study theorists Lincoln and Guba (1985) describe theory which “emerges from the data” as grounded theory. Davis (1995) states that interpretive qualitative (or naturalistic) research uses the “analytic inductive method”, identifying frequently occurring events based on the data. She encourages the use of detailed categorization of patterns and representative evidence of the patterns (e.g. quotes, documents) to establish credibility. I would describe my research as being based on grounded theory. In contrast is research design that has been guided by a preliminary theory that was constructed prior to data collection, as favoured by Yin (2003). As a dual teacher and researcher, I have immersed myself in the context in which students find themselves during the first semester of the MBChB programme at UCT. I plan to describe the experiences, as related to me by students, and gradually develop (grounded) theories to make sense of the data that I gather during the study. The theories that emerged will be discussed in Chapter 5 (Implications and Recommendations). This is congruent with an inductive approach as described by Davis (1995) and Lincoln and Guba (1985). Eisenhardt (1989) describes the process of building theory from case study research as occurring in a series of steps from specifying the research question to reaching closure. The process she describes as highly iterative and tightly linked to the data, resulting in a theory which is empirically valid.

As the researcher, I seek to gain as holistic an understanding as possible of the context of each of the students who participate in the study. The context of the teaching and learning environment of this study is described in Chapter 1. The home and school contexts of the students interviewed will be described in Chapter 4.
My role as researcher is both complicated and enhanced by my dual role as a teacher. Understanding the selection process, the design and implementation of the course content, the administration and assessment practices and the challenges encountered by members of the class who approach me for academic assistance over the course of the semester enhances my ability, as a researcher, to appreciate aspects of the academic context experienced by the students in my study. Theoretically, the possibility exists that students may be hesitant to express criticism of the teaching and learning activities or may say what they think I want to hear in the interviews because of who I am – a teacher and a middle-aged, white woman from a middle class background. Ivanic (1998, p24) refers to the importance of the “social relations, which are set up for us as a consequence of our social class, ethnicity, gender, physical build, abilities and disabilities”. As an interviewer, I have been explicit about my role being that of a Masters student, conducting research for a degree in Higher Education Studies, rather than a lecturer/assessor. I have taken care to reassure students that their participation or non-participation in the study will not affect their academic standing. I have ensured that confidentiality and anonymity are strictly maintained, e.g. by refering to the students only by pseudonyms. I recognize that the role of researcher includes gaining the trust of and building rapport with the subjects of a study (Lincoln and Guba 1985). My hope was that my interactions with the students over the course of the first semester had been such that they would trust me in the interview process.

Further methods that were employed to enhance validity (Kvale, 1996) included obtaining feedback from students and peer review by colleagues within the faculties of Health Sciences and Humanities at UCT and the faculty of Dentistry at the University of the Western Cape (UWC). Feedback from colleagues after presentations of my research and during individual interviews, both formal and informal, was incorporated into the research.
Yin states that "a finding can be said to be more accurate when based on several sources" (2003, cited in Crouch, 2006). In my study triangulation occurs in terms of data sources, perspectives on data and methods. I included in my study quantitative data, such as admission test scores, and qualitative data, both from interviews with students and from analysis of their written assessment scripts. I sought both student and staff perspectives on the interview data obtained.

3.4 The Research Process

3.4.1 Ethical Issues

The Research Ethics Committee of the Faculty of Health Sciences approved this study. This required the submission of a research proposal, which had been reviewed for scientific content by the Human Biology departmental research committee, as the students to be interviewed were registered in the Department of Human Biology. Pseudonyms were used and other measures were employed (as outlined in 3.4.2 and 3.4.3) to ensure that the rights of the students to anonymity and confidentiality were protected.

3.4.2 Main Study

Sample selection was purposive for the main case study in order to increase the range of data obtained. Thus, of the 26 students who entered semester one of the MBChB programme via alternative admissions criteria, I selected the six students who had obtained the highest marks at the end of the first semester Life Cycle course to be part of my main research case study. It was anticipated that these students would best exemplify the experiences of successful students.

An email was sent to each student, explaining the purpose of the study and asking the student to come for an interview. The students were in the second semester at this stage, and I was the deputy course convener. I interacted with the students regularly as a lecturer, a tutor during practical sessions and an advisor. Students were paid for their interview time. Five of the students responded to my request and came for an interview. A semi-structured interview
was conducted with each student. During the interview, the role of various potential issues associated with academic success was explored. The issues that were explored had been identified from the literature reviewed. These included students' secondary education personal background (family, coping skills, identity, adjustment to university) and the teaching and learning environment of the first year programme. The interviews were taped. I transcribed the taped interviews myself. The quotes used from the interview records reflect the grammar used by the students in order to illustrate their use of English. Interview questions for the semi-structured interviews are in Appendix 2.

3.4.3 Comparative Study

Analysis of data from the academically successful students showed that the majority came from families where one or both parents were university graduates with professional careers. The students indicated that they did not have any difficulty with the language of the prescribed course readings. Studying medicine was their own choice, rather than a parent's expectation. These students managed their time well, drew on many of the resources available at the university, were able to look for and recognize patterns in the academic reading materials and demonstrated understanding in their written assessments.

Because I felt I needed a richer, more nuanced understanding of the experiences of the first year students from educationally disadvantaged backgrounds, I decided to expand my research question and include data from academically unsuccessful students as a comparative study. I felt that this would give greater depth to the enquiry and indicate which issues influencing the success of students in the main study group were absent from the experiences of the unsuccessful students. The same questions were used during the semi-structured interviews with the unsuccessful students in the comparative study as had been used with the successful students in the main study. Interview questions for the semi-structured interviews are in Appendix 2.
Of the 26 students who entered semester one of the MBChB programme via alternative admissions criteria, I selected the seven students who had failed the first semester Life Cycle course for inclusion in the comparative study. These seven students were contacted by email, as for the main study group. One student responded and was interviewed in October, before the students left UCT for the year. In February, students were again sent emails inviting them to come for an interview. However, no students responded and most of the emails were returned undelivered. A second email was sent out, as it was thought that the power failures experienced at that time might be responsible for the non-delivery of the initial emails. The reason for choosing email as the route of inviting students was to avoid identifying students to others and to make it easy for them to decline the invitation, should they not feel comfortable about coming. When there was no response to the second set of emails, I reluctantly printed hard copies of the letters and asked one of the Intervention Programme lecturers to hand them to the students. After two weeks, I had still not had a response. Then one of the students who had received a letter requesting an interview came to see me to find out what sort of questions I was planning to ask. After seeing the questions, she said that she would be happy to be interviewed but, as the following week was assessment week, she would contact me later to set a date for the interview. I discussed the possible reasons for the lack of response with this student and with the IP staff. It was agreed that I would make a presentation to the class in the week following the assessments, explaining the purpose and methodology of the study. Six students then made appointments for interviews. Students were paid R40 for the hour spent being interviewed.

My perceptions of why this process was so difficult are as follows: these students were not accessing their emails or the web-based learning environment regularly due to their lack of familiarity with the technology. This was problematic for them as it meant that they also missed announcements and study material that was provided by lecturers. In addition, these students were reluctant to be singled out
from the group and questioned as they were sensitive about having to leave the mainstream class and being placed in the Intervention Programme (Chapter 4).

The possible bias that may have been introduced by the fact that these students were interviewed in their second year of study is that more time would have passed since their experiences of Life Cycle.

The following is a comparative table of student profiles. The table includes the students’ Matric scores (maximum = 48), Health Sciences Placement Test (HSPT) results (maximum = 40), deciles achieved for components of the HSPT, i.e. PTEEP, MACH, MCOM and SRT (1st decile = highest), Quantitative Literacy (QL) test results, Matric English symbol as 1st or 2nd language, Life Cycle (LC) final mark, Basic Health Sciences (BHS) practical mark, the type of school attended (Model C or ex-DET) and the occupation of the students’ parents (professional/P or non-professional/N-P).
<table>
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<tr>
<th>Unsuccessful Students</th>
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Two of the three staff members who had worked closely with the alternative admissions and ADP students were interviewed. The staff interviews were conducted during the time between the completion of the main study and the start of the new academic year, when I planned to complete the student interviews with the comparative study group. The third staff member was overseas over this period. I was interested in obtaining my colleagues’ interpretation of the issues influencing success and their feedback on the appropriateness of the student interview questions and on the data analysis already completed for the main study group. The questions asked in the staff interviews are in Appendix 4.

3.4.5 Written data used

Written data from the assessment papers of students within both groups was analysed with respect to vocabulary, grammar, cohesion and structure, as described by Fairclough (1992). This was an additional data source that was used to enhance the validity of the theories emerging from the interview data analysis, especially regarding the role of language issues in acquisition of the academic Discourse. I sought to determine whether students were struggling with English as an additional language or with the language of the specific disciplines assessed, via a more detailed discourse analysis.

3.4.6 Analysis of data

The interview data was analysed for the identification of patterns and trends, as per the theoretical framework of grounded theory (Lincoln and Guba, 1985). The trends identified from interview data from successful and unsuccessful students were compared. I followed the steps of analysis described by Kvale (1996, pp189-190), i.e. analysing students' descriptions of their experiences, students' discovery of new meanings in their experiences, interviewer interpretation of the meaning described by the interviewee and confirmation or disconfirmation of the interpretation “on-the-spot”, interpretation of the transcribed interview by the interviewer, structuring and clarifying the material, making it amenable to analysis. Kvale (1996) differentiates five main approaches to analysis of the
meanings of interviews. These approaches are "condensation, categorization, narrative structuring, interpretation, and ad hoc methods" (1996, p190).

Students written responses to assessment questions were analysed both from the perspective of a marker and for language usage.
CHAPTER 4: ANALYSIS OF QUALITATIVE DATA: STUDENT WRITING IN ASSESSMENTS AND INTERVIEW DATA

4.1 Interview Data

My aim in doing this study was to understand the context from which students entered the MBChB programme and thus inform my own practice as a teacher so that I can facilitate the successful acquisition of the academic Discourses by the students. The interviews were useful in gaining insights into the social and educational contexts from which the students came. The semi-structured interview format was also used to investigate the students’ experiences within the first semester of the academic Discourse of the MBChB programme. In order to enhance access for these students, I sought to understand the challenges experienced within the first semester teaching and learning environment, which might impact on success in acquiring the Discourse.

There were two main categories into which the trends that emerged from analysis of the student interview data could be grouped. These were PBL-related and language-related challenges. The issues contributing to each of these categories will be described below.

4.1.1 PBL-related data

On the issue of the PBL sessions, the interview data showed strong contrasts between the attitudes and responses of successful and unsuccessful students.

In chapter 1, the context of the new MBChB curriculum is described. Briefly, the new curriculum entails a student-centred rather than teacher-centred approach with a supported PBL pedagogy. Supportive activities include lectures, practicals and tutorials. For the PBL sessions, students meet in groups of ten, with a facilitator. At the first session, they draw up learning objectives based on a paper case. At subsequent PBL sessions, students share and discuss information
accumulated from their reading of the resource pack, textbooks, other sources (e.g. the Internet, subject experts) and the supportive activities (lectures, practical sessions and tutorials).

The PBL facilitators are trained in the philosophy (concept) and process of PBL learning and the specific approach to PBL used in the MBChB programme at UCT, i.e. Supported Problem Based Learning. The role of the facilitator, as outlined in the Facilitators’ Guide 2002, p5. is to “act as activator, challenger, role model, reflector, evaluator”. “to help students develop confidence in their own abilities” and “the process of Problem Based Learning”. The facilitator should “ensure that each student is contributing to the group process”. The aim is that “by the end of the first semester, students should feel confident with their roles in the PBL process”. The group agrees on ground rules to be adopted, including “say what is on your mind”, “it’s OK to disagree with other group members”, “there is no such thing as a stupid idea or question”, “it is important to express your thoughts”, “encourage other members to participate”, “fulfil your group responsibilities”. Lack of participation by a student is one of the common group problems that might be experienced. Facilitators are given guidance in handling tricky situations (critical incidents) and are encouraged to share their challenges and possible solutions at ongoing facilitator training sessions. It is also recommended that facilitators ask the members of their PBL group to protect the ground rules that the group has drawn up and to decide on suitable consequences when rules are broken. Perhaps one of the reasons that facilitators may still experience difficulty in implementing what seems to be an appropriate philosophy is that the PBL pedagogy contrasts quite radically with anything that ex-Department of Education and Training (DET) students have experienced at school.

Comparing the responses from successful and unsuccessful students to the interview questions related to PBL identified the following patterns and trends. Pseudonyms have been used for the attribution of quotes.
Successful students described a process of gradual adjustment to the demands of the Problem based learning curriculum of the Life Cycle course. Dube and Andile (pseudonyms) described their experiences of PBL as “at first very intimidating, but you became used to it and it became very enlightening”. Elias, another successful student, was at first “scared of questions, but saw that others would chip in and help with the answer”.

All six unsuccessful students, however, reported continuing to struggle with the practice of PBL throughout the semester: “I found myself being lost…” (Irusen); “basically I feel intimidated” (Hulisani).

The Discourse of the PBL sessions is the secondary Discourse of the MBChB curriculum at UCT, with students being expected to participate by listening, asking, challenging, questioning and sharing opinions and information (Appendix C, Supported Problem-based Learning Facilitators’ Guide, by EDU, 2005). Drawing on Gee’s Discourse theory, I would suggest that the relative ease with which successful students adjusted to PBL is that their primary Discourses may have been closer to the MBChB secondary Discourses than was the case for the unsuccessful students.

The following are the explanations given by students for their difficulty with PBL:

Understanding the practices
Several of the unsuccessful students stated that they didn’t understand the PBL “system”. Funeka said: “I failed because I didn’t clearly get to know what to do”. As an experienced PBL facilitator, drawing on the detailed descriptions students provided in the interviews of their responses to the PBL experience during Life Cycle, I concluded that, despite the preparation for PBL received during their orientation period, several unsuccessful students experienced difficulty and delay in developing the skills and attributes necessary for effective group interaction. The skills required for effective group interaction include fluency in English,
scribing, chairing, preparation by reading and synthesis of resource material and trust in the group contract. Hulisani expressed it thus: "I didn’t understand the PBL system. I didn’t know what was happening. what is it about": "I was not an active member. I got the feeling that maybe I am the stupid one because all the other members seemed to be understanding everything".

The quotes above concur with Walker’s (2006) description of the experience of working class students at university, with students from culturally marginalized groups misinterpreting the problem to be within themselves and believing that they are less able than others in the group to think intelligently and contribute something of value. Rao and Walton (cited in Walker 2006) suggest that decoding how higher education works and what is expected of them is “harder for working class students who lack the familial and schooling codes, which might assist successful transitions”.

Group work
Successful students found that although it required adjustment to work in a group, it was useful to see how others tackled questions.

The PBL experiences of successful students seem to support Gee’s acquisition principle (1996) – they master the Discourse by being exposed to models in functional settings without overt teaching. The role of the facilitator in PBL is that of a master demonstrating ability to an apprentice. Wenger’s research (1998) revealed the usefulness of peer learning as part of the apprentice model – older, more experienced peers teaching novice peers. As PBL groups are diverse in terms of age, gender, race. Matric scores and type of schooling of the members, these groups could provide a forum for peer learning.

Unsuccessful students were unable to acquire the PBL Discourse by the end of the first semester. The adjustment from working alone at school to working in a group during the first semester in PBL, lectures and study groups, was experienced as an insurmountable challenge. It would appear that the practices from the unsuccessful students’ primary Discourses were very different to those
required in the MBChB secondary Discourses, as illustrated by the quotes, which follow. "We are not used to sit with a group and come with your views and like the thing we do with PBL – so that was new" (Khosa). "I am not one of those guys that is doing group work" (Hulisani).

Pace
Unsuccessful students reported that they struggled to keep up with other members of their PBL group. In addition to not understanding the content knowledge (from readings and other supportive activities) that was discussed during the PBL sessions, several students stated that they needed a slower pace in order to participate in or gain from the PBL session. Jacob stated: "I never had the courage to say okay guys, you are going too fast or guys I don’t understand that". Similar experiences were reported by Irusen, Hulisani, Funeka and Khosa.

Pace in PBL sessions may have been a language issue. EAL students could not keep up with the pace of the discussion in English. Evidence from the written assessments of unsuccessful students supports the issue of pace being a stumbling block. For instance, some of the unsuccessful students left out questions or even whole sections of the assessment paper due to time constraints.

Preferred Teaching and Learning Activities (TLA)
The successful students enjoyed all teaching and learning activities. PBL sessions, tutorials, practicals and lectures, whereas the unsuccessful students wanted more lectures and also workshops on how to go about things. When asked in the interview what advice he would give to staff or other students, Funeka said: "... to really, really give them workshops on how to go about these things. Not necessarily to tell them like, if I give you this question, you should answer like this. But, like, you know, how to engage ... because I found myself being lost ... so it would be better if we are being advised how to go about it".
The preference of the unsuccessful students for lectures and workshops seems to indicate the need for teaching according to Gee's Learning principle (1996) – making the practices of the secondary Discourse explicit to those attempting to master it.

Reading

Students are expected to read and draw from several sources in order to meet the learning objectives. These sources include a selection of readings that have been included in the resource packs that students receive at the start of each PBL case, chapters in the prescribed textbooks and any references that students access on their own, e.g. books and journal articles from the library or internet searches. The readings in the resource packs are selected by the design team from several different genres, e.g. journal articles, a variety of textbooks and internet reference sites. The multiplicity of writing styles, social contexts and intended audiences of the resource materials further complicated the reading process for the students. Examples of readings, illustrating the type and range of language used, are to be found in Appendix 5.

The successful students described an active reading process – looking for keywords with the purpose of understanding the work and being able to answer their Learning Objectives. The successful students also referred to the glossaries provided in order to better understand the disciplinary language. According to Gee (1996), facilitation of a secondary Discourse is likely to occur when the individual's primary Discourse has already adopted features of the secondary Discourse. These successful students were doing what is expected within the secondary Discourse with respect to reading practices, which suggests to me that their primary Discourses were facilitating mastery of the secondary Discourse. In chapter 6 I will discuss the ways in which the successful students' primary Discourses of home and school facilitated access to the academic Discourse of the MBChB programme.
By contrast, the practices of the primary Discourses of the unsuccessful students with respect to accessing resource materials at school were markedly different to the practices expected of students in the secondary Discourse of the MBChB programme. The students who were unsuccessful said in their interviews that at school they had been given notes prepared by their teachers rather than having been required to read and summarise a variety of resources in order to make their own learning materials (notes). The unsuccessful students reported that they found the language of the readings difficult: “the way things were expressed as compared with the way I’ve been used to it’s a bit difficult for me” (Funeka) (cf. Language).

Van Pletzen (2006) reports that the students from the Intervention Programme (those who had failed the first semester of the MBChB programme) did not anticipate having to spend such a large proportion of their time reading. Neither did they realise the cognitive and emotional demands that reading would make of them. They experienced challenges such as

the unfamiliar and unspoken codes of new disciplines of study and
the highly individual and potentially undermining processes of making sense of texts across unfamiliar disciplines and genres

Accessing support
The successful students didn’t feel the need to make use of the student mentors allocated, but were proactive in making contact with students from higher years in the residences in which they were staying. They got advice from these students concerning previous papers and questions, important topics and the approach required. Successful students engaged in peer learning, as described by Wenger (1998). Busi reported “making use of” students from other years, in residence. Andile spoke of the helpfulness of using disciplinary language when talking about work with friends. Cele belonged to a study group “to help each
other out” in preparing for PBL. He also got advice from older students regarding “readings, important topics ... and approach”. Elias stated that he formed a study pair and that they “filled in each other’s gaps”. The study partner was from another PBL group and gave him an idea of the depth that that PBL group went into. Elias did find his mentor, a second year student, helpful: “... (he) told me things that were useful”. He also joined societies, e.g. the Impilo Students’ Society (ISS) where he was given past papers and helped with preparation for assessments.

The unsuccessful students knew about the societies and some of them were aware of the student mentorship programme but they did not make use of these resources. These students stated that they were reluctant to ask for help. Hulisani reported in his interview that he felt strongly that he wanted to make it on his own. He said: “I came with the attitude I am going to go through this alone – I’m going to be a doctor”. When asked whether staff could have been more helpful, he said: “...the staff are doing their best – they can’t know what I am struggling with in my room. I must ask. not even the staff. ask the students – I am stuck here. can you help me with this. that’s where like I lost it. I lost it”. Irusen said he did not approach other students, e.g. second years, in residence because of shyness and pride: “I never asked anyone cos I feel like if I ask they will like see me as this stupid person”. Another unsuccessful student, Khosa, was aware of voluntary third year tutors in her residence, but “didn’t make use of it that much”. Jacob explained in his interview that he “didn’t use any of those things. didn’t use other students last year – medics and IPs even though they were there or ISS” as he was “not used to going to ask for help”. After six months in IP, he stated: “now I am comfortable going to people – there are two or three that I feel comfortable with”.

Again, the reluctance described by the unsuccessful students to approach others for assistance is similar to that described by Walker (2006) in her study of working class students entering university. One of Walkers’ case study students
was in a position where teaching methods at her school had not prepared her well for the pedagogy and academic codes of higher education. Although she worked hard, her lack of confidence made her reluctant to approach her educators for assistance and thus her performance was mediocre. All of the unsuccessful students that I interviewed expressed feeling a lack of confidence in themselves during the first semester, which interfered with their ability to access the support that was available to students.

Time Management and Study Skills
The timetable for first semester includes Self-Directed Learning (SDL) time during the daily teaching and learning activity programme. Students are expected to use this time to read, make notes and prepare for reporting back on the learning objectives at PBL sessions. In addition, it is anticipated that students will need to spend at least two hours per day on reading and studying after timetabled hours.

The students from the successful group found that they had enough time to study and that they made use of the SDL time during the day to answer their Learning Objectives and prepare for PBL. Those in the unsuccessful group reported a lack of discipline in sticking to their study timetables and working consistently. The unsuccessful students said in interviews that other interests such as playing sport and watching TV easily distracted them. Some, e.g. Jacob, struggled to be self-motivated as they were used to there “always being someone telling you to work. now you have to fend for yourself which is difficult if you are not used to it”. Jacob further described his difficulties as follows: “what I found was a problem was time management – as a student you tend to lose that ability to control time, to prioritise, work consistently, stick to study timetable”.

With respect to study skills, mind mapping is a useful aid to learning. The usefulness of mind-mapping as a study tool is due to the structure that it
provides, assisting students to organise large amounts of knowledge in a hierarchy. Students who use mind-mapping as a study technique thus have an overview of how the content knowledge fits together and find it easier to recall information to use during assessments. Three of the five successful students reported using mind-mapping as a study aid during first semester, whereas none of the unsuccessful students did. A workshop on time management and study skills is provided to all students early in semester one. A senior staff member demonstrates the technique and usefulness of mind-mapping. It may be that the successful students made use of the learning opportunity whereas the unsuccessful students did not. Alternatively, the successful students may have been taught this skill at school. The unsuccessful students may have been to the workshop but been either unwilling or unable to change well-entrenched study habits, i.e. the rote-learning and drilling that provided success in Matric examinations. Such students may require further opportunities to practice mind mapping in small groups and with familiar material.

The different experiences of time management and study skills, e.g. mind mapping, as described by the two groups of students again reflect the tremendous challenges faced by the students from the unsuccessful group as they struggled with the contrasts between the practices in their schools and those in the university. The majority of the students in the unsuccessful group had completed their schooling in former DET schools. These schools were notorious for inefficiency and under-funding (Thesen and van Pletzen, 2006). The discontinuities between school and university discourse practices for students from such schools are illuminated by Kapp (2001). Practices at former DET schools include the limited use of English as the medium of instruction and the resultant reliance on code switching, the reliance of some students on external rather than internal motivation and discipline, derision for those who make mistakes and a lack of interdisciplinary work. This contrasts markedly with the PBL MBChB programme Discourse where students are expected to be self-
motivated and to actively participate in group work, with the premise that there is no such thing as a stupid question, and to utilise English exclusively.

Coping and Identity Change
In response to the question "what helped you to cope", successful students reported being able to deal with the stress and just get on with their studies. Their coping strategies included making a joke, believing in God, enjoying the small things and seeing things in perspective – finding a balance between work and sport/other activities. Students from the unsuccessful group, however, reported social/affective problems related to being away from home and feeling that they were not in control of the situation.

Funeka (an unsuccessful student) described her experience thus: "... you get new friends, get new people, experience varsity life and because you are far away from home and you are far away from your parents it’s like you find a new ID (identity)". This suggests that the social practices of the primary Discourses from which the students in the unsuccessful group come are disparate from those of the dominant secondary Discourse of the MBChB programme at UCT. The unsuccessful students seem to be manifesting signs of an identity crisis. Norton Peirce (1995), amongst other theorists, emphasises the centrality of the relationship between commitment to learning and the social identity constructed by the learner. Wells (1999), too, asserts the link between learning and identity by saying:

> It is not simply our view of the world that is constructed in the discourses in which we participate but our view of ourselves, our values and our very identities (1999: 120. cited in Paxton, 2004).

Research conducted by Scollon and Scollon (1981) and Heath (1983) confirmed that changes in a person’s Discourse patterns as they acquire a new form of
literacy involve a change in identity. The changed identity may conflict with the person's initial acculturation and socialization, resulting in affective challenges.

The process of identity change described by the students in the unsuccessful group from my study may thus be contributing to the delay they experienced in mastering the academic Discourse.

4.1.2 Language-related challenges
Language is a key ingredient in learning and conceptualisation. Several of the students interviewed expressed having struggled with language. On further questioning, the issue of language emerged as a complex interplay between the challenges faced by the students as speakers and writers of EAL in an English-medium university, and the challenges experienced in learning to understand and use appropriately the language of the disciplines of the first semester course, i.e. the Basic Health Sciences (BHS) and Psychosocial disciplines. Although there is a great deal of overlap between the difficulties related to using EAL and those related to mastering the disciplinary languages. I have chosen to describe and analyse the language-related interview data according to the following two categories:

1. EAL issues
2. The language of the disciplines (acquiring the Discourses).

EAL issues:
Unsuccessful students reported feeling “inferior and limited by having to speak in English” (Gawa). They explained that at school it was acceptable to switch from English to Zulu, Sotho or Xhosa when clarifying but that this was not so in PBL. The lack of code switching in PBL had a constraining effect on participation by EAL students. “English is our second language so we are not used to sit and speak with English. because our teachers, in our school the teachers are Sothos and Xhosa so they just speak their language. They just speak English when they
are teaching only. And if we don’t understand something, we just clarify it in our language” (Khosa). Hulisani described a similar experience at school and, as a result. “…English – it was one of those major problems for me’. Students reported lack of retention due to the foreignness of the language (English). Hulisani said: “… to express something it is not that easy. sometimes I would have like an idea, so are you going to be able to say it … I don’t know what it was happening. I understood the concepts but it was going out of my mind. it was an emotional experience for me”.

These students are describing the practice they are familiar with of code switching, which, according to Setati, is common in most South African classrooms (Setati 1998), but which lecturers do not practice at UCT. Code switching “is when an individual (more or less deliberately) alternates between two or more languages” (Baker, 1993 cited in Setati 1998). Code switching may be practised for a number of reasons, e.g. to facilitate understanding of new concepts, for affective reasons and to familiarize learners with the language of evaluation (Setati 1998). The quotes illustrate the struggles of EAL speaking students to cope with the increased demands of the MBChB programme for fluency in verbal and written English usage. They also reflect the challenges presented by the lack of code-switching practices by lecturers, PBL facilitators and peers at UCT.

The Language of the Academic Disciplines (acquiring the disciplinary Discourses):

The multiple Discourses of the MBChB programme formed one of the barriers to success for all students. Students reported finding the BHS Discourse easier than the Psychosocial Discourse because of having studied biology at school and because of the uniform language of the prescribed readings from the textbooks. All of the students interviewed reported that they found the Psychosocial Discourse challenging, as this was a new Discourse. The prescribed Psychosocial readings were wide-ranging in terms of language usage
and genres and included, for example, extracts from textbooks, journal articles, manuals for health professionals and policy documents intended for a variety of audiences (Van Pletzen, 2006).

The successful students stated that they acquired fluency by practising the use of the disciplinary languages when talking about work with friends.

Unsuccessful students are fairly familiar with the BHS Discourse because they have done biology at school. These students found it very difficult to express themselves in the Psychosocial Discourse, especially in assessments when asked to apply theories and link them to the case. Funeka stated: “The problem is (Psychosocial) theories – trying to explain … the problem is – I’ve looked at the readings. I failed because I didn’t clearly get to know what to do”. Gawa said: “I didn’t know what structure to use. especially for Psychosocial … it was Psychosocial that put me in IP”. These statements suggest that students recognise that the new Discourse is different from their primary Discourse and thus difficult to master.

Mastering the language of the academic disciplines was especially challenging for students from under-resourced school environments. The new Discourses would be particularly foreign for them because their teachers would not have been fluent in them either. Kapp (2001) described the prevalence of overcrowding, limited facilities, under-training of teachers, predominantly oral classroom culture and reliance on rote learning in the schooling environment from which the unsuccessful students in my study came.

What students are being taught is a highly limited discourse competence that may serve the instrumental purpose of passing the matriculation examination, but which has little transferable value, given that they are likely to forget the facts they learn (2001, p242).
One of the key ways of providing improved access for students from this type of background is to make the "ways of knowing" of the discipline explicit (Gee, 1996). This will be expanded in chapter 6.

4.1.3 Staff Interview Data

Both of the staff members interviewed stated that the factor which they consider to be most important for success in semester one of the MBChB programme is the students' locus of control, i.e. whether the locus of control is internal or external. The factor which they have found to be underdeveloped in those students who fail semester one and require the academic support of IP is the ability to be in control of their learning experience. The staff members confirmed the appropriateness of the categories of questions I had included for the student interviews regarding influences on success, i.e. school-related, personal/family-related, and university-related.

4.2 Written Assessments Data

There are three in-course written assessments during the Life Cycle first semester course. Prior to the first assessment, students attend a preparation workshop where the format and wording of questions are demonstrated and explained. The first assessment is nonetheless very much a formative experience for students. Thus, when analysing responses written by students from both the successful and the unsuccessful groups, examples were chosen from assessments two and three. This triangulation of evidence (qualitative interview data, quantitative data, and written assessment data) was performed in order to strengthen the validity of conclusions drawn from the data. Background data regarding home and school Discourses and the written responses of two students will be described and compared as examples of the differences between the successful and unsuccessful groups. The students to be compared are Hulisani (unsuccessful) and Dube (successful).
4.2.1 Background information/description of primary (home and school) Discourses

A summary of key issues related to Hulisani and Dube's primary Discourses follows. Interview data is reflected in more detail in Appendix 6.

Hulisani

Hulisani comes from Newcastle in Kwa Zulu Natal. His parents are non-professionals and he is the oldest child, the only son, with three younger sisters. Hulisani said that he always wanted to do medicine. He could never imagine himself doing anything else, for example, financial studies. "I was born with the passion to do medicine". His biology teacher was inspirational. The teacher used to work hard and come with different sources. "I was good in biology". Hulisani's family were "...so supportive, especially my mother she was so supportive". There are no health professionals in Hulisani's family, but his family were friends with one of the doctors in the community. He inspired Hulisani – he had fancy cars, his life seemed to be easy. He decided, "I want to do this".

Hulisani found the experience of struggling with PBL to be a very emotional one. He explained his experience as follows: "I don't know what was happening. I understood the concepts but it was going out of my mind. it was an emotional experience for me my first semester". He continued: "I think I was not used to like using English – in PBL you have to be clear, you have to understand what you are saying. at school it was English but it was not a big deal to include Zulu. My school it was black students so you could use Zulu, so you can't use Zulu in PBL. I didn't have friends that I could speak Zulu with but had to use English". What he described was a disparity between the practices regarding the use of English at his school and at UCT. This disparity was unexpected for him as "at school I was good in English I was doing English as my second language". After a semester in IP, he stated: "English it was one of those major problems for me. but now I am more confident". For ease of reference, Hulisani's quantitative data are included
here as follows: Matric score 41, HSPT total 29, QL score 51.7%. He attended a former DET school and obtained a B symbol for Matric English as a second language.

Hulisani reported on his success at school: “You could get 90% even if you don’t understand the work. the concept - if you memorise your work, questions would be like what is in the notes, then it was fine. but come to UCT!” He was “one of these guys that liked sitting alone, doing your work, but then I came to PBL – it was one of those experiences because I am not one of those guys that is doing group work”. He said: “I didn’t understand the PBL system, I didn’t know what was happening, what is it about. I was not an active member. I got the feeling that maybe I am the stupid one because all the other members seemed to be understanding everything. everything was just flowing.” Again, the student is providing a description of his primary Discourse and the effects of the conflict between primary and secondary Discourses.

Dube
Dube also attended a former DET school but was of the opinion that his way of studying while at school stood him in good stead at university. He was used to Self Directed Learning. He was self-motivated and made good use of his time during first semester. He described himself as “a social person within the team”. His quantitative data were as follows: Matric score 40, HSPT total was 31, QL score 67.5%. He obtained an A symbol for Matric English as a second language.

4.2.2 Examples of writing from the Assessments

Examples from the Psychosocial Section

Hulisani
The fact that Hulisani failed to respond appropriately to the questions in the psychosocial section of assessment three despite having attended the
assessment preparation workshop and being provided with marking guides and feedback for assessments one and two, indicates the extent of his language and Discourse difficulties. An example of Hulisani’s response to one of the psychosocial questions in assessment three is described and analysed below.

Question 4 from assessment three is worded as follows:

a) Identify four factors that could influence Naziem’s parenting.
2 marks

b) Using evidence from the case, describe the factor that has the major influence on Naziem’s parenting at this time.
4 marks (150 words)

The case for this assessment – with Naziem’s story – is found in Appendix 7.

The response required, as per the marking guide, is shown below. This material was drawn from the readings in the Resource pack that had been provided to all students.

a) Identify any 4 of the following factors (½ mark per factor):

Work (he is a Police Officer)
Psychological State/Health (PTSD)
Religion (Muslim)
Socio-Economic Status (SES)
Living on the Cape Flats (Gangsterism)

b) In order to be awarded full marks for the second part of the question, students were required to:
- decide which of the four factors identified in a) was having the major influence on Naziem’s parenting at that time (½ mark)
- use evidence from the case to describe the factor (3½ marks for the description)

Naziem's psychological state is the factor that is having the major influence on his parenting style (Students may state that he is suffering from a Post-Traumatic Stress Disorder (PTSD).

Although Naziem received trauma counseling and joined a support group for police officers, he has since had difficulty sleeping, has lost his appetite, and has been depressed.

Students could overlap this factor with the work factor, as it is his work environment that exposes him to stressful situations. However, students need to see that his present psychological state of health will probably affect the way he parents his children. He probably won't have the same parenting style.

“Parents who are in conflict or who have psychological problems themselves, are less able to be effective mothers or fathers to their child” Resource pack 2, page 49: (Golombok, 2000). The impact of a father’s work depends on how he feels about his work.

Students should discuss the different parenting styles that Naziem could be using at this time. He may become more authoritarian as he is concerned about the safety of his son. Naziem is concerned about his son being influenced and swayed by gang members. Naziem frequently talks to his son about the dangers of being involved in a gang. He hopes that him being a police officer will stop gang members approaching his son.

Note: Students who identify the work factor as the influencing factor should still be rewarded but cannot get full marks.

Hulisan only identified one factor for a), viz. SES. although the question clearly asks for four factors. He thus scored ½ mark out of a possible two marks. His response suggests that he experienced difficulty with task analysis.
Hulisani’s answer to b) is shown below. He was awarded two out of a possible four marks for this part of the question.

“The type of job they are engage in has a lot of stressors. it can result in them being authoritarian parents if they feel to bear with a stress appropriately”.

Problems with Hulisani’s answer (written response) include both breakdown in sentence construction/sense (language “breakdown”) and lack of coherence in the structure of the answer. Paxton (2004) rates coherence as a key discoursal feature of written academic discourse because “coherence is crucial to learning and making meaning in a new discourse”.

Hulisani appears to struggle with assessing the amount of depth required, as he has not elaborated enough to earn full marks for his answer. He used only 30 words when the suggested word count was 150 words. The short, cryptic nature of Hulisani’s response in (b) also indicates that he has difficulty expressing himself in English, and that he is unfamiliar with the Psychosocial Discourse. Grammatical errors such as “engage” instead of engaged, incorrect lexical choices such as “feel” instead of fail, “bear with” instead of deal with, using “they” instead of “he” and limited vocabulary are evidence of language problems related to EAL. Hulisani also demonstrates an inability to use the Discourse appropriately, by his failure to explain the “stressors” and to develop a logical argument regarding the link between experiencing stressors and becoming an authoritarian parent. Hulisani’s failure to structure a logical argument may be due to the “thirty marks for thirty facts” phenomenon referred to by Kapp (2001, p243) whereby at school students may be allowed to regurgitate facts in any order without showing organization or argument (i.e. providing coherence).

Dube
An example of Dube’s response to one of the psychosocial questions is described and analysed below
Question 4 from assessment two is worded as follows:

**Explain five key factors that have influenced Leah's attachment relationship with her mother. 10 marks (maximum 200 words)**

The case for this assessment – with Leah’s story – is found in Appendix 8.

The response required as per the marking guide is shown below. Once again, the material was drawn from the readings in the Resource pack.

One-half mark was awarded for identifying each of the five factors and 1½ marks for providing an explanation for the influence of the factor on Leah’s attachment relationship with her mother.

1. **The mother’s personality**
   Mothers who are sensitive and responsive interpret their babies’ behavioural cues correctly. They are able to discern which type of cry indicates hunger/tiredness and which indicates discomfort. Children who have mothers like this have a stronger attachment bond with their mothers. Mothers who are insensitive and unresponsive do not elicit strong and close bonds. A positive attachment bond depends on the ‘goodness of fit’ between the baby’s temperament and the parents’ personalities.

2. **The mother’s general attitude towards children**
   Mothers who are insensitive and unresponsive do not elicit strong and close bonds. They possess ambivalent feelings towards their children. Thus, their attitude towards their children could be a negative one thus influencing the way they respond and raise their children.

3. **The quality of the marital relationship**
   Parents provide a secure base for children. If the mother and father have a stable relationship, Leah will have positive attachment behaviour towards her mother. If the parents and Leah were in synchronisation with each other the chances that a healthy attachment took place could have increased.
(4) The attitude of her husband towards the child

Father-infant relationship tends to be less regular but it offers a great deal of valuable stimulation. Fathers do not focus on caring but tends to engage children in activities. These activities are exciting and challenging. Fears can be overcome. These activities also stimulate cognitive and motor activity. Leah does not get to spend a lot of time with her father. So she will not be frequently engaging in these activities. As Jacob does make time to spend with his family every Saturday night, he is showing commitment to his wife and children and displaying that he values the time they spend together. So he does to some extent have a positive attitude towards his children.

(5) The socio-economic situation

The family in the case is financially stable and leads a comfortable and luxurious life. No financial pressures are existent in the family which ultimately can cause a positive relationship between the mother and child to be formulated.

Dube responded as follows:

*Rebecca's Socio-economic status:* The fact that Rebecca is wealthy means that she can provide with Leah's demands, wants and needs. This might bring about a good relationship.

*Rebecca's work:* Being an accountant means that she doesn't get to spend as much time with Leah as she would if she were a full time mother. That's why Sharon was hired to look after Leah when Rebecca was at work. This might affect the type of attachment Leah has on her mother.

*Rebecca's attitude towards children:* Rebecca's attitude towards children will also affect the type of attachment she has with Leah. Rebecca loves her children or loves children in that she is considering becoming a full time mother to stay at home with her children.

*Leah's attitude towards her relationship with her Mom:* It might seem like the way girls play but the fact that Leah dresses up as Rebecca shows how much she loves her mother. This will affect the type of attachment between Rebecca and Leah in a good way.
’Goodness of fit’ between Leah’s attitude and Rebecca. Since Rebecca loves children and Leah loves her mother this will be a ‘good fit’, and result in a secure attachment.

Dube scored six and one-half out of a possible ten marks for the answer provided. His answer is well structured and clearly expressed despite minor grammatical errors, e.g. “provide with Leah’s demands”. Dube shows mastery of EAL including the ability to weigh up the possible positive and negative influences of the factors identified, using information from the case to support his argument. His writing shows coherence, in contrast to that of Hulisani. Dube is aware of the amount of detail needed in response to the action word (“explain”), and does not seem to have experienced the difficulties with task analysis that were evident in Hulisani’s response. He did, however, lose marks for leaving out the factors relating to the husband’s attitude to the child and the quality of the marital relationship.

Examples from the Human Biology Section of Assessments:

**Hulisani**

Question 12 from the Human Biology/ Basic Health Sciences (BHS) section of assessment three is worded as follows:

a) Describe the physiological stress response (general adaptation syndrome). 12 marks

b) Explain three (3) of the symptoms experienced by Naziem in terms of the general adaptation syndrome. 4.5 marks

The response required was drawn from the Resource pack:

a) Students were required to describe the sequence of steps in the general adaptation syndrome.
During the Alarm reaction:
The hypothalamus (1) activates the sympathetic division of the autonomic nervous system (SNS) (1). The SNS acts directly on smooth muscles and viscera (internal organs) (1). This results in bodily changes such as: >heart rate, >BP, dilated pupils (1). SNS also stimulates the adrenal medulla (1) to release the hormones epinephrine (adrenaline) and norepinephrine into the bloodstream (1). Epinephrine (adrenaline) and Norepinephrine have the same effect on the muscles and organs as the SNS does, and thus perpetuates the state of arousal (1).

During the Resistance reaction:
The hypothalamus activates the adrenal-cortical system by releasing CRH (1), which causes the anterior pituitary to secrete ACTH, the body’s major “stress hormone” (1). ACTH stimulates the adrenal cortex (1) to release cortisol (and other hormones) (1), which regulates blood glucose levels (and levels of certain minerals) (1).

b) Students were required to first identify and then explain three of the symptoms of the general adaptation syndrome that were experienced by Naziem (in the case).

Any three of the following would be acceptable:

Difficulty sleeping (1/2): due to dilatation of blood vessels to brain, increased blood to brain to increase alertness (1)

Has lost his appetite (1/2): as secretion of digestive enzymes is reduced and blood vessels to GIT constricted to decrease digestive activity (1)

Episodes of heart palpitations (1/2): the heart rate and strength of cardiac muscle contraction increase in order to circulate substances in the blood very quickly to areas where they are needed. (1)

Severe headaches (1/2): blood vessels supplying the brain dilate to route more blood to the organ (1)

Muscular tension (1/2): skeletal muscles are tensed for “fight or flight” (1).
Hulisani got only 1 mark out of a possible 16.5 marks. He responded to part a) of the question as follows:

- More glucose is released making sugar available to all body parts for energy generation.
- Pupils dilate
- Muscle tone increases
- Respiratory passages dilate, more O2 is inhaled for cellular respiration – generation of energy
- Digestion and absorption in the intestine & stomach is inhibited
- Heart rate increases
- Thus an increase in blood pressure
- Hairs stand erect
- More blood is made available to muscles

Hulisani did not attempt to answer part b) of the question.

It appears that he failed to pick up the ‘cues’ in the question and to recognize what was meant by the “stress response” or “general adaptation syndrome”. It would seem that Hulisani did not understand the task, as he described the bodily changes resulting from the stress response, rather than the stress response itself. This indicates that he has also not understood the disciplinary Discourse as expressed in the readings in the resource pack and reinforced during the physiology lecture. The lexical density of the academic language in the readings is, however, high (Ivanic, 1996). The finding that Hulisani struggles with both the psychosocial and the BHS Discourses in the Life Cycle reinforces the complexity of the interplay between EAL and Discoursal issues for such students.

Dube

Question 5 from the BHS section of assessment two is worded as follows:

Briefly describe the life cycle of Ascaris lumbricoides. (5 marks)
The expected response, as provided in the marking guide, was drawn directly from material on page 36 of the BHS resource pack, entitled: "Ascaris lumbricoides: Physiology and Structure".

Fertilised eggs become infectious after approximately two weeks in the soil. The ingested egg releases a larval worm that penetrates the duodenal wall, enters the bloodstream, is carried to the liver and the heart, and then enters the pulmonary circulation. The larvae break free in the alveoli of the lungs, where they grow and molt. In about three weeks, the larvae pass from the respiratory system to be coughed up, swallowed, and returned to the small intestine. As the male and female worms mature in the small intestine, fertilization of the female by the male initiates egg production, which may amount to 200 000 eggs per day for as long as a year. Eggs are found in the faeces 60 to 75 days after the initial infection.

Dube's written response was as seen below:

Ascaris lumbricoides eggs are passed with or as faeces. They are passed in a one-cell stage. Mitosis occurs until they reach a stage called advanced cleavage. During all this time they are in the external environment. They stay in the external environment for 10-14 days. Then they are ingested in an inactive state (embryonated). They pass through the digestive system until they get to the duodenum (small intestine), where they penetrate the duodenum wall. They then enter the blood circulation system, which carries them up to the liver. From the liver they enter the pulmonary circulation, which leads them to the lungs. Then they are coughed up and ingested again. Then they move through the digestive tract to the small intestine, where the larvae mature. Then they migrate to the large intestine where they reproduce. The worm is in the lumen for 60-75 days.

Dube scored 4 out of a possible 5 marks for his answer. Once again, he shows fluent use of the English language and a logical sequence (coherence) in his writing. He has understood the task and responded appropriately.
CHAPTER 5: IMPLICATIONS AND RECOMMENDATIONS

5.1 Introduction

My research aimed to understand the experiences of students from educationally disadvantaged backgrounds who entered the multidimensional secondary Discourses of the MBChB programme at UCT. Drawing on the theories of New Literacy Studies, I sought to answer the following questions:

• What do the successful students bring with them that assists them in acquiring the medical Discourse?

• How can the teaching and learning activities of the first semester course be redesigned to draw on students’ primary Discourse(s) and make explicit the academic Discourses and the ways in which knowledge is constructed therein?

During interviews, students described their challenges within the MBChB programme and allowed me to gain insights into the social contexts (primary Discourses) from which they came. Data gathered from the students’ written examination scripts provided examples of the types of language and literacy issues that impacted on the successful acquisition of the academic Discourses and confirmed many of the insights gained from the interviews in this regard. In addition, information was gathered from the UCT Health Sciences database regarding the students’ performances in the Matriculation examinations and in the Health Sciences Placement Tests.

I also studied the social structures and practices (tacit and explicit) of the academic Discourse to which students sought to gain entry. The following resources contributed to my understanding:

• the description of the qualities expected of UCT medical graduates from the supported PBL MBChb programme (see Appendix 9)

• my personal experiences as a lecturer, tutor and facilitator within the programme
the work of academic literacy theorists such as Cummins (1996) and, within the South African context, Kapp and Bangeni (2002), Paxton (2004) and Thesen and van Pletzen (2006). Van Pletzen, in particular, has conducted much of her research within the Health Sciences Faculty.

My purpose was thus to understand how to optimise the “classrooms” (teaching and learning activities, including PBL groups) of the MBChB programme to value students’ primary Discourses and facilitate mastery of the secondary Discourses with the emphasis on the development of critical reasoning skills and self-directed, life-long learning.

5.2 Summary of important findings (trends found)

The experiences of successful and unsuccessful students in the secondary Discourses of the MBChB programme seem to be related to the differences in their home-school primary Discourses. The successful students were mostly from model-C schools where the approach to learning may have facilitated their adjustment to the demands of the PBL curriculum. By contrast, the unsuccessful students were mostly from ex-DET schools where the approach to learning contrasts markedly with that of the PBL curriculum. These students were unable to meet the challenges of the MBChB secondary Discourses without the academic support provided by the IP.

Successful students seemed to master the secondary Discourse of PBL without overt teaching, while those in the unsuccessful group found it harder to decode how higher education works and what was expected of them and attributed their lack of academic success to themselves. The students in the unsuccessful group were from working class backgrounds and perceived themselves to be culturally marginalized at UCT. These students lost confidence in themselves. They came to believe that they were less able than others in their PBL groups to think intelligently and contribute something of value to the discussions. They also experienced reluctance to approach educators, peers and mentors for
assistance, feeling that they should be able to solve both affective and academic problems on their own. These findings are interesting because the PBL process values students from diverse backgrounds sharing their experiences (prior knowledge) and yet it clearly silenced those from disadvantaged socio-economic and educational backgrounds.

Those in the unsuccessful group reported time management issues such as a lack of discipline in sticking to their study timetables and working consistently. They were easily distracted by other interests such as sport and watching TV and struggled to be self-motivated. Students from the unsuccessful group also reported social problems related to being away from home and feeling that they were not in control of the situation. These students seemed to be manifesting signs of an identity crisis.

The preference of the unsuccessful students for lectures and workshops rather than PBL sessions seems to indicate the need for teaching according to the Learning Principle (Gee 1996), which makes the practices of the secondary Discourse explicit to those attempting to master it. As already noted, Gee states that “teaching that leads to learning uses explanations and analyses that break down material into its analytic bits and juxtaposes diverse Discourses and their practices to each other” (1996, p145).

The practices of the primary Discourses of the unsuccessful students with respect to accessing resource materials at school were markedly different to the practices expected of students in the secondary Discourse of the MBChB programme. At school, these students were given notes prepared by their teachers rather than reading, summarising and synthesising a variety of resources to make their own learning materials (notes). The unsuccessful students also found the language of the readings difficult. They had not anticipated spending such a large proportion of their time reading, and underestimated the cognitive and emotional demands that reading would make
of them. EAL students struggled to cope with the increased demands of the MBChB programme for fluency in verbal and written English usage. The Discourse of the MBChB programme forms one of the barriers to access for all students, but is particularly challenging for students from under-resourced environments.

Although this study focused on a small sample from one particular academic year, the findings do confirm that matriculation scores are poor indicators of students' potential for success within the first semester of the mainstream MBChB programme. The usefulness of scores from entrance tests such as the Health Sciences Placement Test has yet to be confirmed. It is therefore very important that all students enter the first semester of the mainstream MBChB programme in order to ascertain whether they are able to succeed within this teaching and learning environment. The crucial role of appropriate support structures is highlighted.

5.3 Theoretical Considerations

By contrasting the statements and written responses of successful and unsuccessful students, it would seem that the successful students have been able to master the MBChB Discourse by acquisition. The unsuccessful students recognise that the new Discourse is different but are unable to master it by acquisition. Wells (1999, p48, cited in Paxton, 2004) states that the goal of learning is to develop the "resources of action, speech and thinking" needed to enable more effective participation in a target discourse. Lave and Wenger (1991) argue that knowing includes the ability to participate centrally in a community of practice and that learning "is a matter of changing patterns of participation". Wenger 1998) describes the important role of imitation in the journey from novice to expert/ master of a secondary Discourse. This highlights, for me, the pivotal role that the PBL facilitator plays. This will be explored further under recommendations. Northedge (2003) sees the goal of teaching as "enabling participation in knowing" rather than merely transmitting information.
He describes the teacher’s role as subject expert and “established and fluent member of the relevant academic community”, as enabling learning by “lending the capacity to participate in meaning, designing well planned excursions into unfamiliar discursive terrain, and coaching students in speaking the academic discourse” (2003, pp169-180).

Norton Peirce (2000), Walker (2006) and Case and Marshall (2007) have described the change in identity that is required for successful Discourse acquisition. The distinctive student identities that have been produced and enacted within primary Discourses are not fixed. Students build an academic discursive identity as they actively participate in the community (e.g. the MBChB first year class).

Van Pletzen has made suggestions for finding ways of scaffolding the complex reading demands of the heavily text-based curriculum for EAL students and the importance of all students developing the confidence and finding the space in the curriculum to contribute their prior knowledge and their critical responses to the reading process.

Paxton, van Pletzen et al (2008, in press), members of the Language Development Group at CHED, UCT, explored the possibilities of building on students’ prior discourses as a way of enabling acquisition of new academic discourses. They discovered the following complexities arising when educators try to mediate novice academic readers’ and writers’ access to disciplinary discourses:

- lecturers’ conflicting understandings of the conventions of a discipline
- the confusing role that textbooks play in modeling disciplinary discourses
- the complex demands that hybrid discourses emerging from applied and interdisciplinary fields make on educators and students
• the extent to which learning to operate in a discourse is a gradual process of apprenticeship rather than a simple application of new knowledge and
• the ways in which writing in a new disciplinary discourse often robs students of their individual voices (Paxton, van Pletzen et al, 2008, in press).

5.4 Curriculum changes implemented in first semester

In the context of post-apartheid South Africa, students' socio-cultural, especially their schooling, histories have shaped the mediational means they have developed and the experiences, beliefs and values they draw on in order to build understanding in the tertiary academic Discourse. Teachers need to develop insights into the students' primary Discourses and how these relate to or conflict with the new Discourse.

Based on the theoretical framework and the key findings of my study, I suggest that the application of Gee's Learning Principle (1996) could be useful in assisting educationally disadvantaged students to master the new Discourse. The Learning Principle involves breaking down what is to be taught and learnt into bits that learners can talk about and explain, thus leading to analytic and reflective awareness. Teaching for learning should, however, be combined with improved opportunities for apprenticeships in academic social practices.

The insights gained during my study have been presented to and discussed with colleagues at several forums including the Faculty of Health Sciences Education Research Day, the Health Sciences Education Research Group and the Medical Education session of the Anatomical Society of Southern Africa. Encouraged by the interest and support received, I have been involved in designing and implementing several changes to the teaching and learning activities of the first semester. These curriculum changes aim to draw on students' primary
Discourse(s) and make explicit the academic Discourse and the ways in which knowledge is constructed therein.

5.4.1 Changes to reading demands: a textbook has been introduced as the primary source for the psychosocial readings. This replaces the multitude of readings from a broad range of sources and authors, written for a variety of audiences, which students had previously been expected to read, understand and synthesise. Critical reasoning exercises have been developed which use extracts from the Basic Health Sciences and Psychosocial textbooks to highlight the different demands/ “languages” of the disciplines. These exercises aim at building students’ metaknowledge of text structure and the Discourses of the different disciplines.

5.4.2 PBL facilitator training: ongoing training of facilitators has focused on issues related to student learning. Facilitators have been made aware of the value of modelling critical reasoning for students and trained to ask the kinds of questions that encourage students to increase their competency in higher-order cognition. Facilitators should now be better prepared to foster a master-apprentice relationship with the students in their group and thus “scaffold the students’ growing abilities to say, do, value, believe, and so forth, within that Discourse through demonstrating mastery and supporting theirs even when it barely exists” (Gee, 1996, p145). The value of the PBL steps has been emphasised, especially the activation of prior learning that validates students’ primary Discourses. The facilitators’ briefing notes have been improved in such a way as to clarify the triggers for the key learning issues in each case scenario. Evaluation interviews with individual PBL group members have been conducted earlier in the semester. This means that there is more time for changes to be implemented in response to insights gained.
5.4.3 Re-organisation of the cases: the sequencing and complexity of the medical knowledge required for each case has been re-organised so that basic, foundational concepts for the basic health sciences (e.g. cell structure and function and the basic tissues) are introduced in the first case and more complex concepts (e.g. the role of the endocrine and nervous systems) are introduced later in the semester. This revision of the curriculum was designed during the second semester of 2006 and implemented in the first semester of 2007. These changes were accepted by the design team as a result of the research conducted in 2005/2006 and endorsement from the external examiner, who is experienced in teaching students from disadvantaged educational backgrounds. Previously the content had been arranged around a psychosocial focus, starting with pregnancy and birth as the first stage in the Life Cycle. Starting from infancy and childhood has preserved the integrity of the psychosocial content.

5.4.4 Teaching staff: following an initial period when several changes were made in the team teaching the first year of the new curriculum, over the past four years a cohesive team of staff members has been developed. This development was facilitated by the Head of Department allowing staff to teach on courses and programmes that were congruent with their teaching philosophy and by the level of engagement by the course convener and design team members in the ongoing discussions aimed at optimising all aspects of the curriculum. Those involved in the first year teaching and learning activities have developed a common understanding of the PBL pedagogy through personal experience as PBL facilitators. They also display a commitment to constructive alignment of the teaching and learning activities with the assessments. Biggs' (1996) concept of constructive alignment highlights the importance of ensuring that there is congruence between the way in which knowledge is taught and the way in which it is examined in order to increase the validity of the assessment. For the purposes of this project, the assumption has been made that the assessments are appropriate and aligned with the teaching and learning activities of the course.
5.4.5 Introductory workshops re assessment practices: these workshops were introduced as part of the new curriculum. They have, however, been expanded and improved over the past two years in an attempt to address the issues and challenges of time management, study skills and assessment preparation which have emerged both through the interviews conducted for this study and through the interviews conducted by several colleagues with struggling students.

5.4.6 Individual interviews: each student who has failed a component of the first assessment is invited to an interview with a relevant member of the teaching team. These interviews were introduced into the mainstream in 2005, in consultation with colleagues from the Intervention Programme, in order to allow staff to offer personalised advice and support for students, early in the first semester, as soon as any were problems identified, either academic or affective. This support is in addition to the peer mentoring system that operates during the first year of the MBChB programme. The mentoring programme is discussed in the following section.

5.5 Further Recommendations/ Prospects for future research
The impact of the changes implemented in the teaching and learning activities, as described above, should be assessed. I would like to conduct a study in 2008, in collaboration with colleagues from Student Support and the Intervention Programme, that investigates the experiences of students with the revised reading and PBL formats. It might also be useful to use a set of markers of competency, against which progress (a change in competency) could be measured.

A longitudinal study tracking the progress of the students who entered the MBChB programme in 2005 via alternative admissions criteria should indicate whether the students who passed the first and second semesters remained
within the mainstream. Sikakana (2006) has been evaluating student progress in the MBChB Programme at the University of Cape Town.

Following evaluation of the mentoring programme at the end of the second semester of 2007, changes in the training and monitoring of peer mentors (second and third year students mentoring the first year students) have been planned. These changes will be implemented in 2008. The results of the 2007 evaluation supported the findings of my study, i.e. although students knew that there were mentors many did not make use of them for reasons such as embarrassment and feeling that they should be able to solve problems on their own. Davidowitz and Schreiber (2007) describe the multidimensional concept of adjustment to university as encompassing personal-emotional, social and academic adjustment and institutional attachment. It is important that the mentors are trained to assist students in developing life skills to cope with both the academic and affective challenges of university life.

The finding that the students admitted via alternative criteria were not a homogeneous group in terms of home and schooling background suggests that race is no longer a suitable proxy for educational disadvantage. Future research might explore the usefulness of using socio-economic status and a schools rating system to promote equity of access. This is a complex issue, but various suggestions have been made by colleagues, including basing the assessment of students' socio-economic status on their parental income. Gee (2005) describes six principles that can be used to decide whether or not students have had equitable opportunities to learn (or are educationally disadvantaged). These could be incorporated into a rating system for assessing the opportunities that students applying to university have had to learn to read and produce text in a context that will facilitate mastery of the academic Discourse. This would, however, require additional resources.
5.6 Personal reflection

It was a valuable experience for me, as a teacher, to gain insight into the primary Discourses of the students interviewed and to understand the challenges they face in acquiring the MBChB Discourses. I felt very privileged to have been allowed access to the students' worlds in this way.

My interviews with lecturers and designers of the curriculum have assisted me in understanding the pedagogy of the MBChB programme. The coursework and readings by CHED have assisted me in better understanding the broader political issues beyond the confines of this first year course.
REFERENCES:


Faculty Handbook: MBChB Curriculum. Faculty of Health Sciences, University of Cape Town


Appendix 1

Steps in the PBL Process

Summarised version of the steps in the (SPBL) process

1. Clarify
   Make sure that everyone understands the meaning of words, terms and phrases. This should be brief.

2. Identify
   Decide on and record the key issues arising from the specific case. Motivate why something should be regarded as key if there is no initial agreement.

3. Record Prior Learning; Interrogate and Analyse
   Put forward/table ideas, views, concepts acquired previously that you consider relevant to the key issues and concepts identified for this case. Examine and probe what has been put forward.

4. Describe connections and Prioritise
   Look for and describe connections between the different points. Suggest and explore explanations. Groups should consider possible causative, associative and hierarchical connections.
   Prioritise: decide what is most important to pursue, focusing on limitations that you have identified in your knowledge.

5. Receiving and Examining Faculty Learning Objectives
   Read the Faculty Learning Objectives and determine how the “triggers” of the case are linked to one or more of these learning objectives. Can you see a “pattern” of how issues/concepts are linked together?
6. **Evaluate**
   Group interaction, part played by participants; what promoted and what hindered learning.

**STEPS 1-6 MAKE UP SPBL SESSION 1**

7. **Go and Learn**
   Gather information and ideas from reliable sources to deal with the limitations. Use the full range of available resources. Organise responses to each LO, making summarised notes.

8. **Report-back (SPBL Session 2 or 2a and 2b)**
   Present what you have learnt. Identify your sources, explaining what you know and how it clarifies and/or corrects and/or builds on what you knew before. This should be new knowledge not a repetition of the prior learning elaborated in session 1. Thoroughly probe reports and examine differences, justifying conclusions. Apply the results of your study and discussion to the case.

**For each LO:**
- Evaluate the accuracy and relevance of new (and prior) knowledge.
- Identify further limitations in knowledge related to the case and emerging from the new knowledge.
- Refine LOs. This can mean revising original LOs and/or formulating new LOs.

**Report-back and evaluate (SPBL Session 3)**
- Same process as SPBL session 2.
- Evaluate Group interaction; part played by participants; what promoted and what hindered learning.
Appendix 2

Interview questions

School-related questions:
- approach to studying and learning
- role of formal, Teacher Centred, learning vs informal (Self-directed) learning
- "did you have to work hard at school?", "did you achieve the expected results?"
- "was your exam preparation at school different from that used at university?"

Individual questions:
- What difficulties have you experienced?
- How did you deal with them?
- What are your coping mechanisms?
- What would make/would have made a difference?

Med school/UCT questions:
- Motivation to study/ Reasons for career choice?: family profession, research questions (related to disease in family), mentor, fascination with the profession of medicine, want to be a doctor, help people, their community, see education as a means of empowerment and improvement of life situation, other.
- adjustment to UCT and Cape Town?
- approach to learning - different to school?
- study methods?
- support: groups? for studying, student organisations e.g. ISS, mentor
- coping mechanisms?: wrt the format of learning activities, e.g. PBL, lectures, prac, and tuts (which do you prefer and why); wrt learning styles (NB rote learning vs understanding); wrt the workload – time management; wrt the reading: volume (language, density - abstract/conceptual, psychosocial/Public Health vs BHS/Biochemistry, compared with school).
- assessments: how did you find them? (Some students work very hard without getting the expected results)
Appendix 3

Consent Form

I hereby agree to participate in the research being conducted by Geney Gunston of the Department of Human Biology, Faculty of Health Sciences, University of Cape Town. In particular, I agree to be interviewed and tape-recorded for the purposes of this research and to complete a questionnaire.

I understand that my name and identity will remain confidential, and that information gathered from me will be used as part of Geney Gunston's Masters Thesis research.

Signature .........................................

Name ..............................................

Date ...............................................
Appendix 4:

**Interview questions for staff**

1. What are the factors, which you consider/have found to be most important for success in semester 1 of MBChB?

2. What are the factors, which you have found to be missing/underdeveloped in those students who fail semester 1 and go to IP?

3. Are there/what factors in the following categories that you have found to influence success?
   a) School-related: e.g. study methods
   b) Individual qualities: e.g. coping mechanisms, reasons for choosing medicine, parents' occupation/educational qualifications

University: adjustment, local to CT, res or home/digs, use of support - groups for studying, student organizations, mentor, use of SDL time/time management, language – reading (volume, density) and writing (assessments)
Appendix 5

Examples from Resource packs

Psychosocial:

To study college students' beliefs in the myths of marriage, Jeffrey Larson (1988) conducted a marriage quiz to measure college students' information about marriage and compared their responses with what is known about marriage in the research literature. The college students responded incorrectly to almost half of the items. Male students responded less accurately than female students and students with a less romantic perception of marriage missed fewer items than more romantically inclined students.

Gender, Intimacy, and Family

Work in Marriage

The experiences and implications of marriage may differ for the wife and for the husband (Brown & Pearson, 1996; Thompson & Walker, 1989). This is especially true in the expression of intimacy and in family work.

Wives consistently disclose more to their partners than husbands do (Peplau & Gordon, 1985). And women tend to express more tenderness, fear, and sadness than their partners. A common complaint expressed by women in a marriage is that their husbands do not care about their emotional lives and do not express their own feelings and thoughts. Women often point out that they have to literally pull things out of their husbands and push them to open up. Men frequently respond either that they are open or that they do not understand what their wives want from them. It is not unusual for men to protest that no matter how much they talk it is not enough for their wives. Women also say they want more warmth as well as openness from their husbands. For example, women are more likely than men to give their partners a spontaneous kiss or hug when something positive happens. Overall, women are more expressive and affectionate than men in marriage, and this difference bolsters many women.

Not only are there gender differences in intimacy in marriage, but there are also strong gender differences in family work (Crosby & Baker, 1993). Wives typically do more of the family work than husbands. In one study, only 10 percent of husbands did as much family work as their wives (Berk, 1985). These "exceptional" men usually were in circumstances with many, usually young, children and a wife who worked full-time.

Besides doing more, what women do and how they experience family work are different from men's experiences. The family work most women do is unrelenting, repetitious, and routine, often involving cleaning, cooking, child care, shopping, laundry, and straightening up. The family work most men do is infrequent, irregular, and nonroutine, often involving household repairs, taking out the garbage, mowing the lawn, yard work, and gardening. Women often report having to do several tasks at once, which may explain why they find domestic work less relaxing and more stressful than men do (Shire, 1988).

Because family work is intertwined with love and embedded in family relations, it has complex and conflicting meanings. Most women experience family tasks as mindless but essential work done for the people they love. Most men usually enjoy tending to the needs of their loved ones and helping the family grow, even if they do not find the tasks enjoyable and fulfilling. Women experience both positive and negative family work conditions. They are unsupervised and rarely criticized, they plan and control their own work, and they have only their own standards to meet. However, women's family work is often boring, tiresome, menial, repetitive, isolating, unfinished, inexplicable, and unappreciated. Thus, it is not surprising that many women have mixed feelings about family work.

Parental Roles

For many adults, parental roles are well planned and coordinated with other roles in life and developed with the individual's economic situation in mind. For others, the discovery that they are about to become parents is a startling surprise. In either event, the prospective parents may have mixed emotions and romantic illusions about having a child. Parenting consists of a number of interpersonal skills and emotional demands, yet there is little in the way of formal education for this task (Brooks, 1996).

Most parents learn parenting practices from their own parents—some they accept, some they discard. Husbands and wives may bring different viewpoints of parenting practices to the marriage. Unfortunately, when methods of parents are passed on from one generation to the next, both desirable and undesirable practices are perpetuated.

The needs and expectations of parents have stimulated many myths about parenting (Olson & Rappaport, 1980):

- The birth of a child will save a failing marriage.
- As a possession or extension of the parents, the child will think, feel, and behave like the parents did in their childhood.
- Children will take care of parents in old age.
- Parents can expect respect and get obedience from their children.
• Having a child means that the parents will always have someone who loves them and is their best friend.
• Having a child gives the parents a “second chance” to achieve what they should have achieved.
• If parents learn the right techniques, they can mold their children into what they want.
• It’s the parents’ fault when children fail.
• Mothers are naturally better parents than fathers.
• Parenting is an instinct and requires no training.

In earlier times, women considered being a mother a full-time occupation. Currently, there is a tendency to have fewer children and, as birth control has become common practice, many individuals choose when they will have children and how many children they will raise. The number of one-child families is increasing, for example. Giving birth to fewer children and reduced demand for child care free a significant portion of a woman’s life span for other endeavors. Three accompanying changes are that (1) as a result of the increase in working women, there is less maternal investment in the child’s development, (2) men are apt to invest a greater amount of time in fathering, and (3) parental care in the home is often supplemented by institutional care (day care, for example).

As more women show an increased interest in developing a career, they are not only marrying later, but also having children later. What are some of the advantages of having children early or late? Some of the advantages of having children early are these: The parents are likely to have more physical energy (for example, they can cope better with such matters as getting up in the middle of the night with infants and waiting up until adolescents come home at night); the mother is likely to have fewer medical problems with pregnancy and childbirth; and the parents may be less likely to build up expectations for their children, as do many couples who have waited many years to have children. By contrast, there are also advantages to having children late: The parents will have had more time to consider their goals in life, such as what they want from their family and career roles; the parents will be more mature and will be able to benefit from their life experiences to engage in more competent parenting; and the parents will be better established in their careers and have more income for child-rearing expenses.

The Mother’s Role
What do you think of when you hear the word motherhood? If you are like most people, you associate motherhood with a number of positive images, such as warmth, selflessness, duffulness, and tolerance (Rollins, 1996). And while most women expect that motherhood will be happy and fulfilling, the reality is that motherhood has been accorded relatively low prestige in our society (Hoffnung, 1984). When stacked up against money, power, and achievement, motherhood unfortunately does not fare too well, and mothers rarely receive the appreciation they warrant. When children don’t succeed or they develop problems, our society has had a tendency to attribute the lack of success or the development of problems to a single source—mothers. One of psychology’s most important lessons is that behavior is multiply determined. So it is with children’s development—when development goes awry, mothers are not the single cause of the problems, even though our society stereotypes them in this way.

The role of the mother brings with it benefits as well as limitations. Although motherhood is not enough to fill most women’s entire lives, for most mothers it is one of the most meaningful experiences in their lives (Hoffnung, 1984).

The Father’s Role
The father’s role has undergone major changes (Lamb, 1986; Parke, 1995). During the colonial period of America, fathers were primarily responsible for moral teaching, fathers provided guidance and values, especially through religion. With the Industrial Revolution, the father’s role changed: he gained the responsibility as the breadwinner, a role that continued through the Great Depression. By the end of World War II, another role for fathers emerged, that of gender role model. Although being breadwinner and moral guardian continued to be important father roles, attention shifted to the father’s role as a male, especially for sons. Then, in the 1970s, the current interest in the father as an active, nurturant, caregiving parent emerged. Rather than being responsible only for discipline and control of older children and for providing the family’s economic base, the father now is being evaluated in terms of his active, nurturant involvement with his children (Uplegger, McHale, & Crouter, 1996).

Children’s social development can significantly benefit from interaction with a caring, accessible, and dependable father who fosters a sense of trust and confidence (Smith & Morgan, 1994). The father’s positive family involvement assumes special importance in developing children’s social competence, because he is often the only male the child encounters on a regular day-to-day basis.

Father-mother cooperation and mutual respect help the child develop positive attitudes toward both males and females (Biller, 1993). It is much easier for working parents to cope with changing family circumstances and day-care issues when the father and mother equitably share child-rearing responsibilities. Mothers feel less stress and more positive attitudes toward their husbands when they are supportive partners.

At this point, we have discussed a number of ideas about attraction and close relationships, and about marriage and the family in early childhood. A summary of these ideas is presented in Concept table 15.1. Next, we consider the diversity of lifestyles in adulthood.
The Diversity of Adult Lifestyles

Today's adult lifestyles are diverse. We have single-career families; dual-career families; single-parent families, including mother custody, father custody, and joint custody; the remarried or stepfamily; the kin family (made up of bilateral or intergenerationally linked members); and even the experimental family (individuals in multigenerational households—communes—or cohabiting adults). And, of course, there are many single adults.

Single Adults

There is no rehearsal. One day you don't live alone; the next day you do. College ends. Your wife walks out. Your husband dies. Suddenly, you live in this increasingly modern condition, living alone. Maybe you like it; maybe you don't. Maybe you thrive on the solitude, maybe you ache as if in exile. Either way, chances are you are only half prepared: if at all, to be sole proprietor of your bed, your toaster, and your time. Most of us were raised in the din and clutter of family life; jockeying for space in the bathroom in the morning, fighting over the last piece of cake, and obliged to compromise on the simplest of choices—the volume of the stereo, the channel on the TV, for example. Few of us grew up thinking that home would be a way station on our life course.

There has been a dramatic increase in the number of single adults. In 1994, more than 44 million adult Americans (23 percent of all adults) who never had been married lived alone—more than twice the number than in 1970 (16 percent of all adults). A history of myths and stereotypes is associated with being single, ranging from "the swinging single" to "the desperately lonely, suicidal
Chapter overview

Microorganisms are classified in groups, the most important of which are the genus and species. Membership of a common group (e.g. genus) implies a certain level of relatedness, or common features. The structural, metabolic, genetic and immunological features of organisms in each successive group are increasingly complex. This chapter also deals with the ecology of microorganisms, where disease-causing species are found and their interactions with the environment.

1.1 Naming microorganisms

All living things have two names, their generic name, e.g. *Staphylococcus*, and their specific or species name, e.g. *aureus*. Either name may contain clues about the organism, the diseases it causes or even its discoverer. Names are usually derived from Latin or Greek and are either *italicised* or in *italics*. Only the genus is capitalised, and its first letter may be used in an abbreviated version. In addition, a third name may be added to distinguish varieties and a common name derived from historical use may occur. The latter is often seen with medically important microorganisms, e.g. *pneumococcus* for *Streptococcus pneumoniae*. So one microorganism may be referred to in several ways:

- *Staphylococcus aureus* (proper name)
- *S. aureus* (proper abbreviated version)
- *Stap. aureus* (colloquial)
- *staphylococci* (group name)
- *Staphylococcus* sp.

1.2 Major categories of microorganisms

Micro- or microscopic - organisms are usually divided into five groups. The parasitic helminths are by no means microscopic but are included because of their ability to infect and cause disease. Viruses are included for the same reason, although they are not ‘living’, i.e. capable of independent replication. For all practical purposes they behave as living organisms.

- bacteria
- fungi
- helminths
- protists
- viruses

Bacteria

Bacteria are single cell organisms (prokaryotes) with both DNA and RNA, but no defined nucleus. They usually have a cell wall and may possess other features such as pili, fimbriae and flagella. They do not have mitochondria or other organelles enclosed in a membrane.

Bacteria can be divided into groups based on the staining characteristics in laboratory identification tests and on their shape. Modern techniques use biochemical and genetic characteristics to extend this classification.

Staining reactions

The Gram stain is the most important staining procedure in medical bacteriology and many species can be clearly defined as Gram-positive, e.g. *streptococci*, or Gram-negative, e.g. *Neisseria* sp. Some organisms stain poorly with Gram stain but can be stained with other stains so fast that they resist decolorization with strong acid: the acid-fast bacteria.

Shape

Three fundamental shapes are seen: spherical (coccus), straight rod (bacillus), and curved or spiral rods (Fig. 1). The last group include comma-shaped rods (vibrio) and spirals (spirochaetes, *spirochaetum* and *treponema*). Within these groups, there is great diversity, e.g. *coci* may be arranged in bunches like grapes (*Staphylococcus*), in chains (*Streptococcus*), in pairs (*Pseudomonas*), etc.

Medically important bacteria can be classified as:

- cocci
  - Gram-positive, e.g. *staphylococci*, *streptococci*
  - Gram-negative, e.g. *Neisseria* spp.
- bacilli
  - Gram-positive, e.g. *clostridia*, *Bacillus* spp., *actinomyces*
  - Gram-negative, e.g. *Escherichia coli*, *Pseudomonas* spp., *Haemophilus* spp.
  - acid-fast, e.g. *mycobacteria*
- spiral or curved rods
  - Gram-negative, e.g. *vibrios*
  - poorly Gram-negative, e.g. *spirochaetes*
Modern classification methods

Biodiversity. Nutritional requirements can be identified in the laboratory as they require oxygen, temperature, and pH. These can often be used as a disease indicator.

Immunological. The antigens present on the surface of pathogens can help identify them and thus be used to distinguish closely related organisms.

Genetic. Modern analysis methods can identify pathogens by their nucleic acid content.

Viruses

These are very small organisms that contain DNA or RNA. They can only grow and propagate inside a living cell. Usually viruses are named according to the disease for which they are responsible and a system of nomenclature does not exist. Within the two main classes of DNA and RNA viruses several groups can be recognized:

- Single-stranded DNA viruses, e.g., poxviruses
- Double-stranded DNA viruses, e.g., adenoviruses, herpesviruses, papovaviruses, pox viruses
- Single-stranded RNA viruses, e.g., bunyaviruses, coronaviruses, orthomyxoviruses, paramyxoviruses, picornaviruses, retroviruses, rhabdoviruses
- Double-stranded RNA viruses, e.g., reoviruses
- Segment RNA viruses, e.g., arenaviruses

Fungi

Fungi possess DNA and RNA, a defined nucleus and have a cell wall. Fungi have a beneficial name; however, because all fungi can reproduce asexually (anamorphic state), and most reproduce sexually as well (teleomorphic state), some fungi were given different names for each state. Clinicians generally use the term of the anamorphic (bacterial) state. There are two major morphological forms:

- yeasts: small, round, unicellular, e.g., Candida spp.
- moulds: grow as filaments (hyphae) that intertwine to form a tangled mass (mycelium), e.g., Mucor spp., Trichophyton sp.

Dimorphic fungi exist in both forms, usually the yeast form in the body and the filamentous form in the environment, e.g., Histoplasma sp.

An alternative classification system is based on clinical syndromes:

- superficial mycoses, e.g., dermatophytes (Trichophyton sp.)
- subcutaneous mycoses, e.g., Sporothrix sp.
- systemic/mycotic, e.g., Histoplasma sp.

Parasites

The term parasite implies adaptation to life on or in the bodies of higher organisms and can include protozoa, complex unicellular organisms with a defined nucleus and other organelles; helminths (worms), multicellular organisms. Members of both groups have complex life cycles.

Prokaryotic parasites include:

- apicomplexa, e.g., Plasmodium spp., Toxoplasma gondii, Cryptosporidium sp.
- rickettsia, e.g., Coxiella burnetii, Rickettsia sp., Coxiella burnetii, Rickettsia sp.
- flagellates:
  - intestinal, e.g., Trichomonas sp., Giardia lamblia
  - blood, e.g., Leishmania sp., Trypanosoma sp.
- ciliates, e.g., Plasmodium vivax

The parasitic helminths (worms) include:

- nematodes (roundworms), e.g., Trichinella sp., Ascaris sp.
- trematodes (flukes), e.g., Fasciola hepatica
- blood, e.g., Schistosoma sp.

1.3 Morphology and physiology of microorganisms

Bacteria

Cell wall

All bacteria, apart from mycoplasmas, possess a cell wall. The cell wall contains characteristic large molecules (antigens) that are important in virulence, as toxins and in host antibody production. There are three main types of cell wall structures, which can be distinguished by their staining ability.

The Gram-positive cell wall contains a thick layer of peptidoglycan, a saccharide-like polymer of N-acetyl muramic acid and N-acetyl glucosamine (Fig. 2). This
Appendix 6

Data from Interviews with Hulisani and Dube (pseudonyms)

Hulisani:
From Newcastle (KZN), did well at school.
Way that he studied? Grades 10-12 - approached his studies more seriously: “I would use textbooks, my teachers’ notes, go and ask questions, individual study”.
Biology: “teacher would write notes that were a combined summary of several different textbooks, I used 1 textbook, you could get 90% even if you don’t understand the work, the concept – if you memorise your work, questions would be like what is in the notes, then it was fine, but come to UCT!”
Physical science: “our teacher used to give us many classworks and homework so we get like more practice, of course I was using textbook there and he would give exam from previous years, geared to preparing for exams, everything is just for the exam, to get you’re a, did you have to work hard – for me to get an A symbol I was supposed to work a little bit hard but to pass – cruising”.

Family: oldest, only son, 3 younger sisters.

How did you come to decide to do medicine? “Always wanted to” – could never imagine himself doing anything else e.g. “financial”. “I was good in biology”. His biology teacher was inspirational – “the way he used to work hard, come with different sources”. “If not medicine, then pharmacy. My family was so supportive”, especially his mother she was “not highly educated, but so supportive”. There was a doctor in the community – “I got inspired. fancv cars. his life seems to be easv. I thought - I want to do this. I was born with the passion to do medicine”.

Health professionals in the familiy? No. but he talked to a familiy friend who was a doctor: “I asked him stuff around medicine. he studied at UKZN a while ago. The
method that they used at UKZN was so different. He gave some guidelines about what to expect".

Why did he choose to study at UCT? “My teacher spoke about those issues. I ask him what is a good university that you know of that makes the best doctors in SA? He went on the internet – UCT was no. 1, and Wits. He said I must contact this other doctor that was trained at UCT. I came to him and he told me lots of stuff about UCT – he was a 4th year student. Since I was not having someone at Wits that I could ask all these things, I chose UCT. I had information around UCT. Also my parents, they also said “just pick UCT”. There were many things”.

Hulisani was in a Residence.

When asked about his PBL experience, he said, “I studied on my own at school, I was one of these guys that liked sitting alone, doing your work, but then I came to PBL. It was one of those experiences, because I am not one of those guys that is doing group work. Also in my school I was not doing group work, even if others were, I would go alone to the library, and do my work. Come the test, I would pass it like that, just like that. I struggled a lot with PBL but as time went by then I realised actually that learning is not about studying, about studying for exams, but studying, writing, talking, going to lectures of course, understand concepts. The key is in explaining. PBL, what I didn’t like about it – I didn’t understand the PBL system. I didn’t know what was happening, what it is about. I was not an active member. I got the feeling that maybe I am the stupid one because all the other members seemed to be understanding everything, everything was just flowing. I didn’t initially have an understanding of what was happening. I would say “okay guys explain this to me, explain this again to me, maybe I have to do something about this”. So I tried to work hard so that I would participate. So I did, but it was not that good. On the eve of PBL it was one of those emotional experiences of what I would face tomorrow, because of even language as English. I don’t know whether it was just because of I’m one of those people that don’t believe in group discussions and those kind of things. I think I was not used
to like using English. In PBL you have to be clear, you have to understand what you are saying. At school it was English but it was not a big deal to include Zulu. My school it was black students so you could use Zulu, so you can’t use Zulu in PBL. I once spoke to my BP facilitator about that – it took me a whole semester to sit down, to say okay you are one of the students here so just sit down, say what is on your mind, what you understand. It took me like a while but she was like so supportive of that thing, because I was like totally …... I didn’t have friends that I could speak Zulu with but had to use English. But with time I started gaining confidence in English. When it comes to those issues around grammar, it is easy to write but to express something it is not that easy. Sometimes I would have like an idea, so are you going to be able to say it? Sometimes it was like one of those things, if I have prepared myself, okay I have studied. If it’s 1st session that’s where thinking and using language comes, when you actually use the language but when you report back, okay you have studied, and know in which direction, what is happening, so you are going to participate. At school I was good in English. I was doing English as my second language. I don’t know what it was happening, I understood the concepts but it was going out of my mind. It was an emotional experience for me my first semester, but sometimes I was confident and today I’m going there. When I come it was like what is happening with you? I used to forget even easy words. In my mind, I was doubting myself. English it was one of those major problems for me, but now I am more confident”.

Working for assessments – did you use the day before approach? Did you use your responses to the LOs to prepare for assessments? “LOs were simple and straightforward, but “using the case”, how are you going to put it, sometimes it is not making any sense. Especially I struggled a lot in psychosocial. Okay I have memorised it, and sometimes I will understand it – okay this is what the theory is saying - but then you have to use the case to come up with my answer that is the problem. BHS – it was like clear, it was easy, if you have done your work you can answer. Now Elmi has taught us and I understood it – like the case, what you are
supposed to do with it, how is it done, formulated. I can think like someone who has come up with the case”.

Your advice to students? “Come forward, study hard, be consistent, don’t just memorise, try to understand it, if you don’t understand it, ask questions, and I would make it a point to tell them about psychosocial. This is what you should do, study this thing, understand it, make sure that you understand it because they won’t ask you like directly, as they put it in the resource pack. They will ask you like to outline. Make sure that you ask if you don’t understand and make use of other students, who are in the second year, third year, and use like question papers. That’s where I lost it – I only used one year and I didn’t know is it wrong my answers. Including chemistry, you have to understand it, you won’t memorise it. You must apply what you know. Understand your work, e.g. cross section of heart. If you memorise it and you are given a sagittal section that means you won’t get it”.

Did you know about/ make use of ISS? “Yes, that is also one of the points where I lost it, because I used to be like alone. People were there. You know when you come to university you say “I’m alone here, and I’m going to do it”. So 1st test came and 2nd test came. I failed the 2nd one dismally because the work was piling up, and sometime like I never used to follow my timetable, like. So I will go to them (ISS) and they will advise me then and there. Sometimes you get that hope, that spirit that you came with – there is something that I have to do here. It was not about just passing – I just wanted to be a good doctor, who understands his work. So even if I have passed – book my place in IP”.

Could the staff have done anything to make it easier? “You know, I think I lost it myself. I think the system it is a good thing, the staff are doing their best. They can’t know what I am struggling with in my room. I must ask, not even the staff, ask the students – I am stuck here, can you help me with this? That’s where like I lost it, I lost it. I came with the attitude: I am going to go through this alone – I’m
going to be a doctor. I come with a good matric and then coming here and struggling and then trying and trying and okay like I started to understand how things work but it was too late. I was not in control of the situation. IP provided me with time to understand things, face things, and how to outline things that I have read in the textbook. I will know how to apply it. It made me to have confidence like I used to have confidence, to come back and say okay I am Hulisani and if I don’t understand to ask, to ask. It is all about understanding – that’s it, not about knowing your book as it is. Its not nice to come here with that confidence, you are in control, and then at UCT…… it was an emotional process, but it is one of those things that you actually learn, you grow”.

Dube:
In response to the questions ‘To what do you attribute your success’ and ‘were your exam preparation techniques/study methods at school different from that used at university?’, Dube replied that he felt that the reason for his success in first semester was that his way of studying at school had stood him in good stead for what was expected at university. He was of the opinion that, having studied on his own at school, he was used to being a self-directed learner. He described himself as being self-motivated. He did not report any difficulties with adjusting to PBL or in coping with time management or the volume of reading expected at university. Dube was staying in a student Residence. He described himself as a social person, within the team.
Appendix 7

Assessment three case

Naziem (48) and Soraya (42) Adams have been married for 26 years. They are a Muslim couple with three children (two girls and one boy): Yumnah (19), Shuaib (17) and Jahaan (15). They live in Mitchell's Plain, a suburb in the Cape Flats.

Naziem has been a police officer for 15 years. Gang activity is common on the Cape Flats, so Naziem often has to work long hours and take shifts on weekends. Recently, Naziem has felt that he is struggling to cope. He witnessed a shooting incident in which a 6-year old girl was killed. During the crossfire of a gang war, the little girl who was playing in the park with her friends was shot and died instantly. Although Naziem received trauma counselling and joined a support group for police officers, he has since had difficulty sleeping, has lost his appetite, and has been depressed. On numerous occasions, he has had episodes of heart palpitations, severe headaches, and muscular tension in his neck, shoulders and lower back.

Soraya works for the Rape Crisis centre, a non-governmental organisation. In her job, she is responsible for organising staff and volunteer shifts and training new volunteers. On occasion, she runs support groups for rape survivors. She enjoys her job, as she knows she is helping people who need her. However, at times she becomes overwhelmed with the stories that she hears. She also finds it difficult sometimes to balance the needs and demands of her manager with the needs of the staff and volunteers working under her.

Shuaib and Jahaan are still in high school. Naziem worries that Shuaib will be influenced or feel pressurized to join a gang. One of Shuaib's friends was forced to join a gang and he is now bragging to his friends about the crimes he commits for them. Shuaib has already started showing signs of rebellion by storming off when being reprimanded by his parents and by playing loud music to block out what he does not want to hear. Naziem and Soraya are concerned for their son's
safety and Naziem frequently talks to his son about the dangers of being involved in a gang. He hopes that being a police officer will stop gang members approaching his son.
Appendix 8

Assessment two case

The Cohen’s are a Jewish family living in a wealthy neighbourhood in Cape Town. Jacob (41) and Rebecca (38) have three children: Leah (8, female), Ruth (14, female) and Aaron (7 months, male). Although they are older than most parents of newborns and their other children are already at school they chose to have a third child. The fact that they have good health care cover gave them ‘peace of mind’ about this decision.

Jacob is a lawyer at a successful law firm. Due to his heavy workload, he often has to work long hours and on weekends. The family hardly gets to spend some time with him during the week and he constantly feels ashamed and guilty. Every Saturday evening he takes his family out for dinner so that they can spend some valuable time together.

Rebecca is a qualified chartered accountant. She has always wanted to have both a career and a family. As she worked full time, the family hired a nanny Sharon (25) to look after the children. Sharon has been with the family for five years. The children are very fond of Sharon and regard her as part of the family. She picks them up from school, helps them with their homework, plays with them before supper, and cooks supper for the family.

After Aaron was born, Rebecca has not wanted to go back to work and is contemplating becoming a “stay-at-home” mother. She has enjoyed being able to take Aaron to the clinic regularly and see his growth plotted on the “Road-to-Health” card. She would like to take on some of the roles that Sharon has been doing for the last few years. She has spoken to Jacob about it and he is encouraging her to do so as he has always wanted her to be a “stay-at-home” mother and wife.
On Friday evenings, the Cohen's spend time with their extended family when they celebrate the Sabbath together. Leah enjoys playing with her cousin Alexia (the daughter of Rebecca's sister). She and her cousin like to dress up in their mothers' clothes and pretend to be mothers. She does not enjoy playing with her male cousins, Samuel and Nicholas (the twin sons of Rebecca's sister) as she finds that the games they play are too rough. Leah and Alexia are the same age but Leah is much shorter than her (Alexia). The family commented on this and Rebecca became concerned. They have asked their GP if the difference in height is normal. Dr Finkelstein measured Leah's weight and height, asked questions about her milestones and whether she had been de-wormed recently.

Leah and her sister both go to a private school in their neighbourhood. Leah is very fond of one her teachers and feels like she can tell her anything. This teacher is very supportive of her and continuously tells her that she is very bright. Leah takes ballet classes after school with her close friends and enjoys spending this time with her friends.

Ruth is now experiencing adolescence. Jacob and Rebecca have had to adjust their parenting styles for 'fear' of losing their daughter. Jacob's parenting style has become more authoritarian. However, Rebecca fears that this way of parenting will push their daughter away.
Appendix 9

Qualities of UCT Medical Graduates

1. Our graduates are committed to delivering safe and effective care.
   - They are skilled in the medical sciences and understand the scientific foundation of medical practice and public health practice.
   - They possess sound clinical and patient management skills, are able to recognize and manage common medical conditions and emergencies, and are competent in the performance of core clinical procedures.
   - They are committed to improving quality and safety in patient care, are committed to the most effective use of limited resources, and their practice will wherever possible be evidence-based.
   - They will make effective use of all health-related resources and sources of information, including electronic information technology.

2. Our graduates are committed to patient-centred care
   - They respect their patients' values, preferences and expressed needs, and will engage their patients as equal partners in decision-making.
   - They are compassionate, empathetic and committed to advocacy on behalf of their patients.
   - They understand the importance of personal, socio-economic and cultural factors in determining health and in limiting the effectiveness of their own interventions.
   - They are sensitive to their patients' personal, ethnic, social-economic, religious and cultural background, and will seek to overcome the limitations on effective patient-centered care which result from differences in language, social status and cultural background.
3. Our graduates are committed to life-long learning
- They are committed to a lifetime of critical self-appraisal and improvement.
- They will continuously seek out, appraise and assimilate new knowledge in order to remain abreast of developments in the health sciences, and will incorporate these developments into their practice.

4. Our graduates are open-minded, critical thinkers and effective problem-solvers
- They will prove skilled in problem identification, analysis and management, both in the specific sense of clinical diagnosis and management, and in the broader sense of problem-solving in relation to research, practice management, administration and health promotion.

5. Our graduates are professional, ethical, honest and humble
- They understand the moral and ethical principles on which medical practice is based as well as the legal responsibilities of the profession.
- They practice in accordance with the highest standards of both ethics and professionalism.
- They will acknowledge their limitations and their need for ongoing professional growth.
- They acknowledge the equal status of their patients and of their colleagues in other health-related professions in both health promotion and health provision.
- They are able and prepared to recognize stress- and health-related problems in themselves and in their colleagues, and seek or offer support as appropriate.
- They appreciate their role in promoting respect for, human rights and incorporate this into their professional practice.
6. Our graduates are able to communicate and collaborate effectively.
   - They possess good written and verbal communication skills.
   - They are able to establish professional and caring relationships with patients, patients’ families and the communities in which they practice.
   - They are able to communicate health-related information effectively to their patients, colleagues and to decision-makers within society.

Approved by the MBChB Programme Committee, August 2004

Graduate profile for the new MBChB Curriculum
Submitted for Senate approval in 2001
To produce a basic undifferentiated doctor with the requisite attitudes, knowledge and skills to enter the pre-registration period with confidence, and equipped for life-long learning.

The Context
The Faculty of Health Sciences will continue to strive to be an outstanding Faculty within the University of Cape Town. It will offer educational programmes to a diverse and talented student-body, equipping students with the attitudes and professional values, knowledge and skills required for life-long learning and competent clinical practice. The educational principles laid out in the University’s Academic Planning Framework (APF), against which our programmes have been measured, will be integrated into the educational process.

The change of name from Faculty of Medicine to Faculty of Health Sciences indicates a substantial shift in the Faculty’s understanding of its role in the training of health professionals. The emphasis on health rather than disease requires a comprehensive educational approach. This approach would have to create a balance between preventive, promotive, curative, protective and rehabilitative health care in order to meet the health needs of the country.