The Physiotherapy Undergraduate Curriculum

A Case for Professional Development

by

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ABSTRACT

This study focuses on physiotherapy professional development and professional education and the multitude of theoretical, practical and political forces that shape and influence physiotherapy education. It does so by addressing the questions: how is an undergraduate physiotherapy curriculum within a historically disadvantaged university responding to post apartheid societal transformation in South Africa; and why is the curriculum responding in the way that it is within the current social, economic, political, cultural and historical context of South Africa.

The study is theoretically and methodically located within critical, feminist and post-modern framings that disturb and disrupt the dominant medical model of health sciences practice. Employing narrative inquiry as the selected methodology, data was produced through multiple methods to obtain multiple perspectives and orientations. This multi-sectoral data production approach involving student physiotherapists, physiotherapy academics and practicing physiotherapists included in-depth focus group interviews, individual interviews, life-history biographies and open-ended questionnaires. The data is analysed firstly separately for each group of research participants - physiotherapy students, practitioners and academics, and then followed by a cross-sector analysis. The analysis illustrated current disciplinary trends and shortcomings of the physiotherapy undergraduate curriculum, whilst highlighting that which is considered valuable and progressive in physiotherapy and health care. The dominant themes that emerged included issues relating to physiotherapy theory and practice, and issues that influenced the construction of relationships in the curriculum.

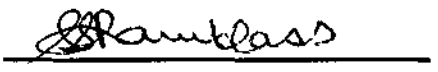
The main thesis presented is that for physiotherapy in the South African context, the notion of caring is identified as the link between transformation and professional development. The model proposed is: A Caring-Transformative Physiotherapy Practitioner Model for physiotherapy professional development,

advancing a view of what it could mean to be an agent of transformation in South Africa within the health care system. This model is located within multiple framings of caring that re-casts the physiotherapy professional previously located primarily within a medical model ideology, into a practitioner with a broadened view of practice and professional accountability within a critical-feminist framing.

DISCLAIMER

I hereby declare that this thesis is my original work and has not been submitted before to any other institution for assessment purposes.

Further, I have acknowledged all sources used and cited these in the bibliography.



Researcher

Dedication

For

my father and mother , Anand and Shanthi Ramcharan

Vinodh and Sadhna – my partners through life's journey

students of physiotherapy – past, present and aspiring

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ABBREVIATIONS

AHSCs	Academic Health Service Complexes
HEQC	Higher Education Quality Committee
HPCSA	Health Professions Council of South Africa
NCHE	National Commission for Higher Education
NQF	National Qualifications Framework
PHC	Primary Health Care
RDP	Reconstruction and Development Programme
SAMDC	South African Medical and Dental Council
SAQA	South African Qualifications Authority

Chapter 1
Introduction

"My experience reflects that there is a lot that still needs to be done in terms of how we should view the patient, cater for all the patients needs / problems, respect them generally, and how we should respect the opportunity that we as therapists have been privileged to enjoy /to use. Do we abuse the privilege of being the therapist? Do we deliver accordingly and regularly? Do we actually put ourselves in the shoes of the patients? Are we aware that we are accountable for our patient's lives? Finally how do we realize the above factors and ultimately provide responsible answers and a true reflection of our attitudes? Who should be responsible for uplifting our profession?" (Diary Number: 11)

Professional development in physiotherapy may refer to the relationship between the development of individual physiotherapists and the physiotherapy profession or, it may refer to the development of teaching and learning practices within physiotherapy curricula. Currently, it could be argued that both undergraduate and postgraduate physiotherapy educational practices are based upon intuitive and historical beliefs about the kinds of educational practices that promote effective learning, rather than on credible research (Chipchase, et al, 2004). However, the common factor that links the perspectives on professional development is the individual and collective response of the profession to issues that relate to professional accountability.

Professional accountability points to a moral commitment to serve the interests of clients, to self-monitor and review the effectiveness of one's practice, to expand one's repertoire and to develop expertise, to contribute to the quality of one's organization, and to reflect upon and contribute to discussions about the changing role of one's profession in wider society (Eraut, 1994). In response to

human rights violations during apartheid in South Africa, Baldwin-Ragaven et al (1999) have proposed a more specific framework for achieving health professional accountability. The five objectives that are proposed for achieving professional accountability within a human rights framework are,

> "to prioritise accountability to patients, ourselves, and society; to identify abuse and operationalise human rights tenets; treat patients with dignity and respect, leading to the empowerment of vulnerable groups; to reorient practice toward the larger social and political context; and the need to clarify one's own values and to define and become aware of conflicting loyalties." (Baldwin-Ragaven et al,1999).

Health professional accountability within a human rights framing expands the focus of practice to unveiling and naming social injustices and acting upon them.

Individual self-monitoring and professional development are generally linked through participation in activities that include formally organized conferences, courses or educational events, which tend to focus on new aspects of professional work. An alternate approach to professional development is experiential learning through collegial sharing and challenging of personal theories of practice, as a means of reformulating theories for individual or organizational professional practice. This approach could be used within the context of curriculum development where debating, monitoring and evaluating practices and courses within the higher education arena could merge the processes of curriculum development and professional development for physiotherapy. This method of inquiry could generate knowledge and provide a space for dialogue for curriculum development that is based on the needs, experiences and accountability of physiotherapy students, practitioners and educators in the practice setting. It is through this latter perspective of professional development for physiotherapy that I advance this study.

In this chapter, I present the background to this study by providing a brief overview of the historical context of South Africa twelve years post-apartheid.

This follows a discussion on transformation and its link to physiotherapy professional development and a description of the institutional context where this study was undertaken. The purpose and rationale for the study is supported by an exploration of the researcher biography. Next, the questions that this study is focusing on are elucidated through the relation between physiotherapy professional development and an examination of curriculum experiences. The chapter ends with an overview of the thesis structure. In the section that follows I present a brief overview of the historical issues relating to health care in South Africa.

Historical Overview

> "Our country which, for centuries, has bled from a thousand wounds is progressing towards its healing. What will guide us in everything we do will be the challenge to build a caring society. This society must guarantee the dignity of every citizen on the basis of a good quality of life for every woman, man and child, without regard to race, or colour or disability. We seek to replace a society, which, in many instances, has been and continues to be brutal and brutish in the extreme. Over the centuries this has condemned millions to a catastrophic loss of national identity and human dignity, land dispossession, classification and denigration as sub-humans and the systematic destruction of families and communities...the challenge of the reconstruction and development of our society into one which guarantees human dignity, faces the entirety of our people."
>
> Excerpt from Thabo Mbeki's first speech as President of South Africa:
>
> 25/6/99

The post-apartheid transformative experience for South Africans is the coming into an alternate worldview, with new ways of being and doing. The inequalities and injustices that produced oppressive conditions during apartheid in relation to race, ethnicity, gender, power, class, culture, patient ethics and social circumstances have been identified. However, within the post-apartheid South African context, these social inequalities and disparities continue to exist. Active work is required for consciousness raising, to change social and institutional ideologies that have rendered some actors anaesthetized to the oppressive and

unjust world around them. The process of transformation is complex, multi-faceted and nebulous (Motala, 2004) and requires shifts in institutional, communal, personal, experiential and attitudinal domains (Motala, 2004, and Powell, 2002). Whilst the responsibility for change may rest at the doors of statutory bodies and institutions, an important factor that determines the extent of change and the success of the change process rests upon individual skills and habits of mind that support transformative ways of being. Transformation requires space to dialogue where fellow individuals can confront the prejudices and assumptions that constitute their world-view through an iterative, explorative process. Resistance to change on the part of people who have been effectively acculturated into the perspective of a repressive system may present a stumbling block to transformation.

The effects of the repressive apartheid system in South Africa were widespread, particularly in the health care sector. Apartheid permeated the health care sector by distorting and corrupting health services, the distribution of health care personnel and health professional education and training (Baldwin-Ragaven, et al, 1999). Further, Baldwin-Ragaven, et al, 1999, state that during apartheid, health professionals displayed a narrow view of professional practice and professional accountability. These views reflected contemporary ethical values focused on behaving ethically with one's patient whilst ignoring the disparities in health care and health status. The practice of institutionalized racism and subjugation within training institutions was complicit with the apartheid ideology and 'training institutions were by and large successfully able to instill in students a profound indifference to human suffering caused by apartheid' (Baldwin-Ragaven, et al, 1999). The institutionalized racism and discrimination was made to 'look like the South African way of life' (Biko, 2004).

The training of health professionals within the apartheid context, did not focus on building a health care system based on human dignity, respect for human rights or assisting a society to achieve independence. It separated social, political,

economic and health care issues. For example, poverty and diseases of poverty were commonly mentioned in health sciences curricula but in contexts that often focused only on the signs and symptoms of the disease and the corresponding curative medical intervention. Poverty became normalized in this way (Baldwin-Ragaven, et al, 1999). Health professional intervention focused narrowly on reversing the signs and symptoms of the disease without addressing the *actual* cause of the disease process. The context of social and economic inequalities and their influence on health care and human rights was ignored within professional health care practice behind the veneer of a health care model that was perceived as being value-free and neutral.

Transformation and Professional Development

Transforming policies necessarily influence the development of a profession through the nature of the relationship that exists amongst the tenets of the policy, theory, practice and research constituents of that profession. The extent to which each constituent is aligned to changing policies could provide a sense of the underlying assumptions of that profession, the value that the change process holds for that profession, and the profession's degree of commitment to the change process. The assessment of the change process can only be determined if the purpose and aims of its objectives, and the social endpoints it anticipates are concretely known (Motala, 2004). Through traditions of reflective practice and for the purposes of developing a profession and its accountability, the values and assumptions that underscore taken-for-granted practice experiences could be explored in relation to the policy, theory, practice and research constituents of the profession within the current socio-political context. These outcomes could form the basis of the inter-relationship amongst current perspectives of the profession, the process of change and evidence for change. In the discussion that follows I present the relationship between post-apartheid policies on health care and higher education, and the physiotherapy profession.

Post-apartheid policy developments have linked health care with developments in the broader social and political contexts. Changes in physiotherapy practice are evident in response to government's legislation on public service delivery. For the physiotherapy profession within the transforming health care system, these policy developments have translated into broadening access to physiotherapy services in geographical locations that were previously under-resourced, under-served or where health care services did not exist. In response to transforming policies for health care, the physiotherapy professional's role within a client-centered, primary-health care approach requires a more humanistic, caring and holistic perspective to health. The physiotherapy patient-base and the nature of physiotherapy practice within the South African context have changed to include the provision of physiotherapy services and intervention programmes in rural areas or within community-based structures. Whilst urban-based private and public-sector physiotherapy services continue, the expanded role of physiotherapy practice into previously under-served areas is linked to broader national imperatives of socio-economic development, social responsibility and advocacy for social justice.

The physiotherapy profession has expanded service delivery to under-resourced areas through the placement of 'community physiotherapists' in those areas. In effect it has responded to a "compulsory" government intervention strategy (White Paper on an Integrated National Disability Strategy, 1997) that is explicit in a national policy document for transforming the South African health care system. Whilst this action is a display of the physiotherapy profession's response to an implementation strategy of national policy, one reflects on the meaning and commitment that this action has for the members of the physiotherapy profession. What does transformation mean for the physiotherapy community in the South African context? Have the statutory bodies assessed what meaning 'transformation' has for the members of the physiotherapy profession within a transforming South African sociopolitical context? What is the nature of personal and attitudinal shifts for transformation within the physiotherapy community; shifts

that require greater introspection about individual values and assumptions that relate to social injustices and inequalities? How is the physiotherapy profession evaluating its response to transformation and how is it experiencing a 'compulsory' healthcare intervention strategy in previously under-served areas?

The physiotherapy profession is also influenced by the aims and objectives of a transforming higher education system. However, international views on the design of physiotherapy curricula have been criticized for being too academic, theoretical and unrealistic from the clinical perspective, focused towards the adoption and practice of technical skills, and the existence of a theory-practice gap between education and health care (Broberg, et al, 2003). Further, Chipchase et al, 2004 suggest that physiotherapy education appears to be experience-based or perhaps even exposure-based where decisions regarding clinical education and associated competences are based on what has always been done, and exposure-based education is based on the premise that if the students are immersed in enough hours in clinic they will eventually become competent. This could suggest that the practices that underlie physiotherapy education is lacking in sufficient evidence and this could influence the nature of physiotherapy professional development.

O'Connell, 2006 presenting a South African view on higher education has argued that universities should produce graduates that are reflective and self-critical in response to adaptability in the world of work. In tandem with developing a critical orientation among the student body, O'Connell suggests that there is an equivalent need from higher education to foster intellectual curiosity about alternatives, and to drive social upliftment. Whilst the skills of higher education are linked to the needs of corporate globalization and employability, it is suggested that higher education should broaden its perspective on education to include skills that are necessary for community development through instilling 'a sense of respect for others, and to take a stand against injustice, inequality and discrimination' (Vally et al, 2006). These values are based on developing moral

character and commitment through education by developing caring, competent, creative, reflective and transformative individuals who would be prepared to meet and respond to the ethical and moral challenges within diverse sociopolitical contexts.

Responding to policy changes in South Africa, the development of the physiotherapy profession could be characterized by a reorientation of physiotherapy practice, education and training, and physiotherapy professional accountability through, first, a recognition of the social, political and economic factors that influence the health care and higher education systems, and, second, the goals articulated in the higher education, health care and public service delivery policies that are responding to individual and societal development needs. These factors could function to inform professional development for physiotherapy. It could therefore follow that professional development in physiotherapy may be characterized by student-physiotherapists developing new habits of mind and practice through a curriculum that supports diversity and the needs that exist within communities and wider society.

In the section that follows, I describe the institutional and departmental contexts where this study was located, by tracing the history of the institution and its response to the agenda for transformation.

Institutional Context

This study was located within the Discipline of Physiotherapy at the University of KwaZulu-Natal: Westville campus, Durban, South Africa. The study began in 2003 within the Department of Physiotherapy at the University of Durban-Westville. Following the merger between the Universities of Natal and Durban-Westville on 1 January 2004, the merged institution was named the University of KwaZulu-Natal. In the sections that follow a brief history of the University of Durban-Westville that provided the background to the institutional context of this

study is presented, the department of physiotherapy at the University of Durban-Westville, physiotherapy education and training within this context, followed by a brief description of the new merged institution, the University of Kwazulu-Natal.

a. University of Durban-Westville

University College, Durban was established in 1960 under the South African apartheid structures for the Indian population group. University College, Durban was started at Salisbury Island naval barracks in a building that was in a bad state of disrepair. The conditions under which students studied were poor. The hopes for a dignified university institution that would be an improvement on the rather old buildings of Natal University where the Indian community attended classes as extra-mural students were shattered. Act 49 of 1969 provided for the University College, Durban to be elevated to the status of a university. The institution assumed academic autonomy on 1 January 1971, when it was officially known as the University of Durban-Westville (Oosthuizen et al, 1981).

The institution functioned within the constraints of apartheid policy that segregated admission of students on the basis of race. This was evident in the university's policy of exclusion of White, Coloured, and Black students for registration until 1 January 1978. The minister could grant permission to Coloureds and African students on an ad hoc basis to register at University of Durban-Westville, in subjects and courses not offered at other ethnic universities (Oosthuizen et al, 1981). The student-body at the University of Durban-Westville constituted part of the terrain of contestation and student-uprisings against the policies of apartheid and unfair discriminatory practices that were based on race. In 1974, a degree course in Physiotherapy was introduced in the Faculty of Science at the University of Durban-Westville, which replaced the diploma in physiotherapy that existed for the training of physiotherapists prior to the introduction of the degree.

In January 1979 the Faculty of Health Sciences came into being at the University of Durban-Westville. At first the new faculty consisted of only three functional departments, these were, Pharmacy, Medical Rehabilitation and Pharmacology. The idea behind creating a faculty of Health Sciences was to create a platform for effective communication across the professions and the development of a new sense of unity, which had being lacking in the past (Oosthuizen et al, 1981). Following the conception of the Health Sciences faculty, the department of Physiotherapy was incorporated into that faculty.

b. Physiotherapy Education and Training in KwaZulu-Natal

The education and training of physiotherapists in South Africa was a direct result of the development of physiotherapy in other countries especially the United Kingdom (Krause, 2002). Physiotherapy was imported to South Africa in the early years of the twentieth century by British trained physiotherapists. The first three - year physiotherapy diploma for physiotherapists, who were not white, was started at King Edward VIII Hospital in Natal in 1964 by a British female physiotherapist, Miss Jones. The diploma in physiotherapy was launched by the Natal Provincial Administration, in conjunction with the Natal Medical School and the University College, Durban (Oosthuizen et al, 1981). Approximately twelve students were admitted into the diploma course per year with an approximate racial composition of 50% Black students, 40% Indian students and 10% Coloured students. The curriculum mimicked that of the Chartered Society of Physiotherapy in the United Kingdom.

The diploma training provided a basic science foundation by admitting relevant aspects of physics and biochemistry knowledge into the programme. The courses in anatomy and physiology were identical to those taken by medical students. The curriculum defined a wide scope of physiotherapy to serve the entire spectrum of medicine. The clinical practice skills of Indian, Coloured and Black student physiotherapists were not allowed on White patients. "In other

provinces there were separate hospitals for Black and White patients. White students at medical schools treated patients of all races, whereas students at Medunsa and Durban-Westville received their clinical education entirely with Black patients." (National Physiotherapy Committee,1998). This was complicit with the apartheid policies of segregation on the basis of race.

With the introduction of the BSc. Physiotherapy degree at the University of Durban-Westville the syllabus assumed most of the content from the diploma-training course. A larger element of the basic sciences had to be incorporated into the programme in order to comply with the requirements for a degree status within the science faculty. This included a larger physics component that was prescribed by the university, a course in biology, chemistry and psychology. This instrumental science-based, medical rationality pervaded the physiotherapy education and training programme, with its focus on illness rather than health, on cure rather than prevention, on the enclosed disciplinary space of the hospital rather than the real life of community. This perspective was illustrated through an advertisement that promoted physiotherapy training at the university. "Physiotherapy is used in every branch of medicine, surgery, gynaecology and special departments, and although usually an ancillary service to routine medical and surgical practice, in some cases it is the mainstay of treatment" (Natal Hospital Services, 1975).

The introduction of the physiotherapy degree programme changed the student population demographics. The stratified discriminatory levels of education that existed during the apartheid years effectively marginalized a large intake of Black students into the physiotherapy programme despite government initiatives to increase access to previously disadvantaged students (Buch, 2001). The entrance criteria into the science faculty effectively marginalised Black students' from the physiotherapy programme through poor academic results at secondary school-level. These results were linked to the inequality these students experienced through the nature of the apartheid schooling system. Because of

the stratified levels of education that existed within the school system, Black students were disadvantaged when they had to compete at tertiary education level with the academic results of students from the other race groups for a space in the physiotherapy programme. During the period 1974 – 1984 there was a marked reduction in Black students entering the physiotherapy degree programme. The demographics of the physiotherapy student body was altered with most of the student population being White (approximately 50%), approximately 5% of Black students and the remaining numbers constituted Indian students and a few Coloured students.

The stratified schooling system influenced the access of Black students to tertiary level education. In an attempt to redress the disparities that existed in higher education and in accordance with the national transformation initiatives, the University of Durban-Westville in 1993 developed an affirmative action policy that increased access to Black students through the university's commitment to redress historical imbalances.

> "At least 40% of student intake in all faculties will consist of students from Department of Education and Training and homeland schools. A target has been set by the University for at least 60% of the total new intake to be from the Department of Education and Training or related education systems. Students with poor learning abilities who are accepted will receive academic support, and a financial support programme is expected to be instituted to give effect to this" (*Varsity Voice*, November/December, 1992).

In accordance with the university's access policy, the intake of Black students into the department of physiotherapy constituted 40% of the total new intake of students per academic year. The Accreditation Report 2003 for this physiotherapy department from the Professional Board for Physiotherapy gives recognition to the increased access and equity with respect to student intake. The report confirms the university and department's commitment to broadening access to Black students. This observation is set against the background of policies of redress and a predominantly White, female physiotherapy profession

within the South African context. However, the adherence to the university entrance criteria that stipulates potential student-physiotherapists are required to have passed mathematics, physics and biology at matriculation level in order to register within the physiotherapy degree programme continues to implicitly marginalize Black student entrance into the profession. This is in the light of disparities and inequalities that continue to exist within the schooling system and wider socio-political contexts.

c. University of Kwazulu-Natal

The merger of University of Natal and University of Durban-Westville on1 January 2004 followed the government's decision that thirty-six technikons and universities, for many reasons, would be reduced to twenty-four. This translated into the merging of a historically advantaged and a historically disadvantaged university, into a new institution, the University of Kwazulu-Natal. The advantages of the merger created opportunities for consolidation of resources, infrastructure and intellectual capital (Miller et al, 2003). The real challenge facing the new university is its vision "to be the premiere university of African scholarship." The Discipline of Physiotherapy was retained at the old University of Durban-Westville campus. As the only education and training centre in KwaZulu-Natal, the discipline of physiotherapy was largely unaffected with regards to human and physical resources, and geographical re-location by the merger of the two institutions.

The Purpose and Rationale for the Study

Researcher Biography

My inquiry into curriculum design and practice began when I was employed as the 'educational advisor' in the department of physiotherapy in 1995 within the Academic Development Programme that was instituted by the University of

Durban-Westville in response to its increased access policy (see, *Varsity Voice*, November / December, 1992). Prior to this appointment I was a practising physiotherapist within a provincial hospital setting. My interest in physiotherapy education arose from my experience and reflection in the clinical environment where I recognised alternate educational resources that could compliment or expand the existing physiotherapy curriculum. In addition, as a practising physiotherapist, I identified skills and knowledge that were required for practice but which were inadequately integrated into or absent from the physiotherapy curriculum.

My role as the 'educational advisor' for physiotherapy involved interaction with, and the provision of student support to first and second year student-physiotherapists, who presented with a range of learning, social, language, and financial difficulties that influenced their academic performance. Difficulties with learning and language were most evident when student-physiotherapists sought my assistance close to a written test or examination. During these 'support' sessions I had to teach and guide student-physiotherapists on how to analyse and respond to theoretical examination questions. This arose because the focus of the physiotherapy curriculum was mainly on acquiring practical physiotherapy skills. The difficulty arose when student-physiotherapists had to relate these physiotherapy skills to pathological conditions, integrate them with other factors that influenced their use on the human body, and explain this in response to a theoretical question. This drew my attention to the deficit or under-emphasis in the classroom of analytical skills or process knowledge / know –how (Eraut, 1994) during the teaching and learning process. It was left for student-physiotherapists to make their own connections between different knowledge components.

This presented as a two-fold problem for those student-physiotherapists who used English as their second language and who had insufficient competence in the written English language to explain their responses to theoretical questions.

As I reflected on the problems, I began to realise that the curriculum was not focused on providing student-physiotherapists with skills for deep and critical learning and skills for reflecting, that learning was focused mainly on achieving technical competence. Although the department of physiotherapy had responded to the university's agenda to increase access to Black students, it was silent on how it would alter the nature of knowledge and pedagogy to redress the effects of the injustices of a discriminatory education system.

The curriculum made insufficient adjustments to accommodate the deficiencies that arose from a set assessment format, the different learning styles, and the diversity in the classroom. Failure-to-achieve good grades were transferred as the responsibility of the student-physiotherapist rather than the result of an unchanging curriculum to accommodate a diverse student body. Under-achieving student-physiotherapists were referred for assistance through the academic development programme rather than curriculum developers addressing weaknesses within the curriculum that could have accommodated student deficiencies. In response to this and in collaboration with the staff in the physiotherapy department I developed a questionnaire to evaluate student responses of the content, design and pedagogy of each course that was delivered by the academic physiotherapists. Whilst this exercise did little to change the overall curriculum, it did however provide the first structured opportunity for feedback from student-physiotherapists about the courses that needed improvement, the teaching, learning and assessment strategies, and suggestions for implementing change, which individual academic physiotherapists found useful. The limitations to this evaluation were its very narrow perception of curriculum, which manifested in the neglect of an assessment of the implicit issues that underscore curriculum.

In 1996, I was appointed as a full-time associate lecturer in the physiotherapy department and in 1999 I registered for a master's degree in tertiary education. During the years prior to this enrolment I had experienced many tensions and

challenges between the experience I brought from a clinical hospital context, and teaching and learning within a higher education context that should prepare student-physiotherapists for the health care system. I recognised the need to understand student-physiotherapists as adult learners, to improve my intervention in the teaching and learning of the physiotherapy subject, to broaden the perspectives of student-physiotherapists about their participation in the health care system and the social and political contexts that influence it. I was 'troubled' by the lack of synergy that was exhibited in the physiotherapy curriculum amongst issues of policy, theory and practice.

As a response to my internal questioning, and in an attempt to understand the student-physiotherapist better I structured an, 'action research' task where I undertook an assessment of the different learning styles of student-physiotherapists who were registered for the level 1 kinesiology course. Following the outcome I dabbled with changing approaches to pedagogy and I encouraged students to write their reflections throughout the duration of that course in journals. This task stimulated the development of reflective thinking about physiotherapy in that cohort of student-physiotherapists. I valued student responses with regards to the teaching and learning approaches that I used in the classroom. It served the purpose of being a yardstick on my performance in relation to the objectives of the course, and it gave me insight into whether students were realising their expectations. In addition the journals allowed me access to the person behind the 'student'. In response to the curriculum's deficit of process knowledge and the lack of focus on skills for the development of a critical thinker, I developed a framework of critical thinking skills for physiotherapy, which could be used by student-physiotherapists and practising physiotherapists in conjunction with clinical education practice. This was in response to the identification of skills that were required for practice in the clinical environment, and a response to the goals of a transforming higher education system.

Following completion of the master's degree, I was appointed as a full-time lecturer in the physiotherapy department. The tensions and challenges that I experienced within the curriculum emerging from the inter-relationship between policy, theory, practice, and research continued. Physiotherapy practice, and education and training in post-apartheid South Africa are influenced by the inter-relatedness of factors that characterise structural, historical, political and sociocultural contexts. I am 'troubled' by a desire to explore how this physiotherapy undergraduate curriculum has responded to the imperatives of a transforming country. Very little has been written about curriculum conception and design in the health sciences professions post-apartheid, particularly in the physiotherapy profession. Whilst there have been some perspectives on how community physiotherapy could be addressed within physiotherapy curricula (see, for example, Beenhakker, 1987, Krause, 2002, Futter, 2003), the gap lies in a conceptual framework that could guide the development of physiotherapy within a transforming socio-political system, and advance a view of a new 'identity' for physiotherapy and the role of the physiotherapy practitioner in this changing context.

The rationale for the study is based on examining how the physiotherapy curriculum is responding to the demands of policy and practice. In addition it will examine how these inter-related demands are shaping the stakeholders and how they in turn influence the curriculum. This examination is based on a celebration of stakeholder voices within the physiotherapy curriculum. Voices and experiences from three stakeholder constituencies are being privileged and centred. These are the voices of the academic, student and practising physiotherapists. This is based on the rationale that in the context of the health science professions 'voice' is not necessarily valued. 'Voice' is silenced because of its subjective nature based on the historical context and perspective of the health sciences with its emphasis on neutrality and the non-subjective view of what curriculum ought to be. Based on these factors the study is advancing a democratic, more inclusive and pluralistic intent for professional development

and professional accountability in physiotherapy. This pluralism will have the potential to provide multiple insights from the workplace, academia, and student perspectives on the nature of the relationship that exists amongst the domains of policy, practice, theory and research. An examination of these factors in relation to the undergraduate physiotherapy curriculum could provide the constituents of the physiotherapy professional development paradigm for a transforming country.

Critical questions

In this section I discuss the broad purpose of the study and the specific questions that the study addresses. The study is responding to a broad focus, that is, **"How is an undergraduate physiotherapy curriculum within a historically disadvantaged university responding to societal transformation in South Africa?"** Why is it responding in this way? The experiences of three constituencies, the academic, practicing and student physiotherapists are being elicited because their experiences within the changing contexts of health care, public service and higher education have the potential to influence the nature and design of the curriculum. The main focus of this study is, however on the experiences of student physiotherapists because they interact within all three contexts. Therefore they are influenced by the nature of these contexts which are shaped, amongst others, by individual and collective physiotherapist interpretations of what physiotherapy education and practice ought to be within these contexts.

The more specific questions that the study addresses relate to the following. Because student physiotherapists work closely with the academic physiotherapists in the university context, and with the managers and practicing physiotherapists in the work environment, what are the views of these constituencies on the academic preparedness of student-physiotherapists for work in the clinical environment from an academic perspective and a practice perspective? Why does each constituency present the perspective they do?

How do student-physiotherapists experience clinical education practice? Why do they present these perspectives on that experience? How do student-physiotherapists experience the transition from a final year student-physiotherapist to a practicing community physiotherapist?

In the interaction across the constituencies, what shapes the relationship between student and academic physiotherapists, between student-physiotherapists themselves, and between practicing physiotherapists and patients? Why are relationships constructed in this way?

How is each constituency influenced by the context in which it operates, and how do they respond to and influence the context?

These sub-questions will attempt to guide the main focus of this inquiry, "How is an undergraduate physiotherapy curriculum within a historically disadvantaged university responding to societal transformation in South Africa?"

Overview of the thesis structure

The structure of the thesis situates South African physiotherapy education and training, and physiotherapy practice within historical and socio-political contexts. The post-apartheid physiotherapy curriculum experiences of student physiotherapists, novice and experienced physiotherapy practitioners, and physiotherapy academics are centred in relation to the country's socio-political transformation. Curriculum experiences of the participating constituencies are explored in relation to the domains of physiotherapy theory, practice, policy, and research within a critical feminist research tradition. A physiotherapy professional development model is proposed that could be used to inform physiotherapy undergraduate curricula and professional development for local and international contexts.

Chapter 2 Policy Development and Physiotherapy in South Africa locates physiotherapy education and training, and physiotherapy practice within the socio-political context during apartheid and post-apartheid transformation. The

discussion centres physiotherapy in relation to the macro-policy context of South Africa, the historical context of the physiotherapy profession, the statutory bodies that control the physiotherapy profession, and a broad view of curriculum implementation in response to policy developments within an institutional context of physiotherapy education and training.

Chapter 3 Framing Theory is organised into two parts. Part One, **Curriculum Theory and Practice** examines the ideologies, conceptions, and constituents that underlie curriculum with a particular focus on the values of emancipation and transformation that underscore critical, feminist and post-modern theories.
Part Two **Review of Literature – Physiotherapy Curriculum** narrows the focus of the curriculum discussion to an examination of curriculum conceptions in physiotherapy, and their influence on the development of the physiotherapy profession.

Chapter 4 Methodology explains how a qualitative research approach, sensitive to the ideologies of critical, feminist and post-modern theories, was used in the data production and data analysis processes. The chapter provides an outline of how narratives were constructed in this study, and the selection of the data production tools that focused on voice, plurality, participation and reciprocity.

Chapter 5 Student Perspectives and the Physiotherapy Curriculum represents the first level of analysis of student-physiotherapists' data. This chapter illuminates the views of student-physiotherapists in relation to their experiences of the design, content, pedagogy and assessment of the theory and clinical education modules in the physiotherapy undergraduate curriculum. Relationships within the curriculum were also explored. The chapter is organised into three parts. **Part One** and **Part Two** elucidate student perspectives on *theory and practice*. **Part Three** describes the *relationships in the curriculum*. Each section begins with a story, which signals the reader to the key themes that have emerged following an examination of the data.

Chapter 6 Physiotherapy Practitioners' Perspectives and the Workplace is an exploration of reflections and observations of physiotherapy practitioners in the workplace. This first level analysis examines data from both experienced and novice physiotherapy practitioners employed in the public service. The analysis is illuminated firstly through stories, which makes visible the changing roles of physiotherapists in public service in response to a changed health care policy. It further illuminates how the physiotherapy undergraduate curriculum enables and /or constrains physiotherapy practice within a changing public service and health care environment.

Chapter 7 Physiotherapy Academics on the Curriculum is an examination of the introspections and ideologies of academic physiotherapists on their experiences of the undergraduate physiotherapy curriculum. This first level of analysis of the experiences of physiotherapy academics is underscored by conceptions of transformation. The data is produced and organised within themes of curriculum design and structure, curriculum content, and relationships in the curriculum.

Chapter 8 A Cross-sector Analysis: student physiotherapists, academic physiotherapists and physiotherapy practitioners, represent the second level of analysis. In this chapter, I present the common issues that emerged across the primary data sources and link these issues to the theoretical framework. There are two main themes that are discussed, *theory and practice*, and *relationships in the curriculum.*

Chapter 9 A Caring-Transformative Physiotherapy Practitioner Model is re-shaping the model for physiotherapy professional development within the South African context. The model is constructed within a critical-feminist framing that values pluralism, individual experience, interdependence, dialogue and choice.

The elements of the model are located within multiple framings of caring, technical and interpersonal competence, reflection and critical self-awareness, individual and societal development, collaboration, and social justice. Suggestions for curriculum development in support of this model are proposed.

Conclusion

In this chapter, I have presented the institutional context in which this study was conducted, my biography as an academic and a researcher of my practice, the purpose and rationale for the study and I have outlined the critical questions. An overview of the thesis structure was also presented. I have presented how against the background of South Africa's changing cultural, political and socioeconomic contexts, the goal for physiotherapy education and training within the higher education and health care contexts should have a moral, transformative purpose within a more humanistic client-centred approach to health care in order to respond to the disparities of the social system. This study will attempt to assess the personal, institutional and societal shifts that the community of physiotherapy practitioners experienced through an exploration of the physiotherapy undergraduate curriculum in relation to the views of different stakeholders within their contexts of practice. In the chapter that follows, I present in greater depth the contextual factors that influence physiotherapy education and training in South Africa.

CHAPTER 2

Policy Development and Physiotherapy in South Africa

The trajectory of South Africa since 1994 is a story of fundamental change. The transition from minority rule to democracy was heralded as an epic moment in South African history. This translated into the development and implementation of policies that were intended to overhaul and eradicate a racist society in all spheres of society, in order to improve the circumstances of the people who were disadvantaged by apartheid.

In this chapter, I examine the historical and political contexts of South Africa and the physiotherapy profession during apartheid and post-apartheid. This chapter begins with a description of the apartheid history of South Africa with a focus on apartheid health care and higher education. This is followed by a discussion on the development of post-apartheid policies for transforming the higher education, health care and public service sectors. Next, the history of physiotherapy is presented, charting its international origins, followed by a focus of how physiotherapy is defined in South Africa, and the regulatory bodies that influence physiotherapy education and training in South Africa. The chapter is concluded with a broad analysis of the changes that characterise this university's physiotherapy undergraduate curriculum in relation to policy developments, through an examination of the curriculum content documented in the university calendars, from the conception of the degree programme until the 2003 academic year. In this study, using apartheid terminology, I will categorise all people who are not White as Indians, Coloureds or Africans. Post-apartheid terminology will denote racial categorisation as White or Black, with reference to Africans in the Black category as the indigenous people of South Africa.

Apartheid, health and higher education in South Africa

Apartheid was characterised by division and disparities across the South African social system. Four main issues characterised an apartheid society; creating human divisions, creating geographical divisions, dividing health, and dividing higher education highlight these.

a. Creating Human Divisions

The enforcement of apartheid in 1948 by the Nationalist Government, served to legislate a process that was started in the colonial era, which created deeply fragmented racial segregation within South Africa. Underlying the institutions of apartheid was the exclusion of Blacks from any share in political power or economic control in the interest of the White minority. A complex network of laws sustained a hierarchical structure of discrimination, exploitation and deprivation, in which Coloureds and Indians formed oppressed minorities in relation to Whites, but who had considerable privileges in relation to Africans (World Health Organization, 1983). The apartheid policies gave effect to marked inequalities of wealth and power. The resultant effect on the majority of South African citizens was that

> "...the Black South African working class did not enjoy the full fruits of their labour and they had been systematically denied the rights of citizenship, e.g. the right to vote, the right to a living wage, the right to proper housing and sanitation, and the right to appropriate and sufficient education and health care" (Pillay, 1995).

b. Creating Geographical Divisions

A central feature of apartheid was the division of South Africa into two areas, viz. a common or White area, and Bantustans, which were African homelands where the Africans were allocated tribally defined territories. The Coloured and Indian population were permitted to remain in the common areas but without political

rights. The Africans were only permitted into the common areas for the purposes of labour, which was characterised by a migrant labour system.

The African male would leave the "homeland" for the purpose of work, leaving behind women and children or the ill infirmed. This resulted in the development of White areas and the impoverishment of the Black areas because the absence of males in the Bantustans reduced labour productivity. In the current South African context, these rural areas remain under-served and under-resourced.

c. Dividing Health care

The homelands became rife with overpopulation, unemployment, poverty, illiteracy and accompanying social ills. The disabling effects of apartheid's political, social and economic rationality became evident in the disease patterns between the White minority and the Black majority. Apartheid was seen as an assault on the whole person, on the family and the community because of the psychological climate that it created of dehumanisation, violence, and the contempt for human life and dignity.

Quantitatively and qualitatively, health services for the Black population were grossly inferior to the White majority. Submissions from individuals and organisations to the Truth and Reconciliation Commission Health Sector Hearings, held in June 1997, gave testimony to the allegiance of health professionals to the apartheid ideology, thus effectively concealing the reality of apartheid medicine behind a veneer of professionalism (Baldwin-Ragaven et al, 1999). Health care and human rights were separated by the apartheid ideology. In addition to disparities in service delivery, indigenous healing practices were subjugated in preference for western allopathic medicine. A recommendation for a more equitable health care system arose out of the Brazzaville Declaration, which stated that

> " ...the single essential prerequisite for the establishment of a health care system in South Africa, which would meet the needs of all people and embody the principles of health for all and primary health care, is the radical and total dismantling of the policies and structures of apartheid" (World Health Organization, 1983).

The principles of primary health care and health promotion were endorsed in "*A National Health Plan for South Africa*" (ANC, 1994b) as part of the ANC's Reconstruction and Development Programme (ANC, 1994).

d. Dividing Higher Education

The higher education system was also fragmented and differentiated along lines of ethnicity and race. It translated into higher education institutions that were designated White, African, Coloured and Indian, according to the population groups they served. It meant that higher education, together with other social services, was delivered separately and unequally. The aim was to "teach" subaltern youth that their Otherness (inferiority) was "natural" and it aimed to create a dominance of White identity, culture, and social and economic dominance (Reddy, 2004).

Complexes of superiority and inferiority were created by policies of segregation. This denigrated mutual respect for fellow man. The aims of apartheid were translated by the state in the 1960's into the creation of Black universities, which were qualitatively different to White universities in terms of facilities, the structure of the buildings, the location of these universities in peri-urban/ rural environments and a watchful campus police that was responsible for monitoring students (Reddy, 2004). By contrast the English speaking universities managed to achieve more freedom from state interference than other institutions (Bunting, 2002a). The teaching curriculum fitted comfortably within a positivist, Christian National Education paradigm with an imposition of the values that underscored this perspective. The exclusion of other existing cultural concepts and values functioned to discourage their advancement and integration into the system.

Language was also used to create a divide in the system with the development and promotion of the Afrikaans language, which contributed to the establishment of a number of institutions where it was used as a medium of instruction (Boughey, 2004). These factors served to advance the social relations that were intended by apartheid, especially in its objective to constitute ethnic subaltern subjects.

Apartheid differentiated amongst people, resources, and access. By its nature it created 'othering'. It created disparities and inequalities whilst dismantling families, bodies and the psyche. Privilege was experienced on the basis of "whiteness". It is against this background of division and discriminatory practices that the student-uprisings began to oppose apartheid in favour of more democratic practices. The most poignant exemplar of resistance to apartheid was the June 16, 1976 student uprising. By the 1980's the Black tertiary education sector constituted a terrain of resistance and conflict with the apartheid state. The University of Durban-Westville, which was constituted for the Indian population group, was a forerunner in this regard. Many victories were achieved in response to the resistance with the milestone achievement in April 1994 of the first democratic elections and the creation of a democratic state.

Transforming South Africa

Following the first democratic elections that were held in South Africa in 1994, the government launched the *Reconstruction and Development Programme (RDP)* which, integrated growth, development, reconstruction and distribution into a unified programme for social reconstruction. The RDP attempted to link education programmes, labour market reforms, the development of human resources and public works towards a common goal of social development.

a. Transforming Higher Education

Within a transforming society, higher education was tasked to produce graduates with skills and competencies to meet the socio-economic development needs of South Africa and it had to respond to pressures of globalisation, massification of the education and training sectors, and to new forms of knowledge production. This presented a challenge, to develop programs for independent and societal development compared to the technical, academic nature of higher education institutions of the past era.

The *Education White Paper 3 – A Programme for Higher Education Transformation: 1997* (Department of Education, 1997) was influenced by the proposals of the National Commission for Higher Education (NCHE), which was formed in 1995. The NCHE's central purpose was to advise the minister of education on restructuring higher education to contribute towards reconstruction and development. The central thrusts of the NCHE's recommendations, which formed the basis for the White Paper for the Transformation of Higher Education, revolved around a skilled workforce recommendation. However, in addition to this the NCHE saw the role of higher education as developing a humanistic element by empowering individuals to assume the identities of active agents.

Some of the goals of higher education that were outlined were embedded within a rationalisation of globalisation and a skills driven outcome. It identified the following goals for higher education 1) to meet individual learning needs; 2) to address the developmental needs of society and to provide a skilled workforce for a "knowledge-driven and knowledge-dependant society"; 3) to contribute to the socialisation of enlightened, responsible and constructively critical citizens; and 4) to contribute to the creation, sharing and evaluation of knowledge. The goals of higher education were focused towards the development of skills and intellectual development.

In order to realise its goal of increasing access and participation, higher education institutions had to respond to the following:

- Increased and broadened participation – it must increase access for black, women, disabled and mature students, and generate new curricula and flexible models of learning and teaching, including modes of delivery, to accommodate a larger and more diverse student population.
- Responsiveness to societal interests and needs – it must deliver requisite research, the highly trained people and the knowledge to equip a developing society with the capacity to address national needs and to participate in a rapidly changing and competitive global context.
- Cooperation and partnerships in governance – successful policy must reconceptualize the relationship between higher education, and the state, civil society, and stakeholders, and among institutions. It must also create an enabling institutional environment and culture that is sensitive to and affirms diversity, promotes reconciliation and respect for human life, protects the dignity of individuals from racial and sexual harassment, and rejects all other forms of violent behaviour.

The focus of higher education was to become more integrative, and responsive to the goals of social development, individual development and globalisation. It had to also increase access to those previously discriminated against and improve communication between itself and other stakeholders involved in the agenda of social development. University curricula had to become more sensitive to a more diverse student body, focus on developing critical thinkers whilst simultaneously producing skills and knowledge for the global stage and local socio-economic development. These goals have been incorporated into a single co-ordinated system, which is premised on a programme-based approach (Department of Education, 1997). Consequently, universities would have to change and reconfigure themselves to produce the type of graduates the

economy requires and help make the South African economy more competitive in this new globalisation era (Reddy, 2004).

The focus of higher education towards skills-driven programmes has been criticised. Motala et al (2001) have cited an argument by Mohamed (2001) who contends that a restrictive, instrumentalist focus on education for economic growth such as has been the case in South Africa since 1994 neglects the issues of 'general cultural and intellectual development'. A narrow view of the role of education would not resolve the longer-term goals of transforming society and of realising the emancipatory function of education as intrinsic to the process of social reform. Further, the humanistic agenda for higher education that was recommended by the NCHE, with its potential for social transformation, maybe inadequately addressed by a skill-driven programme.

b. Transforming Health Care

The democratisation of the health care system formed part of the larger socio-economic strategies that was outlined for South Africa's transformation. This was largely influenced by the imperatives of the World Health Organisation's Declaration of the Alma-Ata in 1978 and the Ottawa Charter in 1986. These declarations proclaimed that all countries should adopt a primary health care approach in order to provide equity in health care. This concept of health care advanced a political philosophy that called for a radical shift from the content and design of traditional health care to more comprehensive, community based care with an intersectoral, multidisciplinary team approach to health care delivery and an action plan for health promotion within a community focus. It embraced the notion of disease prevention, positive health and health education. In South Africa, the primary health care system (PHC) was developed on the concept of the district health system because "this emphasises community participation and empowerment, intersectoral collaboration and cost-effective care, as well as integration of preventive, promotive, curative and rehabilitation services" (ANC,

1994). A transformation of the South African health care system based on the principles of community-based care, suggested that health service delivery would be equally accessible to all South Africans. Strategies for community –based care, focusing on integrating disabled persons into rehabilitation programmes within communities were outlined in the *White Paper on an Integrated National Disability Strategy* (Mbeki, 1997).

Human resource strategies were outlined for the implementation of the transformed health system which, included training and reorientation of existing health personnel towards a PHC approach and the redistribution of personnel. The *White Paper for the Transformation of the Health System in South Africa: 1997* (Department of Health, 1997) recognised the academic health service complexes (AHSC's) as

> "...essential national resources. They play an important role in educating and training health care workers; caring for the ill; creating new knowledge; developing and assessing new technologies and protocols; evaluating new drugs and drug usage; and assisting in the monitoring and improvement of health care quality." (Department of Health, 1997)

The education and training of physiotherapists falls within this umbrella. With respect to transforming curricula, it was proposed that the curricula for health cadre training should be revised and upgraded to include primary health care approaches. To facilitate the adjustment of AHSC's education, training and research functions, teaching staff would have to be re-oriented towards primary health care principles and concepts. By linking the goals of higher education and health, the broader goal of social development through health care and higher education could be achieved. This necessitated the re-orientation of health sciences curricula towards a new philosophy for health, within a curriculum paradigm that was more participatory and transformative focusing on developing individual and societal needs.

c. *Transforming Public Service*

In an effort to deliver equal and efficient services to its citizens, the South African government legislated the White Paper on Transforming Public Service Delivery: 1997, (Department of Public Service and Administration,1997) which aimed to "provide a policy and a practical implementation strategy for the transformation of Public Service Delivery". This also came to be known as the Batho Pele document, which means roughly, "People first".

The eight guiding principles for Batho Pele that were identified called for new ways of effecting service delivery which were more responsive to the needs of the public than the conventional bureaucratic systems, processes and attitudes. The application of the principles of Batho Pele viz. consultation, service standards, access, courtesy, information, openness/ transparency, redress and value for money were intended to shift the locus of control from the service provider to the client by 'putting people first'. This suggested a more caring and participatory system.

These policies for change had a moral purpose; to right the inequalities of apartheid and advocate social justice. However, the change process is hardly characterised by a linear cause – effect chain. For change to be productive, it requires the development of skill, capacity, commitment, motivation, beliefs and insights (Fullan, 1996). However, Motala et al (2001) contends that institutions / practitioners are evaluated against their adoption of the rhetoric for transformation rather than the fundamental individual and institutional shifts that the policy intended. There may be 'strategic' adherence to the policy by 'talking the policy talk' without the deep values and beliefs that underpin that policy. An assessment of change then requires the simultaneous evaluation of the policy and the implementation process. It is against this selective policy context that should influence the process of curriculum and professional development in South Africa that I have chosen to focus this research. In the section that follows,

I describe the history of physiotherapy and examine the physiotherapy profession in South Africa.

The History of Physiotherapy

The history of physiotherapy will be traced to its international origins, followed by a discussion of physiotherapy in South Africa.

a. International Origins

Roberts (1994) traced the origins of physiotherapy and the formation of the Society of Trained Masseuses to the United Kingdom in 1894. Women who had a nursing background formed the Society of trained Masseuses. They were interested in regulating and developing a profession other than nursing. During this period, there was a powerful rise of organised medicine as a male-dominated, central hegemony. This meant that other health care professions had to react to the pressures created by this powerful group and either submit to the dominance of medicine or face exclusion from mainstream practice (Roberts, 1994). While the hegemony of orthodox medicine was at its most powerful, physiotherapy gained from an alliance with the doctors, but in a subordinate role.

Apart from dominating the practice and management of physiotherapy, doctors also dominated the theory of physiotherapy so that it was moulded to meet the needs of the medical profession (Roberts, 1994). The result has been the development of physiotherapy theory, which seeks to explain physiotherapy practice in terms of the medical model. This conception of physiotherapy was imported to South Africa by British physiotherapists (see, chapter 1). Consistent with the medical model, quality physiotherapy interventions are considered to be those grounded in 'scientific' knowledge of physiology and pathology; addressing physical problems identified by standardised assessment and diagnostic

procedures; based on techniques for which they have been specifically trained, with outcomes which can be measured (Litchfield, et al, 2002). Physiotherapists have remained firmly grounded in the medical model of health and have more recently focused on evidence-based practice (Ritchie, 1999). It may mean that to remove the concepts that underpin the medical model may render physiotherapy powerless. The influence of the statutory body, for example, and other factors that influence health care and higher education have the effect of shaping physiotherapy education and training, and physiotherapy practice for the South African context. This will be explored in more detail in a later chapter.

b. How is physiotherapy defined?

Within the South African context, physiotherapy is defined in relation to the focus of its practice, and the demographic racial and gender profiles of physiotherapy practitioners. The Professional Board for Physiotherapy defines physiotherapy as

> "a health care profession, which emphasizes the use of physical approaches in the promotion, maintenance and restoration of an individual's physical, psychological and social well being regardless of variations in either health or economic status" (HPCSA, 2001).

In its definition of physiotherapy, the HPCSA (2001) has suggested that physiotherapy practice has aligned itself to the principles of primary health care and a holistic perspective of health. It has abdicated itself from discriminatory practices related to class difference by advancing its perspective on patients who have discrepancies in health and social status. It remains silent, however, on its views on social injustices and inequalities of care that arise from race and gender discrimination. This observation follows from the physiotherapy profession's position on issues that related to human rights and social injustice during apartheid. These were articulated in a document that was submitted to the Truth and Reconciliation Committee hearings.

> "The physiotherapy profession lacked, and may still lack a human rights culture. In the past, issues relating to rights were too often confused with 'politics'. Our emphasis was all too frequently on a highly skilled, technical, one-to-one treatment situation, in which the context which defines the client, the physiotherapist and the service was ignored or neglected" (National Physiotherapy Committee, 1998).

The racial and gender profile of physiotherapy practitioners has come under scrutiny. According to Van Rensburg, 2004, "occupational therapy, physiotherapy and radiography still remain the domains of women, and white women at that." The gender profile could be linked to the history of the profession whilst the entrance criteria into physiotherapy programmes may be implicitly excluding the entrance of black students. Lehmann et al (2000) states,

> "it would appear that some disciplines in the allied health sciences have been less successful than others in attracting a more representative cross-section of students – a fact which has seen less public debate than developments in medical studies. There is little public debate about the fact that student representation among physiotherapy students has hardly changed at all since 1994" (Lehmann et al, 2000).

This could be, in part due to the professional board's silence on its criteria for the accreditation of programmes in response to evidence of increasing access to previously marginalized groups. Arising from this discussion, are questions that relate to the Professional Board for Physiotherapy's commitment to the national agenda for transformation, and a broadened scope of physiotherapy professional accountability.

c. *Factors influencing Physiotherapy education and training in the current South African context*

There are three main regulatory bodies, outside of the policy context, that influences physiotherapy education and training in the current South African context. These are the South African Qualifications Authority *(SAQA),* The Higher

Education Quality Committee (*HEQC*), and the Professional Board for Physiotherapy, Biokinetics and Podiatry on the Health Professions Council of South Africa (hereafter will be referred to as "The Professional Board for Physiotherapy").

SAQA is responsible for setting standards and assuring the quality of standards within the National Qualifications Framework (NQF). The B. Physiotherapy degree was registered with SAQA and the standards for the degree generated by the Standards Generating Body of the Professional Board for Physiotherapy. Within the framework of SAQA, learning was specified in terms of exit level outcomes and competencies.

HEQC was formed under the auspices of the Council for Higher Education. HEQC is responsible for the promotion of quality assurance, the accreditation of higher education programmes and the audit of quality assurance mechanisms of all higher education institutions. The HEQC defines quality of higher education programmes as "fitness for purpose", "value for money", and "transformation in the sense of developing the capabilities of individual learners for personal enrichment as well as meeting the requirements of social development and economic and employment growth" (Council on Higher Education, 2003). The key focus areas that the HEQC have identified for the provision of teaching and learning are: programme planning, design and management; programme and course review; access and admissions; student development and support; assessment of student learning; staff development; and postgraduate research and supervision (Council on Higher Education, 2003).

Professional Board for Physiotherapy, Biokinetics and Podiatry on HPCSA.

A professional board functions to control and exercise authority regarding matters affecting education and training, to promote the standards of such education, to protect the public and promote the health of the population. Professional associations, for example, the South African Society of

Physiotherapy, play an important role in representing the interests of its members. A professional association could also serve as a vehicle for inserting the perspectives of the profession into policy-making processes, or adopt the role of monitoring and maintaining standards within the profession, or take on the role of peer review. The professional associations therefore play a significant role in informing the processes of the professional board.

The history of the professional boards of the allied health professions in South Africa is associated with that of the medical profession. The status of the medical profession in South Africa is the result mainly of a protracted and powerful professionalisation process, which gradually formalised the physician's role as the key health provider in society and firmly established the profession's dominance among the health professions (Van Rensburg, 2004). Therefore emerging health professions operated within the statutory control of the medical profession. In 1928, the South African Medical and Dental Council (SAMDC), was formed and it encapsulated most of the emerging health professions.

The Health Professions Act of 1974 provided the legal framework under which the health professions of this country operate. Currently, each profession has its code of conduct and a professional board that protects the rights of the provider and client in health care, and exerts control over the recruitment, training and activities of its members (Van Rensburg, 2004). In 1973, the Professional Board for Physiotherapy was established under the umbrella of the SAMDC and physiotherapy, became regulated by the SAMDC i.e. physiotherapy was under control of the medical profession. This regulatory body implicitly functions to protect the status of the health professions by legitimising their practice in relation to the medical practitioner. In 1990, after re-structuring of the South African Medical and Dental Council, the physiotherapy profession was housed within the Professional Board for Physiotherapy, Podiatry and Biokinetics on the Health Professions Council of South Africa (HPCSA).

The Professional Board for Physiotherapy legislates education, training and practice and is also responsible for assuring the quality of physiotherapy programmes at higher education institutions once within a five -year cycle through a process of university 'accreditation'. This body functions simultaneously as a "standards generating body" and a quality assurance committee for physiotherapy education and training. The accreditation process that is undertaken by the Professional Board for Physiotherapy focuses on the alignment between the physiotherapy programme and

> "...the policies of education (SAQA, NQF) in response to health needs and the broad expectations of quality professional developments in the following undergraduate and postgraduate areas of professional specific knowledge base and professional specific skills base. These areas are a) Curriculum development, b) student development, c) staff development, d) research development, e) clinical education development" (HPCSA, 2006).

This implies that there exists a dual system for assuring the quality of a physiotherapy education and training programme i.e. from the perspective of the Professional Board for Physiotherapy and the HEQC. This duality could lead to fragmentation of quality assurance, especially with regards to professional degrees. There have been suggestions that the quality assurance process undertaken by the Professional Board for Physiotherapy is focused narrowly on assuring the quality of physiotherapy education and training that is linked to physiotherapy skills and practice, rather than locating the quality of physiotherapy education programmes within the broader higher education, health care and public service delivery landscape and their wider goals of individual and societal transformation.

There may be a few reasons for the existence of a dual quality assurance system. First, because the physiotherapy degree programme is located within the higher education context, it would seem reasonable for the HEQC, to assure the quality of the programme. However, by the physiotherapy profession having a

quality assurance mechanism that exists in conjunction with that of that the higher education sector, it suggests that the ideologies that support the policies and criteria for assuring the quality of a programme by the professional board may have a somewhat different focus from that of the HEQC. If both mechanisms are assuring the quality of a programme, how are the processes and criteria that inform the process similar or different?

From an examination of the criteria that is used by each body to assess 'quality', the HEQC is assessing what constitutes that body's definition of 'quality' in each of the areas that constitute its definition of teaching and learning within a programme (see discussion on HEQC above). The Professional Board for Physiotherapy is assessing quality in relation to the specific professional body of knowledge and skills that are constituted in its five focus areas. The areas that each body has identified for the accreditation of a programme are similar, with the exception of an evaluation of 'access and admissions' by the professional board for Physiotherapy. Further, different conceptions of quality exist between these two bodies with the focus of HEQC, for example, on the transformative quality of programmes in response to issues of social justice.

Second, the existence of an independent quality assurance mechanism for physiotherapy ensures the maintenance of its professional autonomy. Unless the two quality assurance bodies arrive at a consensus of what constitutes quality for physiotherapy within the higher education sector, ambiguities regarding 'quality' will arise and loyalties of physiotherapy programmes will shift towards that which most closely fits the values and assumptions that the programme supports. This may influence a narrow view of what professional development in physiotherapy ought to be if the wider context is ignored in preference to specific physiotherapy skill development. Consequently this focus may have the potential to continue the rigidities of a separate past by responding more to practice, rather than locating physiotherapy education and training within the broader contexts of higher education and health care.

d. What guides physiotherapy education and training?

The education and training of undergraduate physiotherapy students is guided by the "Minimum Standards for the Training of Physiotherapy Students" document (HPCSA, Form 96, 2002), which serves as a syllabus statement for the B. Physiotherapy degree programme. It outlines a syllabus for the physiotherapy subject with respect to the content that should be acquired in order for one to be socialised into the physiotherapy profession, and it specifies that 1000 hours of clinical education should be completed as part of the degree requirement. It is against the requirements stipulated in this syllabus document that university physiotherapy programmes are accredited by the Professional Board for Physiotherapy in a five-year cycle.

An examination of the current syllabus document for undergraduate physiotherapy training from the Professional Board for Physiotherapy (HPCSA, Form 96, 2002), produced two main issues of focus, namely, the predominance of *'scientific' rationality* and a *primary health care philosophy*. A discussion to support claims for the predominance of scientific rationality follows.

With regards to the scientific rationality that underpins physiotherapy education and training, physiotherapy does not have theories of its own to justify or substantiate its claims of practice. Courses in the basic sciences are used to explain its practice. For example, physics is required to explain electrotherapy and the principles that underlie movement therapy; anatomy, physiology and clinical sciences are used to explain physiotherapy treatment procedures. Therefore there is emphasis on the scientific states of knowing.

Second, the definition of physiotherapy attests to "the promotion, maintenance and restoration..." of an individual's being which speaks the language of PHC, but the guide-lines for the syllabus content of curriculum documents privileges knowledge for curative and rehabilitative measures. Knowledge for health

promotion and disease prevention is not explicit. This is supported by the claims that,

> "In charting the history of physiotherapy education in South Africa, the document articulated that the main focus of the course, in keeping with other countries at the time, was on curative therapy and functional re-education. Although rehabilitation was taught, this was all institution-based. Preventive, promotive and educative aspects of health care received little attention. Physiotherapy education in primary health care and in community rehabilitation was largely unknown" (National PhysiotherapyCommittee,1998).

Whilst this deficit with regards to preventive health care, health promotion and health education has been recognised, knowledge that supports these health care philosophies are absent in the "Minimum Standards for the Training of Physiotherapy Students" document (HPCSA, Form 96, 2002).

Third, evidence exists in the "Minimum Standards for the Training of Physiotherapy Students" document (HPCSA, Form 96, 2002), of the disproportionate prescription of courses that are science-based (for example, physics, chemistry, anatomy, physiology) compared to courses for behavioural sciences. For example, with regards to behavioural sciences, the document prescribes a course in psychology *or* sociology. This is contradictory if one is working within a holistic, biopsychosocial model of health care where in addition to science-based medical knowledge, knowledge that relates to psychological and social factors should be equally represented. In this regard, the document continues a medical model rationality and limits physiotherapy practitioners' knowledge in the broader field of patient care. Despite claims in the definition of physiotherapy that advocates a holistic perspective to health, the document that prescribes the knowledge base of the profession does not support this principle of health care sufficiently.

Further, with regards to skills for interpersonal relations, the "Minimum Standards for the Training of Physiotherapy Students" document (HPCSA, Form 96, 2002) recommends "a specially designed course in human relations, or psychology or

sociology" without the explicit content required for those courses. Whilst these courses are necessary to develop skills for interpersonal relations especially within a fragmented South African context, the absence of stipulated content suggests that the Professional Board for Physiotherapy does not recognise the importance of guiding the profession in relation to issues of diversity, racial hierarchy and social disparities within a transforming South African socio-political context.

Explicit strategies for the development of *primary health care* and community based care are absent in the "*Minimum Standards for the Training of Physiotherapy Students*" document (HPCSA, Form 96, 2002). It does make reference to "Physiotherapy in the community" in the section that specifies "Treatment by Physiotherapy" (HPCSA, Form 96, 2002) as the physiotherapy profession's response to primary health care. The knowledge segments that are specified for inclusion in university physiotherapy curricula for "Physiotherapy in the Community" are stipulated in the document as follows: "principles of community care, rehabilitation and resettlement, introduction to physiotherapy in private practice, and, ethics and legislation relating to physiotherapy". The document makes no explicit reference to physiotherapy and primary health care as it is illuminated in national policy documents. This observation is confirmed by Krause,2002, who states that

> "the extent to which practical experience and competencies are to play a role in primary health care in a physiotherapy education and training programme is not stipulated by the Professional Board for Physiotherapy, Podiatry and Biokinetics and is therefore not standardised in South Africa" (Krause,2002).

This concurs with Pick et al (2001) who have stated that for reforms in health professional education and training, there should be greater emphasis on primary health care in curricula, revised and widened scopes of practice for professionals in consistence with the PHC approach, and continuing development and retraining of existing health workers and professionals in line with changing

health care. This concurs with the requirements that were stipulated for academic health service complexes in the *White Paper for the Transformation of the Health System in South Africa (1997).*

The absence of an explicit framework and guiding ideology for the reorientation of physiotherapy knowledge and skills base within a PHC philosophy, may suggest resistance to the PHC model by the members on the Professional Board for Physiotherapy. Whilst physiotherapy for the South African context is defined within a holistic, PHC model (HPCSA, 2001) this suggests that physiotherapy is responding to systemic transformation health care mandates. However, a closer examination of the documentation reveals an *asymmetrical relationship* between this definition of physiotherapy advanced by the professional board, and the "*Minimum Standards for the Training of Physiotherapy Students*" document (HPCSA, Form 96, 2002) that specifies the knowledge and skills base for physiotherapy undergraduate programmes. This concurs with an earlier discussion that highlighted how institutions might talk the 'policy talk' without having deep convictions for instituting change.

The absence of a knowledge base for PHC in the documents that define physiotherapy education and training (HPCSA, 2001 and 2002) suggests that the claims made by the National Physiotherapy Committee (1998) about the nature of physiotherapy practice during apartheid remain unchanged. This suggests that the prescribed syllabus for undergraduate physiotherapy education and training from the Professional Board for Physiotherapy, has responded inadequately to the agenda for transformation in the health care, higher education and public sector systems. This is supported by claims made by the National Physiotherapy Committee (1998) to the Truth and Reconciliation Hearings:

> "more specific knowledge on the needs, expectations, behaviours and beliefs of diverse cultural groups, and the further development of communication and interpersonal skills, team management and community development skills with a focus on adult learning, are

necessary to redress inadequacies in past physiotherapy education" (National Physiotherapy Committee,1998).

The structures of White hegemony continue to exercise their power over the kind of physiotherapy knowledge and physiotherapist that is valued within a particular social and class setting. Physiotherapists are largely concentrated in the private sector and provide service to a particular socio-economic class that effectively marginalizes physiotherapy services to an impoverished and disadvantaged rural black population.

e. *Charting changes to the physiotherapy curriculum*

In this section, I present how this university's physiotherapy curriculum content has been appropriated from the "*Minimum Standards for the Training of Physiotherapy Students*" document (HPCSA, Form 96, 2002) for educating and training physiotherapists. An examination of the curriculum content for the B. Physiotherapy degree from this university's calendars, suggests that there has been little changes to the physiotherapy theory i.e. the physiotherapy subject since it acquired its degree status in 1975 to 2003. The curriculum has adhered to the guiding framework of the "*Minimum standards for the training of physiotherapy students*" Document but has added on therapeutic skills that constitute orthopaedic manipulations and physiotherapy for sports injuries.

Despite the structural changes from yearlong courses to a modular programme structure in 1999, the content of the physiotherapy theory remains largely science and medically based. There has been no shift towards designing a curriculum using a PHC philosophy as the guiding or core principle. Multidisciplinary team approaches during clinical education or in theory based modules are absent from the curriculum. Changes to the curriculum have constituted "add-on" modules in PHC rather than a changed philosophy to physiotherapy education.

An examination of the Accreditation Report 2003 for this physiotherapy department from the Professional Board for Physiotherapy reflects on the curriculum content and design and advises that modules should be designed according to "specialities". This confirms an adherence to the compartmental, medical model ideology that underscores the "*Minimum Standards for the Training of Physiotherapy Students*" document (HPCSA, Form 96, 2002) and contradicts a more integrated approach to teaching and learning that would translate into a more holistic, integrated approach to health care. In this regard, the curriculum content projects an uncritical, and un-shifting stance towards socio-political and economic transformation in keeping with the founding document that guides physiotherapy undergraduate education and training from the Professional Board for Physiotherapy. This suggests that the "*Minimum Standards for the Training of Physiotherapy Students*" document (HPCSA, Form 96, 2002) has positioned itself as a dominant force shaping this physiotherapy undergraduate curriculum.

Conclusion

In this chapter, I have presented how the practices of apartheid created stratification of health service delivery and education along racial lines, effecting divisions and inequalities and creating a dominant white identity and white hegemony by privileging western healing practices and western knowledge systems. Physiotherapy in South Africa followed the British/western structures that defined physiotherapy in terms of the medical model and in alliance with the medical profession but in a sub-ordinate role. Physiotherapy aligned itself with the apartheid structures and discriminatory practices in relation to race especially during clinical education practice (National Physiotherapy Committee, 1998). The focus of physiotherapy education and training, and physiotherapy practice during apartheid suggests that the physiotherapy profession was responding to and privileging the needs for members of a certain social class. There was no extension of physiotherapy services into the rural under-served areas in the

interest of the majority Black population. Therefore the practice of the physiotherapy profession was complicit with an apartheid ideology.

I have also presented how the interests of those that control the profession through the HPCSA are maintained by policing the professional borders. This is achieved by, for example, by the nature of knowledge that the professional board legitimises for practice, or by its silence on issues that relate to increasing access and broadened participation. This suggests resistance to support a changed physiotherapy ideology from the medical model of care for transformation and social development. A shift from the scientific rationality that supports the knowledge base of physiotherapy may effectively dilute the power of physiotherapy and its alliance with the medical profession, which remains a central hegemony.

In the following chapter, I will present theories-in-dialogue that frame the research context and the current position of physiotherapy education, training and curriculum development on the local and global stages.

CHAPTER 3
Framing Theory

Theories-in-dialogue are presented that were used to focus the analytical lens in the examination of the experiences of student, academic and practising physiotherapists in relation to the physiotherapy curriculum. The central question that influenced the shaping of the analytical lens was to understand how the physiotherapy curriculum was being produced at the interface of policy, context, theory and practice within a transforming society. These theories-in-dialogue provided the framing to uncover and interpret the values and ideologies that existed largely implicitly among different communities of physiotherapy practitioners about the physiotherapy undergraduate curriculum.

In this regard, the theories-in-dialogue created the lens through which curriculum experiences could be interpreted and be positioned in relation to the micro-politics of physiotherapy academia and practice, and the macro-politics of a transforming country. The political context of South Africa, since 1994 has been framed within an ideology that foregrounds democracy and equality in relation to race, class, gender and people who have previously been marginalized through political strategy. The broad framings of this ideology resonate with the underpinnings of feminist, critical and post-modern theories. The curriculum experiences and ideologies that the different communities of physiotherapy practitioners elucidated will be examined against the values and perspectives of the current socio-political framing. Whilst cognisant that real democratic education change does not follow in a straightforward way from a change in government, the theories-in-dialogue provided the lens to identify and interpret the processes that produce the current discourse in physiotherapy within a changed socio-political and socio-cultural climate.

The chapter is organised in two parts. *Part One: Curriculum Theory and Practice*, and *Part Two: Review of Literature - Physiotherapy Curriculum.* The discussion on curriculum provides a broad overview of the constituents, values and assumptions that underlie curriculum conception. Further, it highlights how different curriculum theories and perspectives advance particular political views of what knowledge, and teaching and learning ought to be. This brings to focus that curriculum conception is not value-free and neutral.

Part One: Curriculum Theory and Practice, focuses on the broad themes that constitute curriculum with reference to the nature of the curriculum, curriculum perspectives, designing learning, conceptions of knowledge, pedagogy and power, and values that underlie critical, feminist and post-modern theories. The *nature* of curriculum highlights the difference between the narrow, product orientation of the curriculum and the broad, process orientation of the curriculum. Curriculum *perspectives* illuminate how curriculum positions are influenced by ideology and social power. In addition a discussion on how curricula are oriented for professional degrees is presented. *Designing learning* focuses on the theories that underpin higher education practices, such as, the adult theory of learning, transformation learning theory, and Wenger's social theory of learning.

Knowledge conceptions are discussed in relation to academic, experiential, professional, and personal knowledge types. The discussion is extended to illuminate the relationship that exists among disciplinary power, knowledge, pedagogy, and practice. The discussion on *critical, feminist and post-modern* theories relate to conceptions of knowledge, curriculum and values that underpin these theories.

Part Two: Review of Literature – Physiotherapy Curriculum, narrows the discussion on curriculum with a focus on curriculum perspectives in physiotherapy. The discussion begins with the guiding philosophy for health

sciences curricula, the influence of these ideologies on physiotherapy curricula, a review of physiotherapy curriculum perspectives, a review of physiotherapy practitioner models, and current frameworks for physiotherapy curriculum design. This chapter will be concluded with my personal view on the theories-in-dialogue and the physiotherapy curriculum.

Part 1: Curriculum Theory and Practice

The motivation for including the theory of curriculum in this chapter is based on an assumption that the audience reading this thesis are most likely to be members of the physiotherapy community. Given that physiotherapists have a predominant clinical background this exposition of curriculum theory will assist the reader with curriculum conceptions alongside which the data and the analysis of the data could be interpreted.

Nature of Curriculum

The curriculum is a socially constructed artefact that is conceived and implemented for deliberate human purposes through cultural, political and economic tensions and compromises. There are varying interpretations of the nature of curriculum that relate to curriculum as *product or process*, and the *narrow or broad* orientations of curriculum. Different aspects of the curriculum have been identified that influence the curriculum with regards to a narrow or broad orientation. These include the historical perspective and socio-cultural context of curriculum design, the overt and covert curriculum, explicit and implicit curriculum, intended and not intended curriculum, and the official and unofficial curriculum. An understanding of the nature of curriculum will necessarily convey the meanings that underscore curriculum practice and development.

a. Narrow, product orientation of curriculum

The difference in the nature of curricula rests largely in the treatment of the context. The definitions of curriculum are distinguished by the extent to which they are narrow or broad. Cornbleth (1990) has acknowledged that a narrow definition of curriculum refers to the prevailing *product* conception of curriculum as a document or plan that decontextualises curriculum both conceptually and operationally. A disregard to context could convey the notion that the curriculum is neutral or value-free. However, in its exclusion of context, the history of a discourse or the link between educational practices and other powerful institutions remain hidden within the curriculum through a focus on the *product*. The structural inequalities and access to resources, and their relationship to institutional control remain silent. Apple (2004) has criticised the view of *curriculum as product* because of the ahistorical nature that this curriculum orientation supports and the dominance of an ethic of amelioration through technical models.

According to Cornbleth (1990), curriculum products or plans are seen as one aspect of the context that shapes curriculum practice. With regards to curriculum practice and development, this narrow definition of curriculum has led to a corresponding view of curriculum development as limited and a technical exercise that is concerned with the selection and revision of content (Graham-Jolly, 2002). A teacher-dominated, controlled learning environment underscores this narrow orientation of curriculum, with a focus on achieving the pre-determined educational outcomes. This narrow orientation is described as a technocratic approach to curriculum (Cornbleth, 1990).

b. Broad, Process Orientation of Curriculum

In contrast, a broad orientation to curriculum takes into account the context of which it is a part. Within this orientation, curriculum is viewed as a process in historical perspective to its socio-political context. According to Cornbleth (1990) the **relevant context** refers to those aspects of the context that can be shown to actually influence curriculum in a particular instance, directly or indirectly. The relevant curriculum context varies over time and with the curriculum of interest and the local situation within the national milieu. The relevant context that influences the curriculum is both structural and socio-cultural.

> "The structural context can be considered at several layers or levels, from the individual classroom to the school organization to the national education system. Socio-cultural context includes demographic, social, political, and economic conditions, traditions and ideologies, and events that actually or potentially influence curriculum" (Cornbleth, 1990).

In addition to context, a broad orientation to curriculum pays attention to the relationships between different aspects of the curriculum. These include the overt and covert curriculum, the explicit and implicit curriculum, the intended and not intended curriculum, and the official and unofficial curriculum (Buckland, 2002).

(i). Overt or Explicit Curriculum

Distinctions can be made between the overt curriculum, that which officials *say* should happen, and the covert curriculum that which officials seek to ensure *does* happen. An example of the overt curriculum in use in physiotherapy would be the "Minimum Standards for the training of Physiotherapy Students" (HPCSA, 2002) document for undergraduate physiotherapy education and training that prescribes the syllabus content for university programmes. Another example would be those aspects of the curricula publicly announced in university bulletins and departmental brochures. This is the explicit curriculum that is important to faculty members in the design or alteration of curriculum, and to students in terms of grades, assignments and program time and costs (Shepard et al, 1990).

(ii). Covert or Implicit Curriculum

The **covert curriculum** is also described as the **implicit or 'hidden' curriculum**. The implicit curriculum includes values, beliefs, and expectations that are passed down from academic and clinical faculty members to their students (Shepard et al, 1990). The implicit curriculum may operate, for example, in the structural organization of the curriculum, in the design for learning, or by conveying messages that influence political attitudes or participation (Cornbleth, 1990).

Cornbleth (1990) has described how the operation of the implicit curriculum is evidenced in the structural organization of the curriculum. This was described in terms of the arrangement of time, facilities, materials, examinations and established roles and relationships. With regards to the organization of the timetable, what is regarded as worthwhile knowledge is indicated by time allocations, whilst the standardization of the explicit curriculum communicates opportunities for learning certain subjects and minimises opportunities for learning others. The design adopted for learning, for example the compartmentalization of the program into separate subjects, suggests that knowledge is not or should not be integrated. The rigidity of the curriculum design leaves no room for the individual student to determine "what differences matter, how they are to be assessed, or how assessments are to be interpreted and acted upon" (Cornbleth, 1990).

Patterns of interaction among teachers and students convey values, task orientation and the acceptance of authority. For example, the skills that the teacher emphasises serves to facilitate the acquisition, retention, and reproduction of presented information rather than active student thought. An example of the covert curriculum is the socialisation or disciplining of student physiotherapists by physiotherapy academics into the norms and regulations of physiotherapy practice, for example, the ethical considerations of physiotherapy

practice, and the personal and professional behaviours that are acceptable or unacceptable. This is due to the social organization that is hierarchical, and characterised by a differentiation of roles, which might communicate parallel messages regarding authority relationships, rational management and compliance.

The overt and covert aspects of the curriculum constitute the **intended** curriculum.

(iii). Actual Curriculum and the Official Curriculum

The broader definition of curriculum acknowledges both intended and unintended learning and is conceived as what *actually* goes on in practice. This represents the distinction between the **actual curriculum** and the **official curriculum**, where the official curriculum

> "includes national public statements of goals and intent, the legal and administrative framework of the school system, official calendar and time allocations, the syllabus and related descriptions of prescribed content, official lists of recommended books, and the content and style of the final intermediate examinations" (Hawes, 1971).

The **null curriculum** refers to what is missing from the curriculum, for example, in a physiotherapy curriculum this could refer to courses not offered, invisible faculty members and students, everyday skills related to professional responsibilities not taught, role of patient's living situation in achieving and maintaining wellness behaviour ignored, illness perspective ignored, and neglected clinical sites (Shepard et al, 1990). The explicit, implicit and null curriculum, are guided by perspectives and individual ideologies about curriculum and how knowledge should be selected and structured within the curriculum, to achieve a particular purpose.

The broad curriculum orientation is described as a critical orientation towards curriculum because it integrates the context and all aspects of curriculum (overt, covert, actual, official, null) into the curriculum process. A discussion on the

technocratic and critical or integrated curriculum will be addressed later in this section.

Curriculum Perspectives

Gee (1998) and Cornbleth (1990) have identified beliefs, values and ideology as factors that influence how curriculum is conceived. A curriculum is a reflection of the social interests of the time in terms of the selection and organization of social knowledge in a curriculum for that particular time (Apple, 2004). Further, Gee (1998) enunciates how a discourse, and therefore its curriculum, is linked to the distribution of social power.

> "meanings and ideology are ultimately rooted in negotiation between different social practices with different interests. Discourses are shaped by ideology and are intimately related to the distribution of social power and hierarchical structure in society. All discourses are products of history." (Gee, 1998)

These perspectives support an earlier view that curriculum discourse is not neutral but political because implicitly or explicitly, through curriculum conceptions and practice, it carries assumptions about valued knowledge, the desired society and relations between individuals and societal institutions.

At an individual level the perspective and design of the curriculum influences the formation of identities. Whilst the perspective of a curriculum may be influenced by institutional ideologies, learning within a curriculum is also influenced by individual values or beliefs that guide the work of a teacher which may be individualistic or collectivist, conservative or radical, altruistic or hedonistic (Foley, 2000). These choices are influenced by what one thinks about learning, where one recognises it, as well as what one does when one decides something has to be done about it (Wenger, 1998).

This discussion on factors that guide curriculum perspectives is by no means exhaustive but provides a view of possible ideologies that foreground curriculum positions.

a. Curriculum positions

Eisner (2002) has identified five orientations or perspectives of curriculum that typify curriculum ideology. They represent differences in focus and serve to illustrate the range of positions that exist among curriculum theorists. The five orientations that were articulated include the development of cognitive processes, academic rationalism, personal relevance, social adaptation and social reconstruction, and curriculum as technology. Pratt (1994) has included feminist pedagogy as a further focus, which emphasises a more equitable balance among gender-related characteristics and interests. This perspective will be explored further in the discussions on knowledge, power and the curriculum.

Following is a brief description of the characteristics that exemplify each curriculum orientation.

The central focus of a curriculum that is orientated towards the **development of cognitive processes** is characterised by processes that help students to inquire rather than emphasise the storage of information. This view focuses on the processes and intellectual abilities to solve problems. The curriculum used in school would be problem-centred where students are encouraged to define the problems they wish to pursue either individually or in small groups. The role of the teacher is to provide materials and the kinds of questions to develop the level of analysis that students would most likely use in situations without the teacher's assistance.

A curriculum underscored by **academic rationalism** focuses on subjects that are most worthy of study and foster intellectual growth. The characteristics of the content of this curriculum are usually selections from the basic fields of art and

science because it is argued that these fields, best exemplify and exercise the human's rational abilities. This rationality underscores 'powerful' discourses.

A curriculum that is orientated towards **personal relevance** focuses on students having an investment and actively participating in choices for their own meaningful learning. Educational programmes are designed in concert with students and the relationship between students and teachers is dialectical and shared where teachers regard students as individuals and not mere members of a class or group. The role of the teacher is to provide sufficient structure and guidance for the experience to be productive but it would not be prescriptive or coercive.

In the **social adaptation and social reconstruction orientation**, curricula locate and become sensitive to social needs and provide programs that are relevant for meeting the needs that have been identified. Whilst social adaptation helps students to acquire the skills needed to fit into the society, a social reconstruction perspective is aimed at developing critically conscious youth who are able to recognize the real problems in society and act on them. Content is drawn from widespread and critical social problems. Social reconstruction is linked to a transformation agenda.

The fifth orientation conceives of curriculum planning as being essentially **technical,** using means-end rationality. This orientation is consonant of the western world's efforts to control human activity through scientific rationality and the specification of objectives and standardization. Cornbleth (1990) has advanced the **technocratic view of curriculum** as that which is developed within an apolitical and value-free approach, dissociated between processes related to policy construction and implementation, tending more towards mastery of skills. The teacher is cast as the expert who fosters the transmission of expert knowledge in fragments, related to sequencing and behavioural objectives. This tends to be alienating, distancing teachers and students from knowledge and

curriculum, and it tends towards the status quo within and outside schools. Open-ended inquiry typically results in mechanized inquiry sequences, fostering knowledge and social control. This view is in opposition to the views offered by a curriculum that is underscored by personal relevance and the development of individuality.

In contrast to the technical perspective of curriculum planning, Cornbleth (1990) has advanced a **critical perspective**. The critical conception of curriculum and its construction is integrated. There is dynamic interaction among policy, planning, enactment and their structural and sociocultural contexts. Contextualization is inherent in the critical view in that it situates and shapes curriculum. A critical approach acknowledges conflict, which is seen as the impetus for change, and fosters social and intellectual empowerment.

Following an exposition of curriculum perspectives, an analysis of the possible 'curriculum position' of the Professional Board for Physiotherapy, could be based first, on a view of academic rationalisation because of the largely science-based nature of the syllabus content (HPCSA, Form 96, 2002). Second, the professional board's view on curriculum could be focused on a technical product orientation because by providing a content statement to the exclusion of, for example, plans for enactment and the socio-cultural contexts of use, this could suggest that the professional board's focus is largely on the development of the physiotherapy identity through a mastery of physiotherapy specific knowledge and skills. In its role of guiding the education and training of physiotherapists, the professional board has legitimised particular conceptions of knowledge, ignored the wider conception of curriculum and its potential for individual and societal development. This focus is asymmetrical to social reconstruction or an integrated position of curriculum that constitutes the agenda for South Africa's transformation. The discussion that follows examines how curricula for professional degrees are constructed to achieve particular aims.

b. Bernstein's singular knowledge structures and the regionalization of knowledge

Bernstein illustrates how ideology and social power function in the development of curricula for specialized education. The selection of content for professional degrees is based on academic rationalisation whilst the structure and organisation of the knowledge is underscored by the nature of the relationship that is developed among knowledge structures.

According to Bernstein (1996) singular knowledge structures were created and have appropriated a space to give them-selves a unique name. Singulars are, on the whole, narcissistic, orientated to their own development, protected by strong boundaries and hierarchies (Bernstein, 1996). A region (for example, a discipline) is created by a recontextualizing of singulars, which determines which singulars are to be selected, what knowledge between the singulars are to be introduced and related. Singulars are insulated from each other. The insulation has two functions: one external to the individual, which regulates relations between individuals, and another function, which regulates relations within the individual (Bernstein, 1996). Insulation faces outwards to social order and inwards to order within the individual.

c. Social Implications of Curriculum Structuring

According to Bernstein (1996), there are two rules that govern the organizing principles of knowledge and curricula. Where the organising principle of the curriculum is a collection-type, for example, within disciplines, there is a strong classification, and the rule is that things must be kept apart. Alternately in an integrated-type curriculum there is a weak classification, and the rule is things must be brought together. When applied to a discipline that has a strong classification, the principles of this model may be extended to the relationship that exists amongst its members of staff. Strong boundaries that exist amongst

knowledge structures could also exist between members of the staff and the students. The head of department will direct power downwards. There will be weak relations between staff with respect to pedagogic discourse as each is differently specialized.

By contrast, in a weak classification model, boundaries are permeable and communications from the outside are less controlled. Staff is part of a strong social network which are concerned with the integration of difference. This structure tends to weaken the separate hierarchies and relations between staff tend cohere around knowledge itself. Instead of lecturers being divided and insulated by allegiance to small subject hierarchies, they will be more united by a common endeavour. These horizontal relationships among lecturers may alter the traditional power structures in educational institutions. Each of these curriculum orientations serves a particular political order and particular groups of people, with the collection –type emphasising *states of knowledge* within a specialized form of collection, and the integrated curriculum, which emphasizes *ways of knowing* through education breadth rather than depth (Bernstein, 2002).

According to Bernstein (2002) specialized education e.g. professional degrees, is characterised as hierarchical, differentiating and ritualised, permitting carefully screened students entry and access to knowledge that is sacred and carefully 'bordered'. This allows entry into a discipline through knowledge that is transmitted by lecturers in a context where the lecturer has maximum control or surveillance. Order and control arise out of the hierarchical nature of authority relationships and subject loyalty is systematically developed in students. High status knowledge "is by definition scarce, and its scarcity is inextricably linked to its instrumentality" (Apple, 2004). The discipline centred approach, through its high status technical knowledge, is an example of how power and culture are mediated through society for economic stratification.

d. Reflection

Each of the orientations described has an implicit conception of education virtue that is guided by ideological underpinnings. Each orientation serves to both legitimise certain educational practices and to sanction others negatively (Eisner, 2002). Physiotherapy, the discipline is characteristic of a collection-type curriculum, underlying scientific rationality, and emphasising high status knowledge that is bordered from each other. Curriculum planning is characterised largely by a technocratic rationality that operates in a continual making and remaking of an effective dominant culture that shapes the physiotherapy reality. The practices of the physiotherapy discourse contain the mentalities that student physiotherapists are meant to internalise.

The covert curriculum is operated by immersing student-physiotherapists in practices –learning *inside* the procedures rather than overtly *about* them- ensures that the learner takes on perspectives, adopts a world view, accepts a set of core values, and masters an identity often without a great deal of critical and reflective awareness about matters, nor, indeed, about the Discourse itself (Gee, 1998). The focus is on developing a technically competent physiotherapy practitioner, within an ahistorical context who is socialised as a powerful 'scientific' practitioner within a collection-type, bordered curriculum. How is the ideology of a bordered curriculum extended into and experienced in the relationships that exist between staff and students, and among staff themselves?

As stated in an earlier discussion, institutional ideologies and social positioning may influence curriculum perspectives. Whilst strategies for learning within the curriculum may be aligned to a particular curriculum perspective, it may also be influenced by individual perceptions of the educator about what learning ought to be. In the discussion that follows selections of learning theories that relate to the higher education context will be presented.

Designing Learning

"How teachers and students read the world is inextricably linked to forms of pedagogy that can function either to silence and marginalize students or to legitimate their voices in an effort to empower them as active citizens" (Giroux, 1988a). Heron quoted in Foley (2000) suggests that learning within a curriculum may be authoritative (prescribe, inform, confront) or facilitative or indirect (cathartic, catalyse, support). The design of a curriculum is also influenced by the individual and collective ideological underpinnings of a theory of learning that is held by academic physiotherapists.

Physiotherapy programmes at higher education institutions are characterised by a large content of physiotherapy skills-based knowledge (Eksteen, et al, 2001). Therefore, traditional physiotherapy curricula tend to focus on developing competence through a master-apprenticeship theory of learning where the approach to learning may be largely authoritative. The challenge lies in re-orienting a curriculum that is largely skills-based to include learning that is deep, and promotes critical reflection for individual development. Clouder (2000) has highlighted the need for facilitating reflection-in-action and reflection-on-action in undergraduate students, to mirror what happens in the workplace. According to Clouder, 2000 reflective practice involves the critical analysis of everyday working practices to improve competence and promote professional development.

'Designing learning' advances a discussion on the **adult theory of learning**, **transformative learning theory** and a **social theory of learning** proposed by Wenger (1998). I have elected to discuss these theories of learning because they resonate with the discourse for teaching and learning that is proposed in the policies for higher education and the transforming health care system. Whilst these theories support individual development and building a just society, through practices of pedagogy that are largely self-directed, the culture and

structure of institutionalised settings and workplace training are identified as factors that continue to support teacher-directed learning (Foley, 2000).

a. Adult theory of Learning

Adult learners are defined by those engaged in learning in the post-school years. The broad goal of adult learning is to help adults realize their potential for becoming more liberated, socially responsible, and autonomous learners- that is, to make more informed choices by becoming more critically reflexive as "dialogic thinkers" in their engagement in a given social context (Mezirow, 2000). This encourages learners to become critically aware of the influences of context and human agency in shaping beliefs, assumptions and understanding, whilst becoming more freely and fully engaged in discourse and more effective in taking action on their judgements.

This goal of adult education is linked to facilitation of adult learning through principles such as voluntary participation, mutual respect, collaborative spirit, action and reflection, critical reflection, rather than learning being directed by teachers (Brookfield, 1986). Further, it is linked to the broader notions of democracy and social justice, which should extend to the relationships between teachers and learners. Nel Noddings (1999) quoted in Belenky et al (2000), argues that many people do not understand the processes involved in bringing people into maturity and relationships of equality. Lacking that knowledge, they assume that the process must be a dictatorial one. The authoritarian, teacher-dominated approach to education produces obedient and passive workers through patriarchal practices and ideologies that suffuse education, reproducing relationships of exploitation and oppression (Foley, 2000).

Carl Rogers' idea of facilitating learning is relevant to the move from a dominating to a liberating form of education, one which encourages individual development and contributes to a just society (Foley, 2000). Rogers' idea of the

facilitation of learning starts from the position that the focus of work in learning groups should be 'the honest artistry of interpersonal relations', and not the facilitator's predetermined aims for the group. Important learning was that which heightened your awareness of yourself and others, and which gave you the option of changing your behaviour. The goals of facilitation are both cognitive and affective: the development of participants' analytical capacities, their increased appreciation of the complexities of issues, their increased identification with subject matter, and their increased tolerance of opposing viewpoints (Foley, 2000).

These highlight the differences between teaching for acquisition and teaching for learning. Gee (1998) describes the ideologies that underscore pedagogical intentions.

> "Teaching that leads to *acquisition* means to apprentice students in 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.
> 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. Such teaching develops meta-knowledge. Teaching for acquisition alone leads to successful but 'colonized' students. Teaching for acquisition and teaching for learning are different practices, and good teachers do both" (Gee,1998).

By examining evidence from the primary data sources and ideologies that support curriculum design and pedagogical practices, the extent to which acquisition versus learning, or the adult principles of learning are incorporated into this physiotherapy curriculum will be determined. The adult learning theory, which promulgates critical reflection and the practices of critical pedagogy, is linked to the transformative learning theory.

b. Transformation Learning Theory

Transformation learning extends the adult learning theory by focusing on the development of social responsiveness in individuals. Education is not merely formative – it is transformative (Wenger, 1998). The responsibility of adult educators is to work to bring about transformation at an individual and societal level by recognising, first that we are beings-in-relation and, second our fundamental interdependence with one another and the world (Parks Daloz, 2000).

Linked to critical reflection and critical pedagogy, transformation learning examines the way in which we have come to our knowledge, and of being aware of our values that lead to our perspectives. It is characterised by participatory democracy and the extent to which it exposes the social and cultural embeddedness and taken-for-granted assumptions in which the self is located, explores the interests served by the continuation of the self thus positioned; incites a refusal to be positioned in this way when the interests served are those of domination and oppression; and encourages alternative readings of the text of experience (Tennant,1998 quoted in Mezirow, 2000). Therefore transformation learning depends strongly on the particular environmental and cultural forces at work in the individual's life.

Transformation learning requires the tools of critical thinking and reflection in the process of assessing and reformulating one's assumptions about the knowledge-making process to permit more inclusive, discriminating, permeable, and integrative ways of knowing the world. Further, effective participation in discourse and transformation learning require emotional maturity and social competencies viz. empathy (understanding others and cultivating opportunity through diverse people and political awareness), social skills (adeptness in getting desired responses from others), and self-regulation which includes self-control and trustworthiness (Mezirow, 2000). It is this capacity to identify one's own sense of

self with the well-being of all life that under-girds the use of the term *social responsibility* (Parks Daloz, 2000).

The development of these competences require opportunities for engagement by learners investing themselves in communities of practice, educational imagination that is supported by informational content that is identity-transforming, and educational alignment where learners engage in learning communities whose activities extend beyond the boundaries of the learners (Wenger, 1998). If an institutional setting for learning does not offer new forms of identification and negotiability – that is meaningful forms of membership and empowering forms of ownership of meaning – then it will most probably reproduce the communities and economics of meaning outside of it. Social and practical competences require authentic sites for the experience to be transformative.

c. *Wenger's Social theory of Learning*

Wenger (1998) presented a social theory of learning which focuses on learning as social participation where participation is an encompassing process of being active participants in the *practices* of social communities and constructing *identities* in relation to these communities. In this regard a social theory of learning consists of deeply interconnected and mutually defining components of community (learning as belonging), meaning (learning as experience), identity (learning as becoming) and practice (learning as doing). Intersecting these components for a social theory of learning, Wenger has identified theories of power, theories of subjectivity, theories of meaning and theories of collectivity. Theories of collectivity address the formation of social configurations of various types from the local to the global and seek to describe mechanisms of social cohesion by which these configurations are produced whilst, theories of subjectivity seek to explain how the experience of subjectivity arises out of engagement in the social world. Theory of Power is described as central in social

theory as it operates within conflictual perspectives or as consensual models whilst theories of meaning attempt to account for the ways people produce meanings of their own.

Wenger's social theory of learning represents aspects of the learning theory that are used explicitly in this physiotherapy curriculum. This physiotherapy curriculum engages learning communities that socialise student physiotherapists into the practice of physiotherapy, implicitly and explicitly, through practices 'to become' a member of the physiotherapy community and develop a physiotherapy identity. However, the selection of particular learning communities, and the exclusion of others, may influence the nature of the physiotherapy identity produced in response to social positioning. The extent to which the issues that relate to power, subjectivity, collectivity, and meaning are made explicit and inter-related within the learning communities will be explored through the evidence from the primary data sources.

Arising from the foregoing discussion on the theories of learning and the intended goals of the policies on higher education and a transforming health care system, the following assumptions could be made about the ideology that could underpin the design for learning in a physiotherapy curriculum. First, that the design of the curriculum within higher education should be predicated on an adult and social theory of learning that could position the physiotherapy curriculum to realise individual and social transformation. However, an examination of individual and collective values and assumptions relative the socio-political context, policy, theory and practice, is necessary to guide the ideology on which the curriculum is designed. Second, the changed socio-political context, and the ideology that underscores the curriculum perspective should inform the selection of teaching and learning strategies.

For example, dominating and oppressive forms of pedagogy could be replaced by pedagogy that is transformative, democratic and is sensitive to issues of

caring, sharing, inter-relatedness and social responsibility. To achieve this goal, the curriculum design could focus on competences to develop critical thinking and reflection, social competences and social skills through principles that support both acquisition and learning which are largely learner-directed and developed through participatory and experiential learning opportunities. The challenge is to find the balance between acquisition and deep learning within a curriculum that has a large skills-base as legitimised knowledge, and tends towards technical competence. The discussion that follows on knowledge provides some introspection on the nature of knowledge, the factors that guide its selection in curriculum, and its interpretation in different contexts of use.

Knowledge

The discussion on knowledge focuses, first, on clarifying conceptions about academic knowledge, experiential knowledge, professional knowledge and personal knowledge, and second on the relations among disciplinary knowledge, power, pedagogy and practice.

a. Academic, Experiential, Professional and Personal Knowledge

Arising out of privilege and status that have been accorded to different knowledge claims are tensions that exist between authorized, **academic knowledge** (the knowledge of the academy) **and experiential knowledge** (knowledge generated form experience). The academic knowledge (authorized knowledge) is legitimised within certain institutions and is based largely on dominant forms of discourse characterised by patriarchy, and male dominated positions of power to structure language, theory and define issues. Therefore knowledge has historically meant masculinized knowledge (Letherby, 2003). See, for example, the history of physiotherapy and the development of physiotherapy knowledge, in chapter 2.

The knowledge base of a profession in traditional higher education is largely academic and is concerned with disciplined, codified, propositional knowledge. Propositional knowledge and discipline-based methods of enquiry are constructed within an academic frame of reference, thus largely ignoring the problem of developing and using such knowledge in professional contexts. This definition of "rigorous professional knowledge" designed within a scientific, academic frame generally excludes knowledge of situations and phenomena that professionals perceive as central to their practice e.g. interpersonal communication skills.

Professional knowledge and practice does not stand alone as knowledge that the professional acquires and then implements. It requires the concurrent use of several different types of knowledge. Professional craft knowledge and personal knowledge are largely tacit and it bears a relationship to non-propositional knowledge because of the typology of knowledge that underpins it, that is, practical knowledge, knowing-in-practice, experiential knowledge, aesthetic knowledge, intuitive knowledge, ethical/moral knowledge and embodied knowledge (Titchen, et al in Higgs, et al, 2001). Professional knowledge is something, which the individual will encounter, make sense of, derive personal meaning from, determine what to do about, engage and reflect on in the context of being a person.

Personal knowledge develops through life experiences. Health professionals enter the life world of their patients in order to understand the patient's problems and the lived experience of health and illness. In order to do this health professionals draw on their personal knowledge of life experiences to help them recognize meaning behind the patient's experience. Therefore in personal knowledge lies our recognition of individuals and of those aspects of ourselves that are common to all individuals (Higgs et al, 2001). It is through a person's world-view that professional situations, knowledge and skill are interpreted to determine their meaning and significance for action. World-views are deeply held

beliefs about the self and other human beings that are mediated by cultural, historical and personal contexts of each person. They describe and explain our vision of the world, give meaning to things that we encounter and underpin actions that we take in the world (Cusick, 2001).

According to Eraut (1994) professional knowledge should be inclusive of codified, propositional knowledge, personal knowledge, tacit knowledge, process knowledge and know-how. This is supported by claims made by Higgs et al, 2001 about knowledge used during the clinical practice encounter where health professionals bring three forms of knowledge to the clinical encounter viz. propositional knowledge, professional craft knowledge and personal knowledge. However, only the scientific, propositional form of knowledge is validated and the other forms of knowledge remain embedded in practice or in the person as tacit knowledge.

b. Disciplinary Power, Knowledge, Pedagogy, Practice

Power and knowledge are correlative, they are always found together in 'regimes of truth' (Usher et al, 1994). Foucault argues that 'power and knowledge directly imply one another: that there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations' (Foucault, quoted in Usher et al,1994). According to Foucault, **disciplines** that are located in the human sciences employ regulation, surveillance and labelling of human activities in their production of 'truth'.

> "Truth is centred on the form of scientific discourse and the institutions which produce it; it is subject to constant economic and political incitement (the demand for truth, as much for economic production as for political power); it is the object, under diverse forms, of immense diffusion and consumption (circulating through apparatuses of education and information) whose extent is relatively broad in the social body, (notwithstanding certain strict limitations); it is produced and transmitted under the control, dominant if not

> exclusive, of a few great political and economic apparatuses (university, army, writing, media); lastly, it is the issue of a whole political debate and social confrontation ('ideological' struggles)" (Foucault, 1980b).

Disciplines as systemic bodies of knowledge are also regulatory regimes of 'knowledgeable' practice through which power is exercised. This supports Bernstein's views (2002) on disciplinary control. Theorists have stated that relations of class, power, and gender relations mediate the power of the teacher in the classroom, but the instructional act is the interface at which power relations operate between the student and educator. The specific practices, which actualise the power relations of the teacher, include surveillance, labelling, "supervised freedom" and institutions integrate these relations of power by governing through disciplinary power (Gore, 1993).

Individuals are trained into new habits and patterns of conduct, their bodies are subject to the *dressage* of disciplinary routines, their conduct monitored as closely as possible (Driver, 1994). Pre-modern forms of coercion are replaced by 'discipline', which works through discursive power-knowledge formations – *regimes of truth*- to produce forms of governance that re-position people into tighter forms of regulation and self-regulation. Thus education is not simply what goes on in schools and universities but is an essential part of "governmentality", a crucial aspect of the regulatory practices of a range of modern institution. The locus of power-knowledge formations lies in discourse and the discursive practices through which 'regimes of truth' are constructed.

Foucault used the term "government" to analyse power relations. He described "government" as that which

> "did not only refer to political structures or to the management of states; rather it designated the way in which the conduct of individuals or groups may be directed: the government of children, of souls, of communities, of families, of the sick...to govern, in this sense, is to structure the possible field of action of others." (Foucault,1983b).

Every relation between forces is a power relation and in order to understand the operation of power contextually we need to understand the particular points through which it passes (Foucault, 1980b). Foucault's notion of power captures two understandings of the operation of power viz. (a) power as domination, coercion, constraint, negativity that prevent our purposes and desires from reaching fulfilment and then masks that fact, and (b) in which truth or knowledge can reverse or erase the imposed errors and challenge dominating or repressive power (Gore, 1993). Therefore dominant powers can be unmasked and demystified in order to obtain the undistorted truth for the purpose of empowering.

It is bodies that become the objects of surveillance, be it in the prison cell, the hospital, the school classroom, the factory, through the development of what Foucault (1979) describes as the 'manifold sexualities', which enabled 'the encroachment of a type of power on bodies and their pleasures'. Produced alongside this process of surveillance of the body was a concomitant disciplining through *self-surveillance.* Formal organisation culture regulates the body through its network of rituals and codifications, and through its very bureaucratic existence (Holliday &Thompson, 2001). The disciplining of bodies within secular environments demonstrates that organisational culture is a part of the broader social and cultural forces seeking to regulate men and women's bodies.

The workplace and educational settings (and other secular environments) try to make a distinction between the private and the public body. Holliday & Thompson (2001) present the distinction between the public and the private where mind belongs to the public space and body to the private. Both the public and the private body co-exist simultaneously but managing the distinction becomes an act of discipline and self-surveillance in workplace and the university.

> "In a western philosophical tradition heavily influenced by Descartes it is the mind, and not the body which becomes symbolically central. For Descartes and his descendants pure mind is equated with the rational, sovereign individual. 'Mind' is unequivocally white, able-bodied, heterosexual and male. All 'others' are products of their bodies... The Cartesian position has problematised the body, for the 'normal', or the rational, as something which might be altered or even erased. The 'normal body', then, is diametrically opposed to the 'natural' body. Thus the body becomes invisibilised through the techniques of normalising bodies, techniques which are at the same time made to appear natural." (Holliday & Hassard, 2001)

This Cartesian position describes the basis on which the 'scientific', medical model is predicted and subsequently the discipline of physiotherapy. The history of physiotherapy can be traced to its origin that is characterised by the Cartesian perspective. The power, within this philosophy, rests with the health care professional and the nature of knowledge that the profession legitimises. The views of Higgs et al, 2001 on professional knowledge could be appropriated to criticise this philosophy that selects particular knowledge constructs to advance the perspective of a discourse, to the exclusion of others based on the mind-body or the public-private divide and the power associated with certain knowledge constructs.

Secular institutions (universities and hospitals) are characterised by hierarchy and bureaucracy. They provide structure and stability, which function as mechanisms of control that tend toward normalising effects in the public space. They structure and define social existence through the environment and social practices that they permit within an institutional value system, which is upheld by those who have decision-making power. Secular environments are marked firstly by a concern with enclosure and separation.

Eadie (2001) highlights the constitutive role that architecture and décor plays in the structuring of the body, the way that bodies are fitted by and for the spaces they inhabit and the routines that they perform there. The environment therefore has a dual role: to define for each body what it can and cannot do, how it may

and may not move, what it should and should not look at (a geographical map of bodily operations); to define for each subject what its body means, and how to feel about it (a semiotic grid of bodily significances). These 'normalising effects' maybe internalised amongst student-physiotherapists through measures of surveillance, in the teaching and learning environment, the classroom or during clinical education.

The power of the classroom setting is reproduced in the **practice setting** in the relationship between the patient and the physiotherapy professional. The discourse of physiotherapy, for example, by sounding 'scientific' and "expert", contributes to the quiescence of the public by focussing on its "sophistication" through the language of physiotherapy. Swain (2004) has suggested that power relations are constructed by the professional through the control of the context, time and space and social interaction is shaped by gender, social class and other factors that are believed to determine the person's social worth. Second, power relations can be constructed through distortion, devaluing and drowning out of the client's voice with deliberate channelling of the conversation towards judgements by the professional. Third, unequal power relations can be constructed through ways of responding that block, divert, distort, and re-channel the track the client is on.

Finally, professional power can be constructed through taking over and dominating the flow of conversation, deciding needs and solutions for the other person and professional defensiveness is a barrier to listening. Creating shifts in the power relations could be facilitated through a learning environment that values voice and the principles of democracy to develop social skills and social competences that invite participation and pluralism.

The preceding discussion on curriculum has highlighted how discourses are linked to social power, and how the values and ideologies of a discourse may be advanced implicitly and explicitly through the curriculum design and structure.

For example, during the apartheid era knowledge and power were linked through the creation of dominating, stratified curricula that were designed for the race group for which it was intended. The intended effect was the creation of inequalities and social injustices. By contrast, post-apartheid policies foreground democracy and equality. These new values and ideology necessarily require a re-orientation of curriculum design and practice. The values that underpin the transforming ideology tend to resonate with critical, feminist and post-modern theories.

Conceptions of critical, feminist and post-modern theories

a. Critical Theory

The basis of **critical theory** resonates with aspects of feminist epistemology towards a critique of the Cartesian "philosophy of the subject", plurality of participants in dialogue and the interdependence of conceptions of knowledge and conceptions of community. Critical theory employs explanatory models that seek to demystify and reveal inherent ideologies that have rationalised current practice. A critique of the social reality may be followed by an attempt to change that reality.

A central feature of critical theory is Habermas' theory of communicative action, which is directed towards achieving an agreement that is rationally motivated on reasons and grounds rather than coercion and force (Roderick, 1986). It requires mutual and co-operative understanding amongst participants, which form the communication community. Communicative rationality is the central concept that provides a normative foundation for critical social theory. Communicative rationality involves an attempt to identify empirically the actual social embodiment and historical development of rationality structures, as well as the objective possibilities for extending rationality to more spheres of social life (Roderick, 1986). The concept of consensus is used to articulate an ideal of socialization and enculturation into a just society by overcoming relationships of dominance

and submission through argumentation that is based on epistemic justification. However, feminists for the absence of a gender perspective have criticized this theory (Fraser, 1995).

b. Feminist Epistemology

Feminist theory is based on the premise that the experiences of all human beings are valid and should not be excluded from our understandings and there is no one authority or objective method that leads to the production of pure knowledge. It is of a view that encompasses a focus on gender, as well as other sources of social and cultural inequity (race, class, ethnicity, language) towards the construction of a social identity and promotion of social justice. A critical feminist perspective is proposed as a view that encompasses a focus on gender as well as other sources of social and cultural inequity and an emphasis on transformative potential (Kushner & Morrow, 2003).

Feminist theory is shaped by two central debates viz. between difference and equality, and between an ethic of justice and an ethic of care in relation to moral reasoning. Gender difference is viewed by equality theorists as a patriarchal creation used to rationalize the inequality between the sexes (Squires, 1999). A further argument postulated by feminists is that women share similar experiences, values, and interests by virtue of being oppressed by men and wanting to be free of this domination. This appeal to woman's fundamental common identity and reality has been at the root of gynocentric feminism.

A key theorist of gynocentric feminism is Dorothy Smith (Seidman, 2004). Smith asserts that men and women are socially positioned differently and unequally, with women's lives centred around domestic and care-taking tasks, producing a common gender experience. Women's values and ways of knowing are shaped by their unique social experiences. Smith argues that women's experiences,

values, and ways of thinking or knowing have been, until recently, conspicuously absent from what passes as the dominant knowledge (Seidman, 2004).

Women's experiences and knowledge have been devalued in relation to the values and perspectives that shape the public world of men's lives. The public world of men's lives in the western societies, is organized around 'objectified knowledge' or textually mediated discourses, e.g. scientific-medical, demographic texts, and hospital, prison and educational records, that value abstract and impersonal reasoning. Men have used science, medicine and popular culture to perpetuate the illusion that nature dictates gender difference and hierarchy (Seidman, 2004). Smith underscores objectified knowledge and discourses as the central mechanism of social domination, and her aim is to enhance woman's understanding of the social forces that shape their lives for the purpose of promoting a critical political awareness and practice (Seidman, 2004).

Gynocentric feminism was criticised by woman of colour for its focus on gender inequalities to the exclusion of race and class identity. Gender oppression for black women were said to be inseparable from racial and class oppression. Feminists of colour aimed to expand the category of woman to include them by viewing gender, race, and class as interconnected.

(i). Racism and Gender

Racism is an ideological poison that is learned. It is a historical and social construction that seeps into social practices, needs, the unconscious, and rationality itself (Giroux, 1991). Racism is discrimination by a group against another for the purpose of subjugation or maintaining subjugation. In other words one cannot be racist unless he has the power to subjugate (Biko, 2004). Race and ethnicity have generally been reduced to the discourse of the 'Other' who, is defined within the universalistic theories that create a rational, White male, Eurocentric subject that occupies the centres of power. Black feminists focus on

the ways in which White ethnicity exercises power, designates Otherness in terms that degrade and cheapen human life, and hides its own partiality in narratives of universality and common sense. The Other is reduced to an object whose experiences and traditions are either deemed alien by Whites, and whose identity is recognised in relation to how the dominant other functions. These structure asymmetrical relations of power.

In theorising "whiteness", Seidman (2004) states that Whites claim the benefits of White social privilege that relate to opportunity, choice, voice, and respect. The interests and values of Whites are claimed to express broadly human concerns, and whiteness speaks with reason whilst serving as a baseline standard of what is considered natural and normal. This works to create the 'Other' through dependency and individualization (Apple, 1996).

(ii). Critical Race Theory

Seidman (2004) has outlined the tenets of *critical race theory* that centre the debates on Black racism. The critical race theory outlined by Seidman, (2004), includes the stand-point on Afrocentrism by Asante, the multiple stand-points and Afrocentric feminism of Hills, and post-modern race theory of Appiah. For the purpose of this study, I have selected to illuminate the perspectives of Afrocentrism by Asante, and the multiple standpoints and Afrocentric feminism of Patricia Hill Collins because of their significance to the South African experience. First, Afrocentrism is a standpoint that is critical of Eurocentrism, which imposes its knowledge as dominant and universal by devaluing African-centred ideas and experiences. Eurocentrism is characterised as dualistic, linear and materialistic. By contrast, Afrocentrism emphasises holistic approaches to knowledge and society; it values harmony, unity, and spiritualism. As Eurocentrism obliterates African traditions or renders them inferior, they perpetuate the oppression of non-western people.

An example of the imposition of Eurocentism in South Africa is within its health care system where western values have relegated African traditional medicine to an inferior and covert position. African traditional medicine is based on ancestral beliefs that offer theories in respect of the causes of evil, illness and misfortune (Pretorius, 2004). Harmony or balance among cosmic life forces forms the basis of the African ontology of disease and health. Human anatomy and physiology are intimately related to the social and physical environment, and in accordance with these beliefs, treatment comprises not only restoring harmony within the body, but also between the body and the environment. This concept of disease is more comprehensive and differs markedly from that offered in the western, biomedical theory. The African conception is that people do not exist as isolated beings but that they are dynamically enmeshed in a web of relationships and influences with other people, spirits and nature. Within this conception, disease is a disruption of the harmony of life. This philosophy has been devalued and become subjugated knowledge in relation to a dominant Eurocentric view based on dualisms and an either/or dichotomy.

(iii). "Afrocentric feminist" social theory

Patricia Hills Collins proposed an "Afrocentric feminist" social theory in response to the blindness to gender in Afrocentrism and the marginalization of race in feminism (Seidmann, 2004). Collins underscores the emphasis in Black feminism on the inter-locking of gender, race, class and sexuality as sites of identity, social formation and politics. The guiding theme of Black feminism has been the suppression of Black critical thinking in the social mainstream including the university, as a strategy for maintaining White, male, middle-class ruler-ship, and Black women's voices have been excluded or marginalized in public life.

Collins asserts that Afrocentric feminism describes knowledge that is socially anchored in the experiences of particular groups. The multiple social stand-points and agents of knowledge produce a plurality of knowledge. Knowledge involves

the feelings, personal values, and interests of its producers and therefore carries broad social and political implications. However Collins maintains that Black women are not only positioned by their history as Africans, but share with White women a history of sexism, and certain core experiences relating to female biology, sexuality, motherhood, and roles in the household and workplace. An example of a woman's role in society that is constructed irrespective of differences in race is the socially constructed position that exists between woman and the act of caring.

(iv). Caring

Caring is explained at two levels (Dalley, 1996). The first, 'caring for' is related to the tasks of tending another person. The second, 'caring about' is to do with feelings for another person. These two processes coalesce and caring is 'given' to women: it becomes the defining characteristic of their self-identity and their life's work. It becomes the defining characteristic through which one sex is differentiated from the other. Dalley (1996) describes how the role of motherhood and the function of caring are extended into the public world.

> "The concentration of multiple functions in the role of mother-hood seems to be at the root of the caring issue. Biological and social reproduction become confused: the function of bearing children (biological reproduction) and the emotional bonds that are associated with it become indissolubly linked with the tasks of servicing, maintaining and succouring the domestic group (social reproduction) within which childbearing takes place. It is then replicated in the public world. Likewise, the role of mother in relation to her children is extended into other relationships and other contexts. Just as the affective links that form at birth are tied into the mechanical links of servicing and maintenance in the case of healthy children, the same affective links in the case of the disabled and chronically dependant family members similarly get tied to the servicing and maintenance functions." (Dalley, 1996)

The parental caring role in society is often concentrated and regarded as most appropriately filled by the nuclear family. Goody, 1982 quoted in Dalley, 1996 has advanced a view of a collective responsibility for caring.

> "[Caring] roles are potentially available for sharing not only among kin but even with unrelated neighbours, with friends and the state. Sharing is one way of spreading the task of caring, and is and effective way of forging links between adults...and generations" (Goody, 1982 quoted in Dalley, 1996)

Despite the issues that relate gender and caring, both Noddings (1986) and Collins (2003) concur that the act of caring require a displacement from one's own interests to the one cared for. Collins (2003) has advanced three interrelated components, which constitute an Afrocentric ethic of caring that bears a striking resemblance to feminist perspectives of connected knowing. These components of the ethic of caring – the value placed on individual expressiveness, the appropriateness of emotions, and the capacity for empathy – pervade African-American culture and it resembles the importance that some feminist analyses place on women's "inner voice". For Collins an ethic of caring is grounded in a tradition of African humanism that is holistic and seeks harmony. People become more human and empowered only in the context of a community, and only when they become seekers of the type of connections, interactions, and meetings that lead to harmony (Collins, 2003).

A position on developing caring communities may be advanced by the preceding discussion through a union of the two processes of caring. Within this construct, 'caring about' people could extend beyond nuclear relationships towards caring about the wider community in the creation of a context of collective humanism. This could be developed through 'caring for' people in the acts of valuing individual experiences, emotions and displaying empathy. In the discussion that follows, a theory of caring that is located within the clinical context is presented.

(v). Watson's Theory of Caring

Falk Rafael (2000) developed an overview of 'Watson's theory of Human Caring' for a health care context. According to Watson, human caring is based on human values such as kindness, concern, and love of self and others. Watson asserts that congruency, empathy, and warmth are foundational to a caring relationship. Congruency refers to authenticity and genuineness, empathy reflects understanding of both the content and emotion the client is communicating, and warmth is the degree to which the practitioner conveys caring to the client.

Watson claims that a transpersonal caring relationship is characterised by mutuality and subjectivity of the client and the practitioner in the caring relationship. In addition a balanced sensitivity to one's self is foundational to empathy. Sensitivity to self is described as reflection on one's own thoughts, feelings, and experiences in the clinical setting and the development of one's potential. Developing sensitivity to self involves values clarification regarding personal and cultural beliefs and behaviours such as racism, classism, sexism, ageism, and homophobia, among others, that might pose barriers to transpersonal caring. Finally sensitivity to self includes an awareness of the interconnectedness of all things and beings and of the social, historical and political context that shape practice. Sensitivity to others refers to a way of being in relation to clients and is critical to the caring relationship.

Negotiation and sharing are important attributes in the caring process. According to Watson, the caring processes involve the independent relationship between the client and the practitioner assessing client health priorities and needs, planning the intervention, and assessing the effectiveness of the intervention. These occur in the context of mutuality in which both patient and practitioner decide what the caring processes will be and the role each will assume. Problem solving is used in conjunction with multiple ways of knowing. Watson rejects the connotation of power conveyed by diagnostic language. Instead the patient is an

active participant in mutually determining his/her strengths, goals and needs. The practitioner actively facilitates the client's authentic self-determination, including making knowledge, expertise, and professional judgement available to clients for use in making health decisions.

In addition transpersonal teaching-learning is concerned with enhancing a client's response to health concerns. Watson extends her interconnectedness from human interactions to issues that are critical to health, healing, and survival of the earth and all life on it, revealing an ecologic aspect to her theory. This resonates with the Afrocentric ethic of caring that was advanced by Collins (2003), which interrelates the appropriateness of emotion, empathy and subjectivity that link to humanism which, is holistic and seeks harmony.

Watson's position on caring is located at the interface of the interpersonal relationship that develops between the one- caring and the one cared-for within a context of helping. Self-awareness is important in creating supportive relationships because, in its absence, relations of power could develop and obstruct the act of caring. Professional identities are shaped by the nature of relationships that develop within helping relationships. "If we are unable to resist and end domination in relations where there is care, it seems totally unimaginable that we can resist and end it in other institutionalised relations of power" (bell hooks, 1995 quoted in Hicks et al, 2005). The constructs that support Watson's claims could be extended to contexts outside the clinical environment as generic values and assumptions. These could be examined in the process of assessing and developing caring, for example, within the teaching and learning environment.

(vi). Education and Caring

Critical and feminist pedagogies are grounded in conceptions of power as the possession of dominant and repressive forces that are used to dominate,

oppress, coerce and deny. Such is the power that has marginalized and silenced women, the poor, people of colour, and others. In order to oppose these oppressive forces, both critical and feminist pedagogy discourses reclaim power for their own productive, creative, democratic purposes. A feminist classroom may be the domain to transform the cultural split between mother and father, and appropriate the domain of what has been men's by "affirming that we and our students are concrete subjects in the learning process" (Gore, 1993) through a model that is dialectical rather than positivist. The critical or feminist teacher reclaims power for purposes of emancipation or liberatory authority so that power is exercised *with* rather than *over* students (Gore, 1993).

With respect to caring within an education context, Noddings (1986) states, "I am first and foremost one-caring and, second, enactor of specialised functions. As teacher, I am, first, one-caring". However, Culley et al (1985) have articulated the contradictions that this presents for women in general within the patriarchal boundaries of the academy. "As mothers, we are expected to nurture; as professionals we are required to compete....some of us are more drawn to one role – mother or professor – than the other." (Culley et al,1985). Women vacillate, in this context, between the role of 'mothers' who are necessary for comfort, and 'fathers' who are the authority. Female teachers become "bearded mothers" as they betray their body's traditional significance (Culley et al, 1985).

A similar tension exists within the physiotherapy profession that is dominated by women, but whose practise is legitimised through the patriarchy of the medical model. The dominance of the medical model is probably continued into the classroom where hierarchical, power relationships are constructed through the curriculum in the interactions between student and academic physiotherapists. This rationality is inflicted further through the patriarchy that exists in the university environment. These could produce tensions among female physiotherapy academics because of the intersection of their female ways of

knowing and existing patriarchy. These issues become inter-related with the challenge for legitimacy of Black, female voices in the academy.

A theory of care for physiotherapy could be extended from a focus on the tasks that characterise caring through the provision of physiotherapy services, to a wider concept of caring that embraces the concepts of 'caring for' and 'caring about'. This could have the effect of displacing the concept of caring from a medical model construct, that tends to focus on a means-end rationality in its response to issues relating to health, to a wider concept of caring within community centred or Afrocentric care. Further, it could have the potential to shift the stereotypes that have associated the tasks of physiotherapy and the narrow view of caring associated with predominantly women, to include wider views of caring that link the tasks and the affective experience to the notion of humanity and social responsibility.

This could legitimise affective ways of knowing and broaden the conceptions of professional knowledge for practice, for example, by recognising and including the constructs that demonstrate caring (valuing voice, empathy) in the classroom and within clinical practice settings. This supports the view of Clouder (2005) who argues that affective development should be recognised as being fundamental to professional educational rather than incidental. Further Clouder suggests that by immersing students into the realities of practice early in the programme, they could develop their own personal framework for caring and explore the complexities of caring through engaging with 'troublesome knowledge' that positions them in relation to ethical, moral and personal challenges. This 'threshold' refers to a point of entry into or out of a space that is 'transformative'. Students could be helped to move through the 'threshold' towards identity transformation by teachers who are ready to listen to student experiences and legitimise their uncertainties (Clouder, 2005).

Within the historical context of South Africa, this transformation will necessarily involve beginning at a point of critical self-awareness on issues that relate to difference and social inequalities that arise from race, class, gender, sexual orientation, poverty, towards relationships that could be predicated on democracy and equality. These 'critical introspections' could broaden the perspective on caring from a task oriented practical competence to developing social and emotional awareness within practice settings. This may have the potential to produce the type of transformation that is articulated as national goals at an individual and social level.

c. Postmodernism

Postmodernists focus on the criteria by which claims to knowledge are legitimised. There are many points of overlap between a postmodern stance and positions long held by feminists. Both feminism and postmodernism challenge the epistemological foundations of western thought and argue that the epistemology that is definitive of Enlightenment humanism is misconceived. Both challenge the homocentric definition of knowledge that is defined in terms of "man" the subject, and the rationalism and dualism of the Enlightenment knowledge. In each of the dualisms on which Enlightenment thought rests, rational/irrational, subject/object, and culture/nature, the male is associated with the first element, the female with the second (Hekman, 1990). Feminist theorists enter and echo postmodernist discourse as it deconstructs the grounds for and methods of explaining human experience. It deconstructs notions of reason, knowledge, power, or the self to reveal the effects of gender arrangements that lay beneath neutral and universalising facades (Flax, 1990).

According to Nicholson (1990), postmodernists have focused on the growth of science and its widening influence over many spheres of life throughout modernity. They have claimed that in the name of "science", authority has become exercised in a variety of ways: in the disciplines, the media, popular

advice manuals (Foucault, 1980b, Holliday & Hassard, 2001). Western 'science' cannot be construed as value-free because it has been claimed that the modern western conception of science, which identifies knowledge with power and views it as a weapon for dominating nature, reflects the imperialism, racism, and misogyny of the societies that created it (Jaggar, 1989). Thus, postmodernists urge us to recognize the highest ideals of modernity in the west as immanent to a specific historical time and geographical region and also associated with certain political baggage. Such baggage includes notions of supremacy of the west, of the legitimacy of science to tell us how to use and view our bodies, and the distinction between art and the mass culture.

In this study, the principles of postmodernism will be used to deconstruct how the origin and history of physiotherapy have come to shape the knowledge and the profession in the current South African context. It will also uncover the dualisms that challenge a more integrated approach of practising and teaching physiotherapy. Through the deconstruction of experiences of the participants in the study, the post-modern perspective may provide a lens to recognise alternate perspectives from the one advanced by this curriculum that could constitute a relevant curriculum for this time and this political environment within the South African context.

The interplay between critical feminist and post-modern theories provides a more effective strategy for exploring more comprehensively the relations between social analysis /critique and vulnerable populations. In addition it will explore how the discourse of physiotherapy in South Africa is implicated in relations of power through race, class, and gender, and how physiotherapy practices through curriculum design and implementation, re-inscribe and regulate what is assumed to be reasonable and true.

Part Two: Review of Literature – Physiotherapy Curriculum

In part 2 of this chapter, literature that focuses on the philosophies that guide health sciences curricula, and physiotherapy curricula in particular are presented. In addition Physiotherapy curriculum perspectives, models of physiotherapy practitioners, and current frameworks for physiotherapy curriculum design are discussed.

Guiding Philosophies for Health Sciences Curricula

The two dominant philosophies that tend to guide health sciences curricula are the **medical model** and the **primary health care model**. More recently curricula are being influenced by a philosophy of evidence-based practice.

a. Medical Model

The medical model is framed within perspectives of objective knowledge and reductionism where the ultimate cause of the biological dysfunction is accounted for through principles of chemistry and/or physics (Searight, 2004). In the medical model, illness is discovered by the expert and appropriately labelled and treated. The medical model is exclusionary and operates as a dogma in that alternate perspectives would be removed as invalid, and it presupposes a clear mind/body distinction where ultimately the causal agent of illness would be located in the human body (Turner, 1988).

Roberts (1994) describes how this model explains the working of the human body using key assumptions such as, normal / abnormal, specific aetiology which, is the belief that illnesses and diseases have specific causal agent, and generic disease encompasses the idea that diseases are specific entities that exist outside cultural and historical limits. In addition dualism is explained within

the medical model as separateness between the body and the mind. This assumption has influenced the treatment of the disease rather than the person.

Another key assumption of the medical model is based on 'scientific' objectivity that advances a view of political, cultural and historical neutrality. The individual's actual context of actions, social relations, history and complex relationship with the world is set aside and rendered irrelevant. Only the individual's symptomatic behaviour is considered important and interpreted in light of a general, impersonal system of categories or meanings – a schema of normality and abnormality that are integral to regulating bodies, selves, and populations in accordance with the interests and relevance of the ruling groups. It creates alternate social identities and places the individual under its institutional control.

b. Primary Health Care Model

The concept of primary health care encompasses a political philosophy that calls for radical changes in both the design and content of traditional health services requiring a major shift in the emphasis of health care from curative-hospital based care to integrated community-based care (the guiding context). The health of a person is no longer viewed in an isolated manner within the medical model, but is seen as constituent of the broader socio-economic development imperatives of his/her community. The primary health care (PHC) approach emphasises appropriate and comprehensive health promotion, and health care that is preventative, rehabilitative and curative.

Within a **primary health care philosophy**, a shift in emphasis occurs from external agencies supplying curative health services, to the people of the community becoming active participants of a team that advocates an integrated approach to health, with special health promotion and health prevention initiatives. An important factor that determines the success of this philosophy lies in power –sharing, which involves a shift in the control of the health care context

by the health care professional to a position where the community is an equal partner with all other participating health workers. A multidisciplinary team approach within a primary health care philosophy is underscored, first, by sharing of power amongst health care providers and the community, and second, by the breakdown of ideological and political boundaries between professions. However, the barriers to multidisciplinary education and training rest with the gate-keepers of disciplinary knowledge and the status and power that resides in a hierarchical structure of medical knowledge. Franz (2005) has highlighted the benefits of instrumental, communicative, and transformative learning that are generated from working within cross-professional partnerships. The success of these partnerships created the potential for organizational change.

In the higher education context, factors such as status, professionalism and the separate development of professionals provide a barrier to achieving a multidisciplinary approach to health care. The education and training of health care workers that takes place in the narrow realm of curricula of compartmentalised single professions has been criticised for its inappropriateness to the implementation of PHC (Dennill, 1998). The need for change to a more community-based multidisciplinary training is highlighted because traditional curricula seldom promote common educational experience across disciplines during training. Miller (1995) claimed that faculty members provide the greatest point of resistance to a multidisciplinary curriculum approach because of academic turfism. A socio-anthropological understanding of communities, communication skills to facilitate dialogue with communities and an understanding of group dynamics are critical elements in the education for community participation (King, 1998).

c. *Influence of Medical Model and Primary Health care Model on Physiotherapy Curricula*

Tensions in physiotherapy practice vacillate between evidence-based practice and practice epistemologies, and between physiotherapy programmes that are designed within a client/patient centred philosophy and those of a biomedical tradition. Traditionally, health sciences curricula focused on the acquisition of professional competencies within a master-apprentice model of teaching and learning. It is now recognised that these aspects, however important they may be in themselves, are insufficient for the effective practice of physiotherapy (French, et al, 2004).

The schooling of the medical model in physiotherapy is entrenched in its subjects, as is the case in medicine, through the "hard-science" focus of the premedical and undergraduate medical education curriculum, an increased emphasis on technologically oriented tertiary care, and the vague, unscientific nature of psychosocial knowledge which, eliminates the synthesis between biomedical and psychosocial knowledge (Searight, 1994). The dominance of the medical model and scientific credibility, created an imbalance in value between practice knowledge (or professional knowledge) and knowledge that was scientifically validated. This trend continues today in the extreme views of scientific evidence-based practice (Higgs & Titchen, 2001) that is valued and represented more than qualitative research strategies in physiotherapy literature (Gibson & Martin, 2003).

In line with the principles of primary health care[1], physiotherapy practice is extending into community-based settings employing a community-based and client/family centred approach to health care. This approach to health care is

[1] See, for example, World Health Organisation. 1978. The Alma-Ata conference on primary health care. *WHO chronicle.* Vol.32: 409-30
World Health Organisation. 1986. *Ottawa charter for health promotion: an international conference on health promotion.* November 17-21. Copenhagen: WHO Regional Office for Europe.

characterised by devolution of power through community participation, partnerships with clients and their families, and intersectoral collaboration. Within this context, physiotherapists need to be able to work well in health care teams and to demonstrate both their discrete professional skills and an ability to interact with a range of different clients and colleagues and to make decisions in various settings, within the context of a changing political and institutional environment (Higgs et al, 2001).

Adoption of primary health care principles translated into a more comprehensive, multidisciplinary team approach to health care in an effort to reverse the gross inequalities in the status of health care, towards the promotion of social justice. In addition to providing a multidisciplinary team approach to patient care, barriers between lay and professional people, and between professionals active in the various sectors of society that have an influence on community living could be transcended (Glatthaar,1990). The positive gains of interacting within a community allow physiotherapists to provide patients and their caregivers with effective rehabilitation programmes within a realistic home environment.

The primary health care context can provide both benefits and dilemmas for physiotherapists who have been strongly influenced by the medical model (Litchfield et al, 2002) as physiotherapists remain grounded in the medical model and evidence-based practise in order to prove their worth as a vital part of the health care team. For example, Futter (2003) observed that student physiotherapists in a community setting in South Africa were managing their clients according to the medical model and were insufficiently aware of the social, political, economical, cultural and religious differences that influenced the community and how these differences impacted on the health of disabled people. Student physiotherapists lacked knowledge of the humanities to change their practice approach from a medical model of care to that of a biopsychosocial model.

This resonates with a claim put forward by Stachura (1994) that physiotherapists agree on this alternate perspective (social ecology) but they do not operate in a climate that practises the social construction of disability despite this being the current model for care in the community. Further, Stachura (1994) asserts that what we as a profession must ensure is that as a group we are not maintaining the status quo merely to protect vested self-interest. In the South African context, a similar perspective stated by the National Physiotherapy Committee (1998) illustrates that the need for legitimisation of the physiotherapy profession ranked higher than developing health care services for communities within a patient-centred approach.

> "In attempting to ascend from the status of a minor profession, too much of time was spent on this endeavour at the expense of developing patient/client management within a hierarchical framework rather than being based on the patient/client and community needs. Curative services have taken precedence over rehabilitation services at the expense of the patient's/client's quality of life." (National Physiotherapy Committee, 1998)

Despite national policy imperatives for a transforming health care system that is based on the primary health care philosophy, the Professional Board for Physiotherapy on the HPCSA did not provide universities with guide-lines to develop curricula within the changed philosophy. Consequently, a South African study undertaken by Krause (2002) was motivated by the silence from the Professional Board for Physiotherapy, Podiatry and Biokinetics on the HPCSA, with regards to the skills and competencies that student physiotherapists must acquire for use in all four areas of health care delivery. The Professional Board for Physiotherapy was also criticised for not stipulating the practical experience and competencies that were required for primary health care (Krause, 2002). The result of the study was a framework for educating and training physiotherapy undergraduate students that stipulated the exit-level outcomes student physiotherapists should achieve on graduating.

For physiotherapists, collaboration in a socially-based, client-centred model of health care is a radical change from the treatment of patients in large acute hospitals dominated by a medical model of care (Richardson, 1999). Within a South African health care context, Beenhakker (1987) outlined additional components to the physiotherapy undergraduate curriculum that were required to produce a competent physiotherapist for a health care context that was characterised by first and third world problems. The following areas were perceived as being essential: a course in human behavioural sciences which included all aspects of interpersonal relationships such as communication skills, counselling, social and cultural differences, psychology and sociology of illness and disability. Second, students must be given the opportunity to work in a multidisciplinary team and mix socially with other health professionals from the early years of their training. Management, leadership and collaborative skills should be developed using active learning strategies. Third, the role of the physiotherapist as an educator should be recognised and developed through an introductory course in educational methodology. Fourth, community health including domiciliary care and rural health problems will need to be studied. These objectives should be constantly reviewed to reflect new trends in practice and health care.

Recent literature suggests that health care professionals are grossly lacking in their ability to identify and address potential cultural barriers in their professional interactions. Leavitt (quoted in Black et al, 2002) summarized the state of cultural competency among physical therapy professionals this way:

> "Historically, few practicing rehabilitation professionals have been suitably educated on the issues associated with the delivery of cross-cultural health care. Often, their education has ignored the influence of socioeconomic status, religion, race, or ethnicity, as well as the presence of differing explanatory models or differing verbal and non-verbal communication or learning styles. Strategies to overcome potential barriers resulting from misunderstandings have been sorely lacking, and, few schools or training programs provide adequate instruction about culture and health" (Leavitt quoted in Black et al, 2002).

Issues such as cultural sensitivity, informed consent, and patient involvement in goal setting are not extrinsic issues to the practice of physical therapy within a medical model of care. Instead, these elements are the cornerstones of patient-centred care. If we are to embrace the concept of patient-centred care, cultural sensitivity becomes just one part of that over-arching umbrella of patient rights. The struggle to educate practitioners about cultural sensitivity progresses slowly because the concept requires an internal learning process (Bender, 2002).

Black et al (2002) have outlined four steps towards developing cultural competence. These are first, identification of personal cultural biases, second, understanding general cultural differences, third, accepting and respecting cultural differences, and fourth, the application of cultural understandings. However, Gordon (2005) states that whilst learning about multiculturalism and diversity is important, this education holds larger value when multiculturalism informs advocacy. This cultural sensitivity comes from an understanding of contemporary social-justice issues as well as the self-awareness of one's own position with regards to positions of power and privilege. Self-knowledge of privilege and power, combined with an understanding of systems of privilege and power, enables students to develop the pluralistic attitudes for social action and social justice (Gordon, 2005).

A conceptual framework for physiotherapy curriculum design that acknowledges plurality of views and advanced a more humanistic view to curriculum was developed by Broberg et al (2003). This framework shifts the development of the student physiotherapist from the technical and cognitive domains of practice to the professional and individual development of the practitioner within a social context. A more humanistic approach to physiotherapy practice is developed by theorising the 'body' within a socio-cultural context which, shifts emphasis away from skills and techniques towards a biopsychosocial framing. The framework pays particular attention to the interaction between the patient and the

physiotherapist as a core aspect of the physiotherapy process. This is a shift from the medical model to more integrated, humanistic approach.

The proposed framework by Broberg et al (2003), has a strong slant towards pluralism and adult principles of learning by articulating teaching and learning strategies that reflect critical feminist and post-modern pedagogy for personal and professional growth, and a range of learning strategies that are congruent to student learning styles. It pays attention to the areas of work and physiotherapy practice within a multidisciplinary team. The framework values professional craft knowledge and personal knowledge in addition to propositional knowledge, research that supports both evidence-based and experience-based practice, and practice that is sensitive to cultures and contexts. The framework recommends that the practitioner should be sensitive to his/her self by having an understanding of his/her values as a prerequisite for understanding other people's values and, taking them into account. It advocates that ethical principles such as autonomy, integrity and equality should guide all physiotherapy interventions.

This framework proposed by Broberg et al (2003) serves as a more humanistic, integrated alternative than those framed by the medical model rationality. Whilst this framework suggests more caring democratic participation in the practitioner-patient interaction, it is silent on physiotherapy's response to inequalities in health care and social resources. This suggests that it does not acknowledge the physiotherapists' transformative role in political issues that relate to social justice and transformation at a broader societal level.

The tension in physiotherapy practice is created by competing philosophies from the medical model, the client-centred primary health care model, and evidence-based practice. In the following discussion, a review of physiotherapy curriculum perspectives is presented.

Physiotherapy Curriculum Perspectives

Physiotherapy curricula are often criticised for their focus towards the decontextualised adoption and practice of technical skills with the expectation that they will transfer into the context of the professional workplace, predominant hospital-based practice, and the theory-practice gap between education and health care (Shepard, et al, 1990, Richardson, 1992, Richardson, 1999). A study conducted by Moyo (2001) in Zambia confirmed that the physiotherapy curriculum, which socialises students into physiotherapy practice, is aimed at achieving technical clinical competence in students.

Curriculum Models

Wellard et al (1999) have identified the five main curriculum models that are used in the preparation of health science practitioners. These models are the **traditional curriculum, the integrated curriculum models, competency based curriculum model, problem-based curriculum models, and experiential and practice-based curriculum models**. The key features of each model identified by Wellard et al (1999) are presented.

The **traditional curriculum model** is the subject-centred curriculum and places considerable emphasis on scientific factual knowledge as foundation for clinical experience. Less emphasis is given to behavioural and social health perspectives. Teaching in the traditional curriculum is primarily didactic. Academic and clinical experts lecture, instruct, demonstrate and examine student knowledge and skill acquisition. It is largely left to students to work out the linkages and to integrate the subject matter of the various contributing disciplines. This model assumes a hierarchical authoritarian relationship between teachers and learners. The primary role of the teacher is to determine the rules governing skill and knowledge acquisition, provide expert input, determine academic and clinical standards, and assess student performance in relation to

these standards. A criticism of the traditional model is that it provides students with large amounts of factual knowledge compartmentalised into different disciplines (Bernstein, 1996, 2002)

The **integrated curriculum model** was developed in response to limitations of the traditional curriculum. This model attempts to merge contributing disciplines in order to achieve improved integration between theoretical knowledge and clinical practice. Changes to pedagogy include incorporating more interactive and action-based learning activities, for example, small group learning, individualized study, team development processes, and assignment work incorporating critical analysis of and reflection on clinical experience. The relationship between teachers and learners moves from a hierarchical authoritarian one to one based on cooperation and sharing of experiences. The strengths of the model lie in enabling students to develop the integration between theory and clinical practice, and the knowledge and skills acquired through this curriculum model have a stronger resonance with real world professional practice. This curriculum model tends to resonate with that proposed by Cornbleth, 1990.

The **competency-based curriculum** model focuses on the key areas of competence and performance and provides substantial description of levels of performance in competencies. Mastery learning is an often-used teaching method. The teacher has control of the content, the instructional process, arranges the learning environment and, sets and assesses the mastery standards and performance. The student is the subject of these arrangements designed to optimise student learning. A weakness of this curriculum model lies in its emphasis on the development of skills and behaviour, under emphasising the development of appropriate attitudes and values. The emphasis is on structured and mechanistic definition of competencies to the detriment of creative and reflective learning. Its strengths lie in the explicit definition of the actual behaviour that students need to be competent as health practitioners and there is

increased validity around assessment because standards of performance are identified.

Problem-based curriculum models focus on the holistic applied perspective of what students are required to learn. This focus is achieved by taking a systems perspective or a fundamental issues perspective rather than simply considering subjects and disciplines. Problem-based curriculum models start with the premise that learning in the real world begins with a question or problem, which drives the process of enquiry and the learning of relevant knowledge and skills to address the problem. Through carefully selected problems, students acquire the range of needed contextual, biophysical, social and humanistic knowledge and skills. Usually the problems are in the form of patient cases, which engage reflection, analysis and skill development.

Teaching and learning methods assume a high level of self- direction on the part of the learners within small learning groups. The role of the teacher is to facilitate the work of the student group through advising about resources, developing the skills of teamwork and group communication processes, developing tools and materials to assist learners in their problem-solving approaches, and providing feedback on student performance. Students are encouraged to move towards independent learning. The problem-based curriculum model encourages a collaborative and collegial relationship among students and between staff and students.

The strengths of the model lie in self-direction and active enquiry-based learning. It acknowledges the importance of learning and has real world relevance. The weaknesses of the model lie in the less structured approach that does suit the learning styles of some students, areas of knowledge may be neglected and the program is staff and resource intensive.

Whilst the merits of the problem-based model for physiotherapy curricula have been accorded, Eksteen et al (2001) provided an alternate view. A problem-based curriculum is concerned with the substantive structure (content) of the

discipline. Eksteen claims that physiotherapy has an essential 'process' nature as its body of knowledge because it consists of the process of evaluating and treating a patient as content through a 'scientific' method of investigation. The 'structural' knowledge used in physiotherapy is not essentially physiotherapeutic, because it represents the relevant knowledge from other disciplines used in physiotherapy. This may be one of the reasons why the problem-based curriculum does not fulfil the expected outcomes in physiotherapy education (Eksteen, 2001).

Experiential and practice-based curriculum models involve an apprenticeship-style training model augmented by educational release and supplementary educational activities. The curriculum is based on a framework which links 'domains of competence', patient presentations, and health needs and priorities. The foundation of experiential practice-based curriculum is 'learning on the job' by applying knowledge and skills in the real world. Experiential learning allows learning to occur in context. Self-directed learning is a frequent feature of experiential curriculum models. The main players in experiential and practice-based curriculum models are the triad of educator, clinical practitioner and student. Educators provide and conduct education release activities, whilst the clinical supervisor provides direct supervision and on-the-job training in practical knowledge, skills and procedures. The strengths of the model lie in an emphasis on real world practical experience and of self-directed learning. A weakness of this model lies in insufficient emphasis on critical intellectual reflection and rigour in learning.

More recently, curricula have shown evidence of developing within a **social ecology framework** where the acquisition of more generic skills including interpersonal skills, problem-solving, cultural competence and information technology competence have developed around a model of client-centredness to

prepare students for the real world.[2] This is an approach to health care that returns to the notions of caring for patients, and moves the relationship between clients (not dependant patients) and health professionals towards empowerment, and sharing of power and responsibility. In developing systems of caring, the clinician is required to practise with cultural sensitivity and cultural competence through an understanding of the concepts of race, ethnicity and culture in diverse populations and by reflecting on practices that examine prejudices, power differentials, and stereotypes that will address inequalities in health care (Stewart, 2002). Within this perspective, the client's personal and social needs are accommodated and it acknowledges the social and political context in which these needs are expressed.

In the South African context, Vally (2006) has emphasised that "we need skills necessary for our communities. Quite often these are the skills that the market does not value". Higgs et al (2002) and Jensen, et al (2000), supported the need for education to be rooted in practice and taught around patient care, within a social ecology model. Both these claims propose to reverse the hierarchy that privileges technical/academic competence valued at higher education institutions over professional practice knowledge. This proposal will necessarily shift the practice paradigm from a medical construct of *cure* towards practice within a socially constructed context of *care* that will legitimate 'subjective' ways of knowing in an area where practice epistemologies are unbalanced by the masculinisation of knowledge. This could be extended into curriculum design and implementation through strategies for teaching and learning that promote critical and feminist perspectives (Fassett & Edwards, 1999) focusing on examining gendered assumptions, social justice and legitimising students' voices by acknowledging their experiences.

[2] See, for example, Higgs, J. & Edwards, H. 2002. Challenges facing health professional education in the changing context of university education. *Journal of Occupational Therapy*. Vol. 67, no.7.

The selection of a curriculum model is dependent on the prevailing ideology of the curriculum developers, social interests, the physical and human resources, attributes of learners, and the context of practice. These factors influence the development of the profession and the corresponding model of physiotherapy practitioner that the curriculum discourse will attempt to advance for a particular time and socio-political context. Therefore the ideologies that underscore curriculum development tend to correspond with the emergent practitioner models.

Review of Physiotherapy Practitioner Models

Higgs and Hunt (1999) have charted the transition of health professionals from the master-apprentice era to the development of autonomous competent professionals. The following models reflect trends in notions of practice, education and expertise, but which may well continue to exist concurrently in different contexts.

The apprenticeship model – here the expert began as an apprentice, and learned in the workplace at the feet of the master. The focus of the apprenticeship system was on the practical knowledge, craft and art of the practice role of the health care worker. Expertise arose as a product of the quality of the master's competence, tuition and feedback and the work-based experience of the learner.

The health professional model – involved a shift from the apprenticeship model to clinical-technical competence supported by a more scientific knowledge base within the context of professionalism. Expertise in this model is typified by the diagnosis and disease management roles of the physician

The clinical problem-solver model - the expert in this model demonstrates skills of self-directed learning, clinical problem-solving and thinking skills. The

focus in this model was on skills for problem-solving with a deliberate de-emphasis on knowledge.

The competent clinician model – expertise became synonymous with cost-effectiveness, cost-efficiency and demonstrable competencies. This model leads to an overvaluing of specific, measurable, technical competencies.

The reflective practitioner model – this model, developed by Shepard & Jensen (1990) sought to reduce the theory-practice gap, by creating a reflective physical therapy practitioner rather than a technical physical therapy practitioner. Expertise in this model involves an advanced degree of higher level cognitive skills, particularly reflection-in-action. Reflection needs to part of an overall approach, which encompasses knowledge and technical ability, as well as interpersonal and cultural competence. The reflective physical therapy practitioner holds the knowledge and skills of a technical practitioner and is skilled in creative information acquisition and intervention techniques that can be brought to bear on any unique health care problem that may be encountered during the practice of physical therapy (Shepard et al, 1990).

The scientist-practitioner model – expertise became synonymous with scientific rigour and evidence-based practice. With this trend come questions concerning the nature of acceptable evidence in support of practice and the need to seek evidence beyond science.

The physiotherapy practitioner models discussed resonate with the developments in physiotherapy curricula. Each model reflects the ideologies of a given time with a focus largely on the *professional development* of the practitioner in the context of practice and in response to social standing. The development of the *individual* is seen as separate and therefore remains implicit and inadequately addressed within the constructs of physiotherapy practitioner development. The models are silent on the interdependence and the relatedness of the physiotherapy practitioner to the broader socio-cultural context. The notions that are reflected suggest an adherence to the development of technical

and cognitive competencies within a scientific framing. The notion of human caring within a construct of psychosocialspiritual development is not addressed.

The **interactional professional model** was developed by Higgs and Hunt (1999) which proposed that the future health practitioner combines key notions of competence, reflection, problem solving and professionalism with three other practice concepts: social responsibility, interaction and situational leadership. The model is based on the recognition that health professionals need to operate within a model of social ecology. The model claims that **interactional professionals** will be equipped with generic skills (including skills in communication, problem solving, evaluation and investigation, self-directed learning and interpersonal interaction) which will enable them to engage in lifelong learning and professional review and development, as well as responsible, self-critical autonomous practice of their professional role. Interactional professionals will be capable of interacting effectively with their context in a manner, which is transformational, facilitative, interdependent and symbiotic (i.e. both influenced by and influencing that environment).

Higgs and Hunt (1999) identified the need to merge the factors in higher education practice and health care contexts that impact on the education of health professionals.

> "These include the changing health care arena, the revolution in higher education, globalization, community demand for information, participation and accountability, the development of the health professions with consolidation of the professions' status and increasing expectations from within and without, the changing nature of work with expectations of dynamic career paths, and the competing demands of evidence-based and patient-centred practice. Within this changing context health professionals need to be situational leaders and managers, competent to deal with changes, challenges and contingencies through the employment of creative, relevant, valid and effective strategies of intervention, development and evaluation" (Higgs and Hunt,1999).

In addition to the changing health care context, the influence of a changing higher education landscape also has implications for the education and training of student physiotherapists. Higgs and Edwards (2002) claim that increased access to higher education has resulted in a higher education context that is characterised by a growth in the number and diversity of students. This demands a change in the management and delivery of curricula, and the potential for flexible delivery. Flexible learning is linked to an increased expectation that students will be both independent and interdependent learners, self-motivated, self-directed, self-managed and self-confident. This resonates with the principles of the adult learning theory.

Higgs and Hunt (1999) claim that the characteristics and dimensions of the **interactional professionals** include client centredness and credibility in relation to the given situation, as well as operating within their personal frames of reference. They are competent professionals, interdependent team members, and reflective practitioners capable of substantiation of their actions. Their actions are those of responsible agents who operate interdependently with people and the environment to address the needs of the situation and to facilitate change for the benefit of their clients and society as a whole.
The **interactional model** for health professionals is a shift from the model of technical competence for patient intervention to a model that focuses on developing cognitive competence, competence in physiotherapy professional skills, and collaboration. These are the characteristics that foreground the 'client-centredness' and multidisciplinary approach of the model. The competencies that are recognised in the competent practitioner and effective team-member are made explicit.

The **Interactional Professional Model** proposed by Higgs and Hunt (1999) is unique in comparison to earlier practitioner models because it acknowledged amongst others, the influences of the health care, community and higher education contexts on the development of the health care practitioner. The model

was developed within a particular contextual framework, that is, it integrated the structural and sociocultural contexts that influenced the development of a practitioner. Whilst the model does focus on attainment of physiotherapy craft skills and competences, an additional feature of this model is its focus on relational issues that broadens the focus of the patient-health care professional interaction. The model is located within a multidisciplinary, community-based framing of health care. This is the most relevant model for physiotherapy in the current South African context. Because of its integrated, social ecology base I have used this model as the initial conceptual lens to guide the data production process.

The silences in the **interactional model** for health professionals lie at the interface between the patient's world, and the health care practitioner's world that create the micro-context for practice. I contend that that whilst the **interactional professional model** has identified the competences that are generic for a competent health care professional, the South African context requires, in addition, attitudinal and experiential shifts to enable relational changes that transcend difference. Attitudinal issues that relate to power and social justice within social systems are not made explicit in this model. Relational factors, for example, race, power, gender, class, age, religion, ethnicity, sexual orientation, inequalities and oppression that influence the interpersonal relationship are not addressed.

Factors such as race, gender, class, and ethnicity are especially important in the South African context because these factors were used to officially create unequal opportunities and privilege in the South African health care and social systems during apartheid. I suspect that similar disparities exist in social systems globally. I will argue that to heal the fractures that exist within South African society and to transcend difference, it is important for health care practitioners to first identify their biases and privileges, by developing critical self-awareness and sensitivity of the self. It is necessary to recognise the interdependence of all

human beings within a particular socio-political setting. I will argue further that in a society fragmented by social injustice, the notions of human caring and empathy are essential in health care contexts to create relational shifts, for the dissolution of boundaries and integration within a transforming South African society. This suggests that practice, in the educational or clinical setting requires close contact rather than functioning at a distance.

Conclusion

In this chapter of two parts, I have presented how curriculum is a socio-political construction of a particular time that is underscored by a particular ideology to achieve a particular intent. The choice to experience curriculum through a narrow or broad orientation is also political. Each orientation presents an underlying belief and value system that will shape and manipulate its subjects into the intended discourse. A narrow orientation towards curriculum is underscored by mechanisms of power and control that operate to reproduce the social and hierarchical ordering of structures in society. This is achieved through a teacher-controlled learning environment, through the nature and selection of knowledge that it authorizes, the relations between the student and the teacher, and the mechanisms of surveillance that it employs. The individual is socialised for adaptation into society. A broad orientation to curriculum is committed to social reconstruction through a critical perspective that is sensitive to socio-cultural factors and the individual learning needs of the student.

Physiotherapy knowledge is largely skills / process based and consequently teacher-dominated. The challenge for physiotherapy is to produce a curriculum that simultaneously develops physiotherapy craft knowledge which is context-independent, whilst acknowledging the social injustices that embody it. The broader curriculum perspective could first acknowledge the inequalities and disparities that mark the health care and social systems. Consequently, the focus of the curriculum could shift from socialising the student from becoming a

competent, skilled physiotherapy practitioner to a relational, transformative individual who is competent in technical and affective skills. The focus of the curriculum could be on facilitating an individual to become a reflexive, transformative agent of society through a broader understanding of physiotherapy professional knowledge. In this regard, the physiotherapist's role may expand to issues that relate to advocacy for social justice. To achieve these intentions, the underlying conceptions of curriculum may have to shift to embody the notions of critical, feminist and post-modern theories.

In the chapter that follows, I present a discussion on the methodology used in the study.

CHAPTER 4

Methodology

Education always refers to the development of some-body (Grumet, 1992). With reference to physiotherapy education, this would translate into an initiation of the student into the community of physiotherapy practice or what is alternately referred to as physiotherapy socialisation (Richardson, 1999). The process of physiotherapy socialisation is built from educational activities, which aim to shape the divergent paradigms of individual students towards a convergent professional paradigm (Richardson, 1999). In this research, I cast my gaze on the dialectical relationship between person and world as it is experienced through the physiotherapy undergraduate curriculum. The focus of this research is on exploring how a physiotherapy undergraduate curriculum in a previously disadvantaged university is responding to a society in transition. The research examines the experiences and reflections of people that are engaged in the world of physiotherapy and on the dialogue between the person and his /her perspectives of the physiotherapy curriculum.

In this chapter, I first examine agency and how it operates within the physiotherapy discourse. Second, I present a triangulation of critical, feminist and post-modern perspectives that underpinned the production and deconstruction of the data. The notions that underlie these perspectives, such as, democracy, plurality, race, gender, social class, social justice, transformation, have been explicated in an earlier chapter. Given the history of South Africa and the history of physiotherapy, it was necessary to examine these constructs in the context of curriculum experience. These discussions contextualise and support the framework for the methodology that is used in the study. Third, I present how narrative inquiry was constructed in this study by arguing for the methods selected and the appropriateness for its use in this inquiry. Fourth, I explain how the study was operationalized and blurring of the researcher-researched hyphen.

Fifth, I describe the procedure for data production. Sixth, I explain the strategies that were used for data analysis, and seventh, I explain how validity was established in this study.

Agency

Agency may have a constraining, normative effect on practice or it could reflect the possibilities people have for effecting change within that practice. For the purpose of this research, I will argue that the Professional Board for Physiotherapy on the HPCSA, the medical profession, policy, the contexts of practice, the individual within the community of physiotherapy practitioners, and the community of practitioners as a whole, are the agencies that shape the physiotherapy profession.

As was discussed in an earlier chapter, a central influence that is responsible for shaping the physiotherapy identity is the statutory body, the HPCSA whose legislation, amongst others is to control the scope of physiotherapy practice, and the education and training of physiotherapy professionals. Present day physiotherapy continues to be influenced by the origin and history of the profession, for example, in the gendered nature of the profession, and physiotherapy's association with the medical profession. The influence of the medical profession is observed by its participation in the prescription of what physiotherapy practice ought to be in its role as a service profession for medicine, and second, by legitimating physiotherapy practice through authorized scientific and objective claims that physiotherapy uses to explain its practice.

The physiotherapy discourse is also influenced by the agency of policy that works through multiple domains viz. the policies for health, public service and higher education. Their focus on responsiveness to social accountability, institutional changes and global homogeneity creates spaces for physiotherapists to engage in new actions and locations. This is generative of boundary crossing

and boundary stretching as a tactic to redistribute space. Within a context of transforming policies, the predictability and order that space imposes is disrupted. Creative and critical thinking, and new possibilities for practice evolve in response to shifting spaces and boundaries, and altered contexts of practice. Changing practice contexts requires an assessment of knowledge, skills and other factors that intersect with the context and knowledge for practice. This could relate to the *'transposability' or recontextualization of knowledge* and experience across contexts.

The recontextualization of knowledge and experience shares assumptions of William Sewell's theory of the "transposability of schemas" (Sewell, 1992). Sewell argues that, actors' schemas (akin to procedures for practice) draw on existing resources to create new resources for action. Structure and agency presuppose each other, yet actors' schema and practices are not isomorphic with one structure but are derived through movement across structures. This movement through multiple domains, cultures, and locations forms actors' strategies for action, which they bring to new locations. Relocated and recombined in new contexts, these actions constitute the possibility of agency to rearrange spaces by appropriating aspects of them for new uses and meanings (Talburt, 2000).

Sewell's theory relates to, for example, the teaching and learning experiences of student physiotherapists in the classroom and the experience of 'recontextualizing' that experience of learning to learning and practice within the clinical environment. This theory also supports the interpretation of the experiences of novice physiotherapists within a community context of practice that is somewhat different from the largely institutionalised practice settings that are prescribed for clinical education practice within the physiotherapy curriculum.

The community of physiotherapy practitioners and their participation within the community also influences the physiotherapy profession. The model of community of practice proposed by Lave and Wenger (1991) is supported by a

social theory of practice that emphasises the relational interdependency of agent and world, activity, meaning, cognition, learning and knowing. Participation within the community of practice is based on situated negotiation and renegotiation of meaning in the world. Legitimate peripheral participation within a community of practice takes the form of defining characteristic of ways of belonging.
Peripherality suggests that there may be multiple, varied, more or less engaged and inclusive ways of being located in the fields of participation defined by a community. Changing locations and perspectives constitute part of the learning trajectories, developing identities, and forms of membership. Legitimate peripheral participation analyses the changing forms of participation and identity of persons who engage in sustained participation in a community of practice – from entrance as a newcomer, through becoming an old-timer with respect to newcomers.

This study examines the experiences of physiotherapy practitioners who are located differently within the physiotherapy hierarchy, for example, the physiotherapy academics, novice practitioners, physiotherapy managers, and, student-physiotherapists. Each category of practitioner will be interpreted as a community that exists within the larger physiotherapy community. The experience of each community in relation to the physiotherapy curriculum will be examined. Four central issues are focused on with regards to positioning in the community of physiotherapy practitioners. These issues are the **centre/margin metaphor, othering, plurality and voice, and the curriculum "invention"**.

Lave and Wenger's theory could be appropriated to assess the positioning of physiotherapy practitioners within the community of physiotherapists. Members within this community are positioned differently along a hierarchical structure in relation to their knowledge and experience. For example, my interpretation of the community of physiotherapy practitioners, given its history of hierarchical ordering, could be represented through a **centre/margin metaphor** of circles-within-circles with the location of the physiotherapist-in-training at the outermost

periphery, followed by the novice practitioner moving towards the centre, the expert practitioner or manager, the physiotherapy academic and the central position is occupied by the regulating professional body (HPCSA).

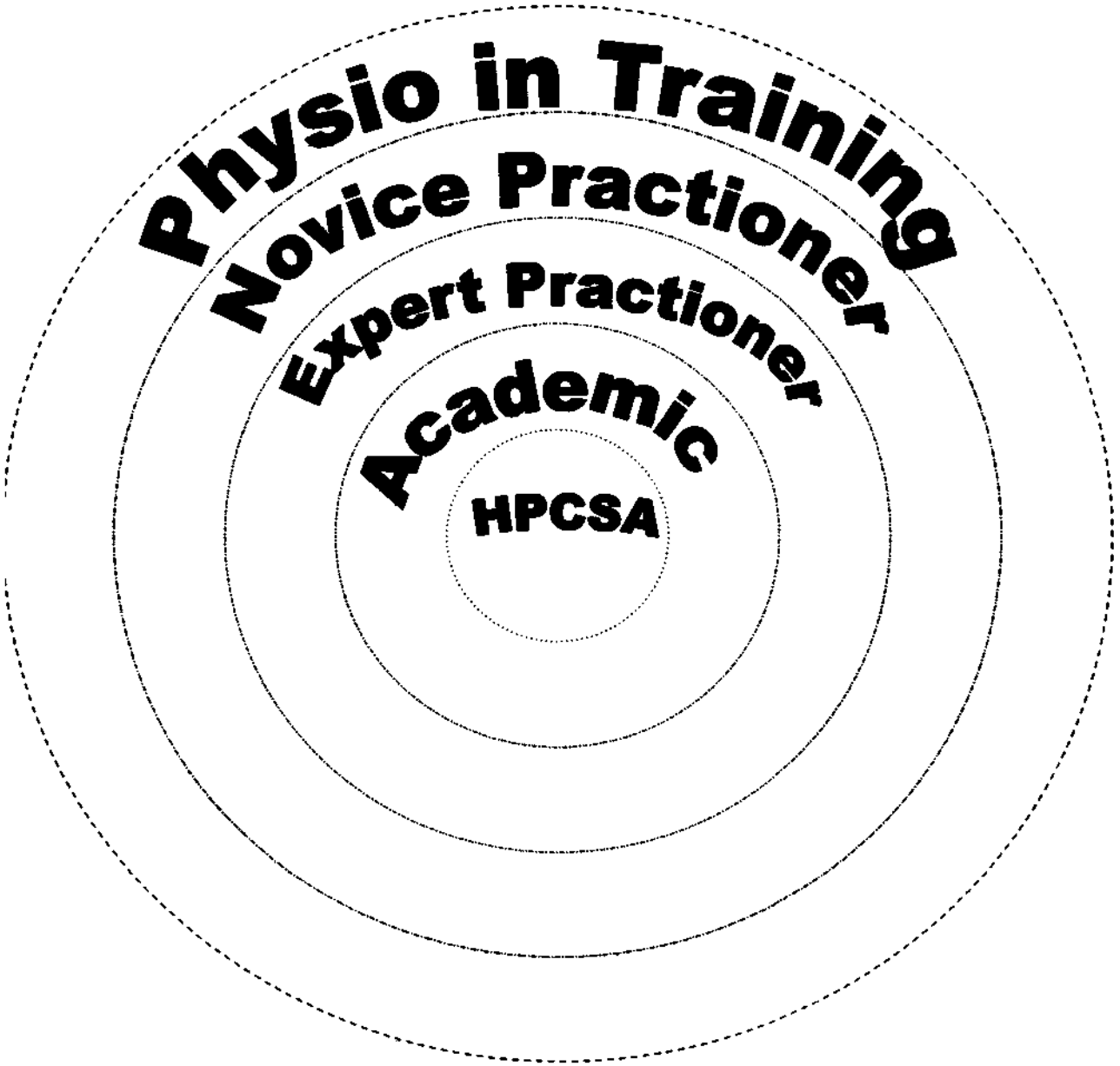

Fig 1. Centre/margin metaphor

This system of relations defines the centre of power, either casting all others outside the circle of the 'real' or holding them at the margins (Minnich, 1990). This centre/margin metaphor represents the location from where categories of knowledge are established, ordered and sequenced. This defines the discourse and authorizes what can and cannot be said by producing relations of power and communities of consent and dissent. Through location knowledge is ordered into sequence and delineates what we may hold as knowable and, following Foucault, renders certain experiences "true" and "scientific" while excluding others (Probyn, 1990). The relations of power, however, could be influenced by the degree of permeability that exists across the 'circles'. Communication, for example, could be facilitated across permeable structures, which could have potential for 'transposability' of knowledge across each context of practice.

The previous discussion suggests that the community of physiotherapists is at once both the victim and the accused in the discourse of **'Othering'**. Arising from the historical context of physiotherapy, physiotherapy is "othered" by the medical profession and by the nature of its own practice and relations of power, subaltern categories of physiotherapy practitioners are created. The concept of the Other is the clue to the difficult conceptual tangle we must undo. Exclusions and devaluations within communities of practice are systemic and shape the world of discourse by replicating what it covers, how it explains and judges so that it remains related to the culture from which it arose. This resonates with the image of consciousness-raising that was conjured by Spivak's argument quoted in Probyn (1990).

> "the whole hierarchical taxonomy of concrete experience which has been regarded as completely valid for so long is exactly what has to be got under. At the same time one cannot use that as a terrorism on the people who were obliged to cathect the place of the other, those whose experiences were not quite 'experience'." (Spivak quoted in Probyn,1990)

These are the dichotomies that shape the physiotherapy community of practice and they are played out in curriculum practice through the degree of inclusiveness and democratic participation that is allowed by the members of physiotherapy community. In researching the experiences of physiotherapy practitioners and physiotherapists-in-training my question turned to how physiotherapy socialisation was produced through the discourse of the physiotherapy curriculum. It explored how learning in the one community (educational institution) interacts with learning in the other (workplace), and how learning produced broader imperatives of individual and social transformation. This path of reconceptualized inquiry leads us inward, to individual experience, and outward, to metatheory (Grumet, 1992). This presents new ways to read and open up ideological contradictions that constitute the construction of experience that moves from the indicative to the subjunctive in order to create a speculative narrative that enables new forms of thought (Visweswaran, 1994).

The study provides a space for recognition of **plurality and voice** within the context of physiotherapy "through diverse voices entering public spaces, and through the recovery of subordinated histories" (Ramazanoğlu and Holland, 2002). This resonates with the principles of democratic transformation where voice and individual expression are valued. Voice, in the study, is represented by the spoken word, or statements that are grouped together to form biographies of one's lived experience.

> "Voice is the meaning that resides in the individual and enables that individual to participate in a community. Voice suggests relationships: the individuals relationship to the meaning of his/her experience and hence to language, and the individual's relationship to the other, since understanding is a social process" (Britzman quoted in Pinar et al, 1995).

This study explores, through the constructs of plurality and voice, the relationship that exists amongst members of the community of physiotherapy practice and their experience of the undergraduate physiotherapy curriculum.

In studying the experience of physiotherapy practitioners (novice physiotherapists, academic physiotherapists, physiotherapy managers) who were representative of the wider community of physiotherapy practice, it allowed me to trace how student physiotherapists became an **invention of the curriculum**. My interest was to trace the "invention" as it unfolds and to write against the discourses that bind, disagreements, the unsaid and the odd moments of uncertainty. The study explores how the physiotherapy experience was structured through the intended physiotherapy curriculum from the vantage point of persons that were directly involved in its construction, and what was the *actual* experience of the curriculum from those who were be-coming physiotherapists and those who were. The study examined how student-physiotherapists were socialised into the community of physiotherapists through implicit and explicit curriculum experiences.

This brief discussion on agency has highlighted how the factors that constitute 'agency' within the physiotherapy profession have either constraining or enabling influences that operate implicitly and / or explicitly. The extent to which these factors influence the curriculum, and in turn, the effect that the curriculum has on the factors that constitute agency is explored in the study.

Critical, feminist and post-modern perspectives

The dialogue that this chapter engages amongst critical, feminist and post-modern perspective, resonate with that presented in an earlier chapter that framed the lens of the research. Following the discussion about the effects of agency and power in physiotherapy, it would be justified to engage research traditions, which do more than create new knowledge. It is necessary to confront the inequality and injustices of social relationships by exposing the appearances that are accepted by the dominant culture as natural and normal, especially in

relation to race, class and gender. In this regard, it becomes necessary to engage in research that is transformative.

Critical Research Perspectives

Critical research traditions have arrived at the point where they recognise that claims to truth are always discursively situated and implicated in relations of power (Kincheloe & McLaren, 1994). In order to engage such critique, the critical researcher has to enter into the research process by putting on the table his/her assumptions (Kincheloe & McLaren, 1994) that relate to the investigation. Later in this chapter I present a brief biography of myself and the values that have guided this inquiry. I have presented the assumptions I hold about the relationship that exist between agency and the discourse of physiotherapy. This is in part influenced by the writings of Foucault (see chapter 3) where researchers are invited to investigate the relationships that are implicated in discourses of power and knowledge, which regulate disciplines and practices.

Post-modernism Perspectives

By charting the origin of physiotherapy and the history of physiotherapy in South Africa, in an earlier chapter, one became aware of the political entanglements that physiotherapists experienced for the purpose of legitimating their practice. In addition, the practice of physiotherapy continues the deeply engrained assumptions of enlightenment rationality and traditional western epistemology within a multicultural, multiracial South African context. Therefore by engaging the principles of post-modern critique in this study, it allowed for deconstruction of western meta-narratives in physiotherapy that have asserted themselves as truth in a context that is typified by diverse cultures, healing practices and traditions, languages and people, and an unjust political history. The synergism that exists between critical theory and postmodernism invites concepts of multiplicity and difference to be explored through a project of democracy, and it

invites new understandings of how power operates by incorporating groups who have been previously excluded or marginalized. This begins to incorporate feminist theoretical concerns to the centre of critical theory.

Feminist Perspectives

Feminist perspectives that inform research are broadly identified by their theories on gender, race and power, their normative frameworks, and their notions of transformation and accountability. It aims to produce knowledge that will be useful for effective transformation of gendered injustice and subordination (Ramazanoğlu & Holland, 2002). Therefore, a critical theory reconceptualized by post structuralism and feminism promotes a politics of difference that refuses to pathologize or exoticize the Other (Kincheloe & McLaren, 1994). Together, these theories advocate social justice and transformation through pluralism, democracy and participation.

Triangulating critical, postmodern and feminist perspectives

Within a context of multiplicity of voices, triangulation of critical theory, postmodernism and feminist perspectives will illuminate the experiences of persons in the community of physiotherapy practice and the physiotherapy curriculum. The ideologies of members within the community of physiotherapy practitioners and their influence on the curriculum will become explicit by engaging in a number of 'critical frames' (Lather, 1992).

In the context of the physiotherapy curriculum, these critical frames may be appropriated to include aspects like the following: studying marginalized groups who are not given the opportunity to speak, for example, by listening to student voices and novice physiotherapy practitioners in their individual capacity; approaching inquiry in ways that are interruptive of taken-for-granted social practices, for example, by allowing the employers of physiotherapists space to

voice their experiences of newly qualified graduates and physiotherapy academics to illuminate their ideologies of a changed physiotherapy curriculum for a changing practice context; and editing the researcher into the text by not presuming that the researcher is a neutral actor in the research. For example, in this study the researcher is at once the "transformative intellectual" and the "passionate participant" (Guba & Lincoln, 1994).

Physiotherapy curriculum development at this institution has been the domain of physiotherapy academics. By engaging multiple participants and marginalized communities who previously had no voice in curriculum development, the study is re-defining democracy within the context of the physiotherapy curriculum. Exclusion from the process of curriculum development, could suggest that student physiotherapists, novice physiotherapy practitioners and physiotherapy employers are made invisible. This cannot be seen as just an absence (Minnich, 1990); that invisibility itself teaches something. These are the notions that are central to critical research, postmodernism and feminist perspectives.

The social constructs that critical, feminist and postmodernism disrupt, for example, power, race, class, gender will be examined within the context of the physiotherapy curriculum to determine what ideologies *actually* shape the physiotherapy curriculum discourse, and *why* is it shaped in a particular way. It will make visible voices that are absent or subordinated in physiotherapy curriculum development. Narrative inquiry was selected as the most suitable research strategy in this regard.

Narrative inquiry

Narrative ways of knowing have been devalued in western scientific tradition. Used in conjunction with curriculum inquiry, all forms of narrative inquiry share the fundamental interest in making sense of experience, and an interest in constructing and communicating meaning (Chase, 2003). This is done through

an inquiry into the knowledge, ideas, perspectives, beliefs and values of narrators in relation to the educational encounter. Narration is culturally shaped and through narrative inquiry, the embodiment of social phenomena in life stories may be determined. As a means to curriculum inquiry, narrative inquiry merges the biography of the narrator and his/her experience and meaning of the curriculum embodied in social processes.

The narrators are invited to theorize their lives within a teaching-learning-practice context that incorporates their own personal beliefs and perspectives. By inviting others to tell their stories reflexively from a life experience, we are finding a form for personal knowledge about feelings and meaning that partially constitutes the narrator. Telling a story requires giving oneself away; every telling is a partial prevarication (Grumet, 1991) where the autobiographical consciousness and the autobiography never coincide. However, the narrative is a means of theorising practise. To act is to theorize. To write autobiographically is, among other things to theorize, as well (Pagano, 1991). It brings to focus the identities that constructed the story as it displaces an inner reality to an outer reality, consolidating connections between the narrator and the listener.

'Moral Fictions'

Narrative inquiry tends to be emancipatory (Gough, 1998) and it has the potential to construct caring communities through sharing stories (Noddings, 1991). It is concerned with analysing and criticising the stories we tell and hear and read in the course of our work, as well as the myths that surround and are embedded in our social interactions. Narrative inquiry requires collaboration, negotiation and ethics of participation between the narrator and the researcher. Grumet quoted in Pinar et al, 1995 has described the concept of 'voice' as constituting three parts that should be attended to in narrative inquiry.

> "The first, situation, acknowledges that we tell our story as a speech event that involves the social, cultural, and political relations in and to which we speak. Narrative, or narratives as I prefer, invites all the specificity, presence, and power that the symbolic

> and semiotic registers of our speaking can provide. And interpretation provides another voice, a reflexive and a more distant one... None is privileged." (Grumet quoted in Pinar et al, 1995).

For example, in the field of curriculum inquiry, the inner experience is sought by suspending the objective world of inquiry. 'Moral fictions' are created, by blurring the public and private through voice. The field of curriculum, with its preoccupation on the public, the visible, with design, sequencing, implementation, evaluation, and in its preoccupation with curricular materials, ignored the individual's experience of those materials (Pinar et al, 1995). As Pagano (1991) writes,

> "Only through meaningful work reflexively reconstituted can we invent ourselves in stories powered with an intellectual and moral passion strong enough to empower us to appropriate our own lives and to authorize our entry into those of others. In the course of our reflexive reconstructions, we teachers must encounter the otherness of our students in order that they may appropriate their own stories. These are moral fictions....moral fictions teach us our own ignorance and help our students to come to theirs" (Pagano, 1991).

In this study, by admitting the student's personal knowledge and reflections of the educational encounter, the emancipatory and caring potential of narratives is experienced. Boundaries and distance are re-negotiated in the student and academic physiotherapist hierarchy. In addition to voice, community and gender have been cited as intrinsic to understanding curriculum through narratives as these embody the social and cultural phenomena of experience. These resonate with feminist theories. The lived experience of the narrator may be captured through journal records, interview transcripts, observations, story telling, letter writing, autobiographical writing, class plans, newsletters, and other writing (Connelly & Clandinin, 1990).

How narrative inquiry is constructed in this study

The choice of narrative techniques used in this study was underscored by critical-feminist and post-modern theories that focus on participatory inquiry, whilst challenging the norms of objectivity. These valued the personal and the private as worthy of study, and valuing reflexivity and emotion as a source of insight, thereby enabling the discovery of experiences of previously silenced groups of student physiotherapists, physiotherapy practitioners and physiotherapy educators.

An eclectic selection of **research tools** was employed in the data production process within a framing of curriculum experience and practise, whilst being sensitive to issues that relate to gender, power, race, class and the language that produced the discursive acts. The narrative inquiry was structured through data produced from in-depth focus group interviews, individual interviews, life-history biographies, a participatory workshop/ group interview, and a qualitatively designed open-ended questionnaire. The multiplicity of methods and research participants were valued "to obtain increasingly accurate, imaginative, and useful answers to persistent problems" (Reinharz, 1992).

Life histories / stories are narratives about some life experience that is of deep and abiding interest to the interviewee. Life histories (in full or part) is not only seen as a way of developing participatory research but is a method that enables the discovering of the social experiences of 'silenced women' (or other silenced groups) (Geiger, quoted in Letherby, 2003). Regardless of differences, people who belong to a common community, for example, therapists or physiotherapy practitioners, share a 'familial embeddedness' that is central to the way they perceive their social world. As a feminist method, life histories attempt to capture the lived experience of the narrator through the active process of reflection and construction whilst evaluating the present, re-evaluating the past and anticipating the future, as the narrator gives us a 'snapshot' of a point in time in his/her world.

There are subtle lines that are drawn among the methods that are used in constructing life histories. These methods, for example, oral history, interviews, biographies and autobiographies contain features of each method that are shared by others. Interviews and oral histories are similar, where interviews focus on a particular experience or phenomenon and oral histories deal more broadly with a person's past. The role of the narrator in oral histories is to discuss the development of all or part of his/her life, as an individual or representative of a specific group, assisted by the questioning of the oral historian.

Life-history interviews assist the informant in reconstructing his/her life memories whilst providing the interviewer with an in-depth look at another's life (Neuman, 2000; Chase, 2003). Oral histories differ from biographies in the method of transmission but both are used to contribute to social justice, develop a feminist theory and explore the meaning of events in the eyes of silenced groups whilst facilitating understanding among social classes. However, writers point out that the literary tradition is essentially an elitist one and that the act of writing, particularly by women, is both class- and culture-bound (Letherby, 2003).

By engaging in the act of writing, respondents may feel less exposed as people if they write rather than speak to researchers and they have more control in what they want to reflect on and disclose to the researcher. This has an empowering effect for the respondent. Oral histories, when conducted among people who are literate and highly educated but who have experiences that have remained hidden, does not 'give voice to the voiceless, but rather allows a different voice from within some person to emerge' (Reinharz, 1992).

Interviewing allows interviewers to envision the person's experience and hear the multiple voices in a person's speech (Reinharz, 1992).

> "It [interviewing] is complex talk, it is loaded with unknowns and hidden messages and I argue that it would be naively realistic, or postpositivistically plain or bland to engage in surface content interviewing that is typical of the standardised interview" (Henning, 2004).

In the scientific tradition, the standardised interview is characterised by the following (Letherby, 2003): the interviewer should interact with the respondent on a minimal basis and be completely neutral and in control; the interviewer's job is that of a noter of responses; when asked what a question means they may only repeat the question and neither body language nor verbal cues should 'bias' the answers. Oakley (1981) has argued that this hierarchical style of interviewing which supposedly results in the perfect interview and which defines the interviewee as sub-ordinate, supports the male paradigm of inquiry.

The best way to find out about people's lives is through non-hierarchical relationships where the interviewer and interviewee interact in the part of information gathering and knowledge making through the researcher's investment of his/her personal identity in the research process. The researcher becomes a co-constructor of meaning whist simultaneously breaking down the hierarchy between the researcher and the respondent within a participatory, interactive frame. Through researcher self-disclosure, "true dialogue" rather than "an interrogation" is initiated (Reinharz, 1992). Within this framing, power vacillates between the interviewer and respondent.

Historically feminist researchers used interviews for the purposes of social reform. Feminist approaches to interviewing are characterised by a preference for an unstructured or open-ended format, a preference for interviewing a person more than once, the creation of social connections, disclosure of personal experiences by the interviewer, avoiding control and fostering equality by downplaying professional status, engaging careful listening in a respondent-oriented direction, and encouraging respondents to express themselves in ways they are most comfortable whilst creating a sense of empowerment (Neuman, 2000). These were the characteristics that underpinned the interview process in this study. This form of interviewing offers the researcher access to people's views of reality through free interaction between the researcher and the

respondent, and it allows the researcher to generate a theory of the respondent's experience.

The narrative is shaped by cultural understandings and during the interview, the language of interviewing and the relationship between the interviewer and interviewee fractures the stories being told. Miller & Glassner (1997) state that interviewees respond to the interviewer "based on who we are in their lives, as well as the social categories to which we belong, such as age, gender, class and race". Although I explained to student-physiotherapists during the data production process that I was wearing a different hat, that I was a researcher in that context, my role as their physiotherapy educator may have produced barriers to communication. To enable free disclosure, the construction of confidential autobiographies was used in conjunction with the focus-group interview.

The problems in the relationship between the interviewer and the interviewee are exacerbated when the interviewer does not share membership with the group being studied. Building rapport by establishing trust and familiarity, showing genuine interest, assuring confidentiality and being non-judgemental whilst constructing a democratic relationship where the interviewee is a co-constructor in the discursive practice, are important elements in negating the view of the interviewee as the "passive subject".

This captures the subjectivities of the participants, of "getting to the data" interactively that does not relinquish the researcher's position as inquirer, but at the same time validates the respondent's part in the knowledge-making process (Henning, 2004). Therefore the interview process should be an empowering, active, meaning-making collaborative occasion (Holstein et al, 1997). This allows the interviewer to encourage the respondent to shift positions in the interview so as to explore alternate perspectives and activate applicable ways of knowing.

The **focus group interview** is a participatory qualitative research method where small groups of homogenous participants (6 - 12) are recruited by the researcher to elicit views and opinions on a research topic. Focus groups are useful in exploratory research or to generate new ideas for questionnaire items or it may take place following the analysis of a questionnaire (Letherby, 2003; Neuman, 2000). The researcher leads the discussion by asking a few questions and the group discussion can follow a more structured or less structured approach (Morgan, 2002) depending on the goals and needs of the research. Whereas the goal in the more structured approach is focused on answering the researchers' questions, the less structured approach is focused on understanding participants' thinking and participants' interests, which are dominant. The researcher's questions, which are fewer and more general, guide the discussion. Discussion is facilitated and participants talk to each other.

In this research, focus-group interviews were used simultaneously with a "life-history biography of a physiotherapist-in-training" to produce narratives of how student physiotherapists experienced this university's undergraduate physiotherapy curriculum. The focus of the student's life-history was based on the period that he/she was engaged in the undergraduate physiotherapy programme. The discussions that developed during the life-history focus group interviews were used as a catalyst for student-physiotherapists to encourage them to write their biography.

The **feminist group interview** that is described by Reinharz (1992) is similar to the focus-group interview where the group interview is established by the researcher for a one-time discussion of the topic. The group interview has a leader, includes face-to-face interaction and it includes participants who have expertise in the area of discussion. The group interview format enhances the flow of ideas and information amongst the women "by being able to listen to each other's experience and to interact with each other....a group interview format

facilitates women building on each other's ideas and augments the identification of patterns through their shared experiences" (Oakley quoted in Reinharz, 1992). Within this research project, the feminist group interview was appropriated to explore the current context of physiotherapy practice in relation to physiotherapy curriculum. The "experts" were representative of novice and expert physiotherapy practitioners who are engaged in providing physiotherapy services within the public health care system.

The difference between individual Interviews and focus-group interviews is that

> "individual interviews may produce the most despairing stories, evince the most minimal sense of possibility, present identities of victimization, and voice stances of hopelessness. In focus groups with the same people the despair seems to evaporate, a sense of possibility sneaks through. In the context of relative safety, trust, comfort, and counter-hegemonic creativity offered by the few free spaces into which we have been invited, a far more textured and less judgemental sense of self is displayed. In these like-minded communities that come together to trade despair and build hope, we see and hear a cacophony of voices filled with spirit, possibility, and a sense of vitality absent in individual data. This is the cost of not seeing or hearing collectives" (Smyth & Shacklock, 1998).

The **open-ended questionnaire** was also used as a data production tool.
In a qualitative research setting, the inquiry focuses on the qualities, characteristics or the properties of a phenomenon to achieve better understanding and explanation. Oakley (1981) states that qualitative methods are usually taken to include unstructured or semi-structured interviewing, participant observation, ethnography, focus groups and other approaches that involve researchers actively 'listening' to what respondents have to say. Quantitative methods are equated with questionnaires, surveys, structured observation and experimental studies. However, writers have criticised this divide along the lines of gendered research methods (Letherby, 2003) and have suggested that the choice of method should be appropriate to the research question, and the particular way in which methods are deployed within the

frameworks in which they are located. Essentially it is important to use a method that suits the project.

The foregoing discussion supports the use of questionnaires in this research project in spite of the traditional assumptions that surround questionnaires as a method of data production that belongs within a quantitative research paradigm. Open-ended questionnaires are described as a focused 'micro-interview' of the research population (Kronberger & Wagner, 2000). It allows the researcher to learn how the respondent thinks and to discover what is really important to him or her within the respondent's world-view through self-expression and richness of detail. It also has the advantage of reaching a wider research population when compared to face-to-face interviews that may have to be conducted over large distances.

A multiplicity of methods were used in this study to construct narratives that privileged the reality of what was experienced by the participants, as an expression of truth of a point of view within a specific location in space and time (Jovchelovitch & Bauer, 2000). The multiplicity of methods reflects that there is no single "feminist way" to do research or "methodological correctness" in feminist research (Reinharz, 1992). It allows the researcher to be creative whilst simultaneously gaining access to a greater range of subject matter and soliciting many voices. The effect is cumulative. To emphasize an earlier discussion, the choice of research tools was guided by the ideologies that support critical, feminist and post-modern theories.

Operationalization of the Study

Situating the Research

The study was conducted within a qualitative research framework. The physiotherapy undergraduate program, which was offered by the Department of Physiotherapy within the Faculty of Health Sciences at the University of Durban-Westville, was used as a case study. The data gathering process began in the latter part of the 2003 academic year and extended into the first half of 2004.

Admitting Participation and Reciprocity

The focus of data production was on methods that could best represent the realities of the lives of physiotherapists within the framing of the physiotherapy curriculum. The methods of choice for data production encouraged the inclusion of the personal, experiential and emotional aspects of the curricular experience. The participants were allowed to represent their lives by audio-recordings, video-recordings and a narrative of their life history. Methods are not passive strategies. They differentially produce, reveal, and enable the display of different kinds of identities. The democratic, participatory intent of this research encouraged self-reflection and deeper understanding of the practices of the research participants.

Lather (1991) proposes that research of an emancipatory nature must have reciprocity. Reciprocity was encouraged in this study through interviews that were conducted in an interactive, dialogic manner that required self-disclosure on the part of the researcher, and sequential interviews that facilitated collaboration between the researcher and research participants, and a deeper probing of research issues. A non-hierarchical relationship was created between the researcher and the research participants where I was open to the questions from the participants and in responding, I gave something of myself back by talking

about myself. In this way, the interviews were dialogic and flexible, re-negotiating the boundaries between the participants and myself. The participants had more 'freedom' during the interview process, and in turn, they had more control over the whole research process.

Reciprocity was slightly more difficult to achieve between the respondents of the open-ended questionnaires and myself. However, the respondents may have been spurred towards participation by sharing their 'new' experience as physiotherapy graduates and as part of the country's first cohort of community service physiotherapists. A reflection of their experiences counted as their contribution to curriculum and professional development for physiotherapy. In addition, many of the respondents of the questionnaires were present at the group interview/ participatory workshop where a more dialogic relationship was created between the participants and myself.

Blurring the researcher-researched hyphen

Behind the research process, stands the personal biography of the gendered researcher, who speaks from a particular class, racial, cultural, and ethnic community perspective. The biographically situated researcher enters the research process from inside an interpretive community that incorporates its own historical research traditions into a distinct point of view (Denzin & Lincoln, 1998). The need to declare one's position in a study requires the researcher to reflect on one's value system and personal history in order to articulate one's ideological stance. This is necessary on two accounts. Firstly, as a researcher, one's background and values will influence the way in which the data is produced and analysed. This implies that the life of the researcher cannot be disassociated from the study. Secondly, in being openly ideological, the reader of the study can take this information into account when interpreting the study's findings and

analysis. In admitting this, the researcher is declaring that this is not 'value neutral' research.

It is not without reason that I engage in a study that straddles critical, feminist and post-modern perspectives. The ideologies that these perspectives reflect concur with my views on social formations that should be disrupted. Further, as discussed in an earlier chapter, physiotherapy research and practice is embodied within a medical scientific framework, which does not legitimise the personal and the emotional aspects of research and practice. I find this contradictory within a health care profession whose practice speaks to the holistic treatment of the person yet it does not validate personal and affective forms of knowledge. It is for this reason that I have strayed out of my profession's research traditions towards a faculty that invites a more realistic and humane focus of research; research that is not sanitized to fit a particular research tradition and which values the personal as a form of knowing.

My Biography

By presenting a brief biography of myself, I allow the reader entry into my 'safe space' in order to trace my ideological principles and establish how they assert themselves in this study. I introduce myself as a South African, middle-class woman of Indian origin. The effects of growing up as an Indian female during the apartheid era has weaved its way into my moral fibre. During my years in a racially segregated secondary school and later at university, I became deeply aware of the injustices that were being played out through apartheid, and I was drawn into campaigns that levelled resistance against issues related to race and social injustice. At the same time, I became acutely aware of how people with disabilities were marginalized by 'normal' people through my experiences of watching my disabled father trying to rise above a discrimination that acted itself out as a class restriction. The silencing, the dehumanising of apartheid together

with the social ills associated with race and class ordering, have influenced my stance in the world against those who practise hierarchical invidious monoisms.

The values that I bring to this research are further complicated by my position as physiotherapy academic. In the grand scheme of things, it would appear that I am casting my weighty academic gaze on public people who are differently ordered in the community of physiotherapy practise. I am at once a practising physiotherapist, physiotherapy academic and curriculum developer, and a researcher of the practices that I am involved in. As I chronicle the passions, anxieties and pains of the participants, how much of my relatively privileged position will I insert into this research? There are no easy answers to these dilemmas. In this regard it may be useful to ponder on a quote from Maxine Greene cited in Foley (1998)

> "My interpretations are provisional. I have partaken in the post-modern rejection of inclusive rational frameworks in which all problems, all uncertainties can be resolved. All we can do, I believe is cultivate multiple ways of seeing and multiple dialogues in a world where nothing stays the same. All I can do is to provoke my readers to come together in making pathways through that world with their students, leaving thumbprints as they pass" (Greene cited in Foley,1998).

Another characteristic of feminist research is that the inquiry generally begins from one's own experience, that is, feminist researchers frequently start with an issue that bothers them personally (Reinharz, 1992). Often a troubling or puzzling personal experience of the researcher becomes the start of an inquiry because by being an insider of the experience, enables the researcher to understand what some participants have to say in a way that no 'outsider' could. In this regard, the researcher cannot be objective and value neutral.

The research tradition at the department where this study was undertaken has strong ties with the scientific, objectifying reality of presenting truth. As a graduate from this department, my roots in research were constituted by this

paradigm. However, as I entered the world of physiotherapy academia, I realised that in order to evaluate and assess educational practice, the boundaries of assessment have to stretch beyond graphs and numbers. As I reflected on my practice as physiotherapy academic, I was emotionally and aesthetically aware of the factors that constrained and enabled practice, of hegemonic voices that were legitimate stakeholders in the development of the physiotherapy profession but was not allowed a legitimate voice to disclose their meaningful experiences.

Data Generating Strategies – Vacillating between privilege and threat

In setting up the research process, I was consciously aware of how my position in the research process vacillated between being privileged on the one hand, or threatening and intimidating, on the other. I was in a privileged position as a researcher in relation to student physiotherapists and novice physiotherapists because of my simultaneous roles as their physiotherapy lecturer, an experienced practising physiotherapist and a researcher involved in curriculum inquiry. My privileged position allowed for my research agenda to filter into the timetabled activities of student physiotherapists as they availed themselves to participate in the focus-group interviews, which were conducted with prior permission from their lecturers or clinical educators at convenient sites and during convenient times.

A second privilege arose from the inquiry process itself, that is, student physiotherapists were 'freeing' their voice for the first time to a physiotherapy academic who wanted to *listen* to their experiences, concerns, pains and triumphs of their life-history as a physiotherapist-in-training. The novice physiotherapy practitioners were also keen to share their experiences of their first year of work as part of the first cohort of community based physiotherapists in the country. Novice and experienced physiotherapy practitioners were also positive about their input into the development and critique of the physiotherapy curriculum in relation to the current practices within the public health system. It

must be said that the voice of this stake-holder group was invited for the first time by a representative of the physiotherapy academia to contribute to the development of the physiotherapy undergraduate curriculum.
The positive response to this research project from the aforementioned participants seemed to lie in their loyalty or patriotism as members of a physiotherapy community. Their participation was important as a contribution to be counted in the development of future physiotherapists who enter this community.

All of the physiotherapy academics were not however, as eager to participate on the project, as were the other research participants. Time constraints were often cited as a problem by the physiotherapy academics, for keeping scheduled interview sessions, which eventually resulted in two academics being non-participatory. Attempts to secure an interview slot with the senior academics/management within the department, proved to be the most difficult. I was able to secure an interview with a senior academic only when I reported that my promoter would to be joining us for the interview session. This could suggest that being a participant in a research that was outside traditional research processes, may have evoked 'troubling' in the participant because of the depth, 'unpredictability' and the value of voice that this research approach supported.

Data Production Procedure

a. Obtaining Consent

The research ethics committee at this university granted permission for the study to proceed with the methods that were indicated. The participants were free agents in the research process, which meant that they could withdraw their consent for participation at any point in the research should the process become exploitative.

Permission was sought from the department of physiotherapy at this university for access to curriculum documents and reports, and student and academic physiotherapists' participation in this study. Signed permission for individual participation was also sought from each participant. Permission from hospital managers were sought for community physiotherapists' participation in the study first through telephonic communication, followed by a letter that explained the terms of participation and a copy of the questionnaire. Permission from hospital mangers was also obtained for the participation of physiotherapy managers on the study. This was achieved telephonically and through a letter that explained the intention of the group interview and a copy of the invitation.

b. Research Participants and Methods used in the Study

(i). Student physiotherapists and life-history biography

As the researcher I was fuelled by the exigencies of timeframes for data collection and deadlines for reporting on the study. The data production process began with student physiotherapists in the latter part of 2003. The students (42) were in their final year of study. The cohort comprised 36 female students of which there were 11 blacks, 17 Indians, 2 coloureds and 6 whites. Of the six male students, 2 were of Indian origin and 4 were black.

Each student was given a journal to document his/her **biography** titled "The Life-history of a physiotherapist-in-training". Student physiotherapists were asked to document their story and experiences, through a process of guided reflection, of becoming a physiotherapist within the physiotherapy undergraduate programme at this institution. The story telling process included an attempt to bring into dialogue their own past experiences (home, family, school) that might have motivated them to enter the physiotherapy community, their present experiences of being within the physiotherapy programme for four years or more, and their future intentions as practising physiotherapists.

Student physiotherapists were each given a journal before they could embark on their clinical elective experience, which is a three-week clinical education block during the undergraduate programme where student physiotherapists choose to practise physiotherapy at any clinical site of their choice. Students were asked to document their reflections, in a language of their choice, before they embarked on the electives so that they could capture their thoughts about their experiences in the programme up to that point, and how they made sense of their actions and others' during the educational process. They were also asked to reflect on their state of preparedness for the elective encounter. The elective encounter provided students with an opportunity to assess their skills and abilities without the help of clinical educators in a different clinical context from those that were familiar to them. Student physiotherapists were to document their experiences and reflections of this elective clinical encounter.

The journals (29) were collected in December 2003 on the day that successful student physiotherapists took their professional oath as they entered into the community of practising physiotherapists. The journals therefore included, amongst others, reflections on being in the physiotherapy programme, the elective experience and student-physiotherapists experiences of the final examination in the physiotherapy programme. Despite the guided reflective process that was provided for the students, writing an autobiographical account proved difficult for those students who did not have experience of autobiographical, reflective writing. Further, the underlying scientific paradigm of the physiotherapy curriculum does not value reflective accounts and emotional experiences. Therefore the tradition of autobiographical writing/reflective journals is less developed and I became aware that for this exercise, students needed skills in writing in order to capture the detail of information that related to their experiences.

(ii). Student Focus Group Interviews

Whilst student physiotherapists were engaged in documenting their biography, 2 sets of **student focus-group interviews** were conducted. One set of interviews was held before the elective experience and the other was held in after the elective encounter, before the final examinations. Each interview was arranged so that each focus group comprised 5-8 student physiotherapists. All 42 students participated in both sets of focus-group interviews. The focus-group interviews were used as a catalyst for the biographical entries and it provided an alternative medium to writing for student-physiotherapists who were not familiar with that tradition to communicate their experiences.

Whereas the first focus-group interview was semi-structured and it tended to direct student thoughts towards similar questions that were provided for the guided reflection of the biography, the second focus-group interview was more open-ended where the students were free to reflect on their elective experience, the undergraduate programme, the forthcoming examinations and their intentions for the years ahead as practising physiotherapists. The focus-group interviews were audio-taped and video-recorded. Verbatim transcripts of the interview data were documented. During the second round of focus-group interviews, a segment of the data produced from one focus-group of 6 students, was lost through faulty recording equipment. To compensate for the loss of data these students were asked to document their contributions as part of their journal entries.

Reflecting on the focus-group interviews, the student physiotherapists were at once eager to have someone listen to their experiences and they were also afraid of the political issues surrounding disclosure, despite my pledge of confidentiality. However, the focus-group interviews allowed disclosure in a safe environment where voices were heard as a collective. After every focus-group interview, I was moved to tears as I reflected on the students' emotional

disclosures of their struggles, their humiliations, their passions, none of which the physiotherapy academics were aware of as we maintained the divide between the public and private worlds of our students and ourselves.

(iii). Community Service Physiotherapists and open-ended questionnaires

On the successful completion of their final examinations, the 2002 cohort of 23 final year physiotherapy students were the first group who practised as community physiotherapists during 2003 in underserved and under-resourced areas in South Africa. This was legislated as a yearlong compulsory community service for graduating physiotherapists (and other health care professionals), which formed part of the social-economic development programme for South Africa through health care.

I was interested to explore how the physiotherapy undergraduate curriculum of this university contributed to the practice of these novice practitioners in under-resourced environments and how it helped these physiotherapists contribute to the socio-economic development of the country. I invited these novice practitioners to comment on the physiotherapy undergraduate curriculum by reflecting on their current practises through an **open-ended questionnaire**. The questionnaire was the most suitable method to collect data from this group of physiotherapists, as they were located at various health care centres in deep rural areas.

The participants, 19 Indian females, 2 Indian males and 2 Black males, were contacted telephonically initially to explain the purpose of the research and their contribution to the inquiry. Further, the telephonic conversation served to gauge the level of interested participants for the study. All 23-community physiotherapists from this institution were eager to participate. In November 2003, when the community physiotherapists were almost at the end of their first

year of work, a copy of the questionnaire was faxed accompanied by a letter that sought consent for participation and indicated the terms of participation. 20 of the 23 questionnaires were completed and returned within a month of this data collection process. The data was categorised and emerging themes were identified.

(iv). Physiotherapy managers and the Group interview/participatory workshop

Managers of physiotherapy departments at public hospitals were invited to attend a **participatory workshop**. The managers were selected from practice sites where community service physiotherapists of 2003 who graduated from this university were employed and where the current final year student physiotherapists attended their clinical education blocks.

The intention of the group interview/participatory workshop was for the managers to reflect on the skills and knowledge that is required in the changing health care and public service contexts in relation to the physiotherapy curriculum. This reflection was conducted in conjunction with a perusal and discussion of the 2003 physiotherapy undergraduate curriculum from this university's calendar. An assessment of the curriculum was determined in relation to the skills and knowledge that physiotherapy managers value in their employees and in the current context of practice. The workshop participants represented a hybrid selection of physiotherapy management experience as some of the community physiotherapists, who were in their first year of work, were in dual positions at their community placement sites – as a practising physiotherapist and a physiotherapy manager.

The participatory workshop/group interview, which was held in October 2003, comprised 19 participants. The group composition consisted of 2 Black males, 11 Indian females, 1 coloured female, 2 Black females and 3 white females. 12 of

the participants were experienced physiotherapists and occupied physiotherapy management positions at urban, well –resourced public hospitals or health care centres in excess of 5 years. 7 of the participants were novice physiotherapists who were in community physiotherapy posts and who practised simultaneously as physiotherapists and physiotherapy managers at small, rural, under-resourced hospitals.

The participants were arranged in six small groups of 3-4 participants per group. Each group comprised an experienced physiotherapy manager from an urban setting, and a novice physiotherapy manager form a rural/community setting. Every member of each group was given a copy of the 2003 physiotherapy undergraduate curriculum from this university as it appeared in the university calendar. They were asked to reflect on the curriculum content, organisation and design, and pedagogy in relation to their experiences of needs in the workplace within the current context of practice. They were also asked to reflect on the competencies and skills that practising physiotherapists in their employ and/or final year students from this academic institution display during clinical education practice.

The participants were given an hour to dialogue within their groups, following which a spokesperson from each group presented its findings to the larger group. During the report-back, I facilitated discussions between the presenter and other participants in order to clarify issues and probe deeper into emerging issues. The process of generating the data was collaborative and I would like to acknowledge that I was an active participant in the data that was produced. The participatory workshop/ group interview was video-recorded and audio -recorded. A verbatim transcript of the discussion was produced. A scribe/moderator, who was familiar with the research purpose and inquiry, was present to ensure that no one person dominated the discussion and that the process was indeed participatory.

(v). Individual interviews with physiotherapy academics

Seven of the nine physiotherapy academics from this university were interviewed as part of the process of data production for this research. The demographics of the physiotherapy academics comprised one Indian male professor, one Indian female senior lecturer, three female Indian lecturers, one black female lecturer, and one coloured female lecturer. One of the academics was also a representative on the Education committee on the Professional Board for Physiotherapy, Biokinetics and Podiatry on the HPCSA. **The interviews** were semi-structured and in-depth and were shaped by my interest on how the physiotherapy academics constructed and produced knowledge in the undergraduate curriculum within a context of socio-political change.

Some of the academics were initially sceptical to be interviewed, as they feared an element of exposure in the process. However, as they reflected on their practice it seemed to have moved some of them from a place of the "taken-for-granted" to a reflection of themselves and their motivation and purpose to become physiotherapy academics. Further, it allowed them to reflect on their own developments, of their worlds interacting with student worlds and of institutional pressures and its impact on their practice. The interviews were audio-recorded and verbatim transcripts of the interviews were produced.

(vi). Analysis of policy documents

Policy documents were analysed to provide a framing for the research process (see chapter 2). Participants of the interview/participatory workshop and myself undertook a documentary analysis of the 2003 undergraduate physiotherapy curriculum from the university's calendar. This was necessary to generate reflection and comparison amongst the participants between the actual requirements of current physiotherapy practice, and a physiotherapy curriculum that is prescribed by the university following the guidelines of the HPCSA. The 2003 curriculum document was used for this purpose because this was the

prescribed curriculum that the cohort of 4th year students for 2003 was also engaged in reflecting on. It provided a means of identifying synergies and differences in the experiences and needs of the same curriculum document from different practitioner vantage points.

In addition documentary analysis of the following documents were undertaken viz. "Minimum standards for the training of physiotherapy students, 2002" and "Eales scope of practice for physiotherapists, 2001" accessed from the HPCSA, "Physiotherapy curriculum policy document for a programmes-based approach i.e. Template for submission of Physiotherapy programme to the Department of Education,1999", "A report on the evaluation of physiotherapy training and facilities, September 2003" following the accreditation of this physiotherapy department by members of the Professional Board for Physiotherapy, Biokinetics and Podiatry on the HPCSA. In addition, analysis of government policy documents viz. White Paper for the Transformation of the Health System in South Africa, 1997; White Paper on Transforming Public Service Delivery, 1997; and Education White Paper 3 – A Programme for Higher education Transformation, 1997, were undertaken (see chapter 2).

c. Reflecting on Data gathering

The range and forms of data gathering used to generate and produce data about the lives within a physiotherapy curriculum was rich and varied. It exists in different modes and it captures the life of the story-teller in the different contexts that the curriculum operates: in the lecture-theatre, the practical classroom, the clinical education sites, the university campus, the hospital contexts, the lecturer's office, the university cafeteria, the student's room at the clinical site, the examination room, the community setting. Each telling reflects a range of aspects to becoming and practising as a physiotherapist. It attempted to reflect the voices of those who were not heard or valued previously with respect to the development of a physiotherapy curriculum. By engaging the voices of those that

are located peripherally in the community of physiotherapists, this research allowed a shift from the central hegemony of the Professional Board for Physiotherapy on the HPCSA to include alternative perspectives on the physiotherapy curriculum.

Through the elicitation of voices from a wider, more representative community of physiotherapists the knowledge produced was more democratic and it encouraged reciprocity between the participants and myself as we dialogued to improve our understanding of the reality of physiotherapy practice in its current context. It moved participants through reflection towards untangling the reality of practice, and facilitating an understanding of how their worlds were shaped by practice and policy, and how it could be transformed. By reflecting on their experiences, the participants came to understand the strengths and weaknesses of this physiotherapy curriculum and their own strengths and weaknesses as physiotherapists/people in relation to their own practice and their worlds.

The limitations of using recall data through focus group interviews and biographies are acknowledged. Because memory is imperfect, recollections are often distorted in ways that primary sources are not (Neuman, 2000). Memory is influenced from within the person, the external environment and from other persons. According to Drukteinis, 2005, one set of memories greatly affects the memories of similar events which may not be identical, and can lead to significant overgeneralization with regard to frequency and quality of experiences. Further there is no way of testing whether the recollection is accurate except through corroborating data. Therefore, Boice-Pardee, 2005 suggests that the best way to account for limitations is to triangulate data by comparing multiple data sources and employing multiple methods to enhance the credibility of results. The use of multiple methods and sources in this study attempted to reduce the distortions that could be produced with recollection data.

Strategies for Data Analysis

The process of interpretation and meaning making lie in re-presenting the narrative research text as a temporal text, about what has been, what is now, and what is becoming. The narrative is "recognised as a set of viewpoints of a time, justifiable only within its own time" (Nicholson, 1990). The strength of the research inquiry is built by using a variety of data collection methods and in the use of different approaches to analyse and interpret the data. Holstein & Gubrium(1997) state that the goal of the analysis is to show how interview responses are produced in the interaction between interviewer and respondent, without losing sight of the meanings produced or the circumstances that condition the meaning-making process. The analytic objective is to show how what is being said relates to the experiences and lives being studied.

Data analysis involves data reduction, data display, and conclusion drawing, which occur throughout the study but that calls for different modes of inquiry at different stages (Huberman & Miles, 1994). This was evident during, for example, the interview process where I constantly probed deeper to help the participants and myself understand their story. The effect was twofold, namely, the data that was generated at each stage directed me towards refining the data collection tools, and it prompted the process of designing new data collection strategies that could supplement the richness of the data already produced or improve its quality. Thus the process used during the data collection and data analysis processes could be regarded as iterative and parallel rather than linear.

Grounded Theory Approach

The analysis of the data was underscored by a grounded theory approach, which allowed the data and theory to interact in order to generate an inductively derived new theory about the phenomena being studied. The basis of grounded theory analysis is that emic categories emerge from the data with minimal a priori

expectation. In comparison an "a priori analysis" is when categories are determined in advance of the data collection, through an imposition of an etic view, and the analysis proceeds according to those categories. According to Boje (2001), grounded theory moves between emic and etic, with an eye on refining their alignment through successive comparison.

I believe that the approach I adopted in this research tended towards Boje's explanation of grounded theory. My own unarticulated views about curriculum development, which may have been crystallised through the readings on the subject and my own practice, could have served as a priori categories that guided the analysis through a search for patterns, following the generation of categories and themes.

It is important to acknowledge that my approach towards the analysis of data relied almost exclusively on privileging my interpretation of the data. In my data analysis I was concerned with themes and selected extracts from narratives that for me exemplified groups of participants' views on issues and which I thought were most salient. While attempting to present a multiple view-point approach, it is fair to say that voices of some participants are represented more than others. In conducting the analysis along thematic lines, I may have represented the lives of many participants in a fragmented manner. In an attempt to limit the deficiencies of this data analysis strategy, a range of analytic approaches was used in this study. These included content analysis, described as a tool for reduced, condensed and grouped content; discourse analysis where the conversational records (transcripts) are examined to reveal reality-constructing practices and the subjective meanings that are conveyed (Holstein & Gubrium,1997); and global analysis procedures (Henning, 2004) where the data are not disassembled, rather an overview of the thematic range of the text is identified by searching for meaningful patterns and themes that connect.

The global analysis mode of representation captures the data optimally by either composing a portrait of a person where the central characteristics of the person as reflected in the data are taken as the main concept, around which other characteristics, activities, events and encounters are then connected (Henning, 2004). This genre of analysis is represented in this study by fictional stories that were constructed to highlight emerging themes as the data was examined.

Constructing Stories

In describing the role and function of the stories that represented the first level of analysis, a distinction has to be made between *narrative analysis* and *analysis of the narrative*. Narrative analysis, in this study, is represented by the story that was generated from the data production and has been codified in a particular way into a coherent text. Analysis of the narrative is the second-level of analysis, which is the data analysis strategy.

The first level analysis was approached in each instance by constructing a story, which illuminates the analysis that follows for each particular section. The stories are used as an exemplar or an illustration to the first level of analysis. The purpose of the story is that it elucidates or signals the themes, which are deepened in the analysis. The stories are symbolic because it gives the reader the opportunity to maximise the themes from the data.

The stories are constructed by making selections from the data. These selections are not neutral and are linked to the research focus and the theoretical framing that the researcher is propositioning. The stories will allow the reader to feel and experience the practice setting in which the theoretical ideas are interpreted into practice. It also allows the reader to critique the relation between physiotherapy theory and the techniques that are used to translate the theoretical underpinnings into practice. The stories will allow the practice to speak back to theory as a source for theorising and developing practice.

Physiotherapy theories and practice are imported from the western world and are re-conceptualised for the South African health care environment. Given that this occurs, it becomes necessary for practice to talk back to theory. By examining practices through stories, it becomes possible to identify weaknesses, strengths, gaps or silences or the appropriateness of theory and physiotherapy techniques for particular contexts. Therefore the stories could function to transform theory and practice to suit a new context as it uncovers the values that underpin the existing theory. It raises questions about who produces physiotherapy knowledge, the content of knowledge production and the dominance of what counts as acceptable knowledge for practice. It could be generative of an improved theory for physiotherapy practice in the current context by discarding some theoretical ideas and practices and generating new ones.

By using deconstructive methodologies, the research text dismantled "truths" and alerted the reader to contradictions and fallacies and it discovered how they function to legitimise power relations. The "truth" became plural, local and embedded in practice. It generated categories of meaning by excavating beyond the taken-for-granted within the historical, aesthetic, social, cultural and emotional perspectives, and it presented what has been, what is now, and what is becoming in the world of physiotherapy practice. This re-presented the curriculum within a broader, more representative context of social reality.

Validity

Internal and External Validity

The foundations of physiotherapy enquiry embrace the tradition of 'Truth' as the desired means to knowledge claims. The validity of traditional research is assessed on two types of validity claims viz. *internal validity* defined as the extent to which a researcher's observations and measurements are true descriptions of a particular reality; and *external validity* which is defined as the degree to which

such descriptions can be accurately compared to other groups. However, within the critical research tradition both these criteria for assessing validity have been rejected.

Critical researchers reject the notion of internal validity that is based on the assumption that a knowable, tangible, cause-and-effect relationship exists and that research descriptions are able to portray that reality accurately. They argue that the notion of external validity is too simplistic and assert that if generalizations are to be made, then the contexts that are being compared have to be similar (Kincheloe & McLaren,1994). Within the context of critical postmodern research, *trustworthiness* has replaced the constructs of external and internal validity that are used in traditional research.

Validity and qualitative research

The qualitative research paradigm embraces a set of three new commitments: first to new and emergent relations with respondents, second to a set of stances – professional, personal and political – toward the uses of inquiry and toward its ability to foster action, and finally to, a vision of research that enables and promotes social justice, community, diversity, civic discourse, and caring (Lincoln, 1995). This shifts the standards by which research is judged in response to the questions of what research is for and who will have access to it. This suggests that rather than having fixed criteria for judging the validity claims of an inquiry, the criteria for the research should be established from the congruency between the intended purpose of the inquiry and the research design that legitimises that purpose.

For example, the purposes of critical research attempts to expose how ideology constrains the desire for self-direction and it confronts the way the way power reproduces itself in the construction of human consciousness. In this regard, the validity claims are assessed in relation to catalytic validity which is the degree to

which research moves those it studies to understand the world and the way it is shaped in order for them to transform it (Kincheloe & McLaren, 1994).

Feminist Perspectives on Validity

Feminist research challenges narrative realism and traditional naturalistic ethnography through the presentation of texts of power and knowledge in situated versions of the worlds that are studied and created by writers. This requires alternative ways of authorizing and presenting texts, which require new forms of validity. Lather (quoted in Denzin, 1994) presents five forms of validity that may be used in authorizing feminist texts where theory is conceptualised as theory-as-interpretation or theory-as-criticism. These new forms of validity are called reflexive, ironic, neopragmatic, rhizomatic, and situated validity. Each enacts a multivoiced, reflexive, open-ended, emotionally based text that is action, or praxis based.

Validity for a just social order

Lather (1991, 2003) has reconceptualized the criteria for validity that is appropriate for research committed to a more just social order. The following guide-lines have been offered viz. *triangulation* of data sources, methods and theoretical schemes; *construct validity,* which recognises the roots of theory building from within empirical work; *systemized reflexivity* which gives some indication of how a prior theory has been changed by the logic of the data is essential in establishing construct validity; *face validity* or member checks is integral to the process of establishing data credibility by recycling description, emerging analysis, and conclusions back through at least a sub-sample of respondents, and *catalytic validity* represents the degree to which the research process re-orients, focuses and energizes participants toward knowing reality in order to transform it.

Validity in this study

In this study, claims to validity may be judged against criteria that reflect a multivoiced, reflexive and pragmatic text in addition to criteria that characterise catalytic validity for social change and action. Self-disclosure and reflexivity of my views have been authorised into the text. The validity of the methodology and theory construction may be assessed against criteria for triangulation, construct validity and face validity. In this study, establishing face validity was limited to physiotherapy managers and physiotherapy academics.

Novice physiotherapists and physiotherapy students were difficult to access. During the time period of data analysis, they had left their community placements and the university respectively. This set of criteria that may be considered to assess validity in this study represents a shift in the focus of validity for the research process to include a concern for the participants and the nature of their relationship in the research process.

Triangulation of data sources was achieved by the multiplicity of participants that represented each stakeholder constituency. Multiple research methods were used to accommodate the weaknesses and strengths that each method would have presented if used in isolation. Wide-ranging theoretical constructs were used to accommodate, value and legitimate the plurality of views that the participants produced.

Conclusion

In this chapter, I have detailed the rationale for the selection of research strategies that underpinned this study and I have described how the study was operationalised. The procedure for data production was sensitive to voice, plurality, participation and reciprocity. Included in the text, were my reflections on the processes as they occurred and the limitations and strengths of the data

production process. In the next chapter, I present an analysis of the student-physiotherapist data against a critical feminist and post-modern lens.

CHAPTER 5

Student Perspectives and the Physiotherapy Curriculum

In this chapter, I present the perspectives and actual experiences of final year student physiotherapists that journeyed through the physiotherapy undergraduate curriculum. The analysis of experiences is derived from two sets of focus-group interview data and journal entries. The first set of focus group interviews were conducted before student physiotherapists commenced their clinical elective block. These pre-elective focus group interviews were conducted at five sites and are referred to in the analysis as A1, B1, C1, D1 and E1. The post-elective focus group interviews were conducted at three sites and are referred to as A2, D2 and E2. Sites B and C that were used for the pre-elective focus group interviews were not selected for use for the post-elective focus group interviews. All the research participants were stationed at sites A, D and E only. The number of student-physiotherapists that were present at each site determined the number of focus group interviews that were carried out at that site. The division of student-physiotherapists into smaller focus groups is indicated in the analysis as focus group (FG1) one or focus group two (FG2). The journals were numbered for the purpose of identification.

This chapter is organised into three parts according to the key themes that were derived from the primary data sources. **Part One** focuses on the student physiotherapists' intentions for entering the profession, and their experiences of the design, content and pedagogy of the curriculum. **Part Two** focuses on student-physiotherapists experiences of physiotherapy clinical education. **Part One and Part Two** elucidate student perspectives on *Theory and Practice.* **Part Three** describes the *Relationships in the curriculum.* Each section begins with a story, which signals the reader to the key themes that have

emerged from an examination of the data. Following the stories, I present a wider selection of the data to elucidate the themes and key issues that have been highlighted in the stories. The stories and quoted verbatim data are illustrated in an alternate font (Bradley Hand ITC) that distinguishes those from my voice.

A single story has been constructed to introduce *Part One: Intentions, Design, Content and Pedagogy*. The key issues that underlie this theme relate to the motivations for becoming a physiotherapist, experiences of physiotherapy before entering the programme, issues relating to the design of the curriculum, the content of the curriculum, and the pedagogy.

Two stories introduce *Part Two: Physiotherapy Clinical Education*. Following the stories, a discussion follows around the key issues that relate to the design of clinical education practice, the content, pedagogy, clinical block assessments and the clinical elective experience.

Part Three: Relationships in the Curriculum is highlighted by two stories. The key themes that relate to the relationships in the curriculum were the interaction between student-physiotherapists and patients, the interaction between student-physiotherapists and the physiotherapy academics, the interactions amongst student physiotherapists and the university student body, and the interaction between student physiotherapists and practising physiotherapists.

This chapter will be concluded with a reflection on the dominant themes that have emerged from the exposition of the first-hand experiences of student-physiotherapists.

THEORY AND PRACTICE

Part 1: Intentions, Design, Content and Pedagogy

The first story that I present is ***Isabel's Story***, which represents a female, white voice in this physiotherapy undergraduate curriculum. The story illustrates how perceptions of physiotherapy are formed through similar knowledge and tools that are used in its practice and in medicine. These entice individuals to gain entry into a physiotherapy programme and aspire to a higher level within the para-medical hierarchy. The story highlights other key issues that relate to the content and organisation of the curriculum, and the teaching and learning strategies that are used in the curriculum.

The Story of Isabel

There was no real motivation for me to become a physio. There was this girl who was doing physiotherapy whilst I was doing B. Sc and she used to carry her stethoscope, lab coat and goniometer in a transparent bag. She made me choose physio because I saw that I could also use the stethoscope and lab coat and look like a doctor without having to study for a 6 year degree. Of all the health sciences departments on campus, physiotherapy was the one that made me feel more like a doctor than a paramedical.

What I didn't realise was that it takes a lot to be a physiotherapist and the process of getting to where I am now, was taxing and sometimes frustrating. With regards to the content of the curriculum, I found that I could not use the knowledge of some of the courses e.g. biology. The course content of psychology in first year was textbook stuff that could not be used during the interaction with patients. I also found difficulty in relating to the university-wide course on changing society and values at first year level. It wasn't about physiotherapy; rather it related to broader social and political issues, which didn't seem relevant to me. There were aspects of the physics module,

which had no relevance to physiotherapy, but occupied a lot of space in the timetable. Physics was agonising to understand and even harder to pass. A highlight for me during level 1 was the one/two community visits into rural communities during the community studies module. We were able to experience the reality of providing a health care service within a rural community compared to the times we sat in the classroom on campus and theorised about encounters in the community.

Physiotherapy is a very demanding course...the anatomy and physiology...that's when it really got demanding and you had to stay focused because these courses help shape you into the person you want to be. The problem with the physio programme is that as you progress through the levels, the number of courses and the volume of work increase greatly, especially in third year...if physiotherapy isn't your life, then there's no point...it has to become. This puts students under a lot of pressure, which results in us just learning enough to pass the exam. Your life as a student on campus just passes you by. It's just work and you are excluded from campus meetings and functions because there are no free spaces in the timetable. As a result I became more disciplined towards my studies. I think I'm so exhausted after working through first, second and third years that this year I can't seem to study much. This year research is taking a lot of my time.

The physiotherapy courses are designed to give you the skills that shape you into who you are becoming whilst the clinical sciences modules taught us about pathologies, disease conditions and how they could be used in the diagnosis of patients. The problem however, lies in the way these courses are taught. It's too theoretical; it's too academic and condition-focused and we are always taught in an ideal situation in the classroom so when we go into the clinical area and see patients, it's difficult to adapt the classroom knowledge to treating a patient. You are not quite confident of your skills and knowledge during clinical education until after the end of block assessment. Sometimes we are exposed to the clinical block before we have the related

theory. There is a gap between theory and practice; I think we are missing that middle part.

Even though there were ups and downs in my journey, I've enjoyed my training but I've been in a place plenty of times this year when I wondered if I really wanted to do this for the rest of my life. I guess you'll never really know what physio is about unless you're a student in a physiotherapy programme.

In ***Part: 1 Intentions, Design, Content and Pedagogy***, I highlight the motivations and prior physiotherapy experiences of student-physiotherapists on applying to the physiotherapy programme. The image of physiotherapy and the nature of exposure to the physiotherapy working world surfaced as key motivating factors for becoming a physiotherapist. A fragmented and tight prescribed curriculum emerged as issues on the organisation and structure of the curriculum. Important factors that emerged around the content of the curriculum were its focus and its relevance. The key issues relating to pedagogy were teaching and learning on the 'normal' subject, theorisation of the physiotherapy content, group-work and the competency of lecturers.

Intentions for becoming a physiotherapist

The motivation for becoming a physiotherapist was based on the image of physiotherapy and initial perceptions of physiotherapy that were related to prior experiences of physiotherapy. Their initial perceptions were based on the skills and tools of physiotherapy and the conditions that require physiotherapy intervention. It was also influenced by the visit of student-physiotherapists' to a centre where physiotherapy was practised.

a. *Image of Physiotherapy*

Student-physiotherapists described how they were attracted to the physiotherapy profession by the particular image they had of physiotherapy. The image of physiotherapy was constructed around three main images, the *medical* profession, a *glamorous* profession and a *helping* profession.

Eight respondents were attracted to physiotherapy because of its *medical image*. For these respondents, physiotherapy was not their first choice of study. These student-physiotherapists had been declined a place to study medicine; hence physiotherapy was an alternate choice of study that closest resembled medicine. The following two respondents highlight this perspective. "I just had an idea that physiotherapists are doctors, their own doctors" (Student focus group interview: A1FG1). "I didn't really know what it was about and that there were so many things to do. I wanted to be a medical doctor initially but I couldn't. I thought of all the health science disciplines that I could go to, and physio seemed closer to being a doctor than pharmacy or anything else. So that's how I just chose it" (Student focus group interview: B1FG2). The symbolism of physiotherapy because of its association with medicine held greater appeal than the *actual* profession.

Physiotherapy was also perceived as a *glamorous profession*. Five of the respondents were attracted to physiotherapy because of the perception of glamour and status that it projected. "I saw a bit of what physios did and I really, really liked it but along with that, whenever people spoke about physio, there was a lot of glamour attached to it as well. Like physios are up there..." (Student focus group interview: A1FG2). "It looked so nice when the physio was called onto the field during a sporting event to attend to the sports person – you were important. It also seemed like a lucrative profession" (Diary: 27). The motivations for becoming a physiotherapist that are related to an image of the medical profession and a glamorous

profession could be interpreted as tokenism. Student-physiotherapists were attracted to physiotherapy more for the 'prestige' rather than for its purpose and role within a health care system.

In contrast there were student-physiotherapists who were attracted to physiotherapy for humanitarian reasons. For example, four respondents were attracted to physiotherapy because of its image as a *'helping profession'* whilst two respondents were attracted to the profession because of its potential for *social responsiveness.* "I guess it was that I will be able to help other people to get better. I would contribute a lot into their lives. I can make someone walk. I just felt that I'd be helping other people basically to walk" (Student focus group interview: A1FG1). "I had mixed feelings about physio but after I visited a hospital ICU ward, I thought that I had a chance to make a difference; to help people with their suffering. I decided that physio might not be a bad profession after all" (Student focus group interview: C1FG2). "One of the things that influenced me to do physiotherapy is that the place where I'm staying does not have a physio and people have been told to go and see a physiotherapist but they do not know where to find one and some don't even know what a physiotherapist is. I want to help my community, provide good service and be a good physio so that other children will be motivated and take over one day" (Diary: 7).

Two respondents cited the image of an active profession as another motivation for entering the profession. The images of glamour, a medical profession and a helping profession shaped the perceptions that students had of physiotherapy from their observations of physiotherapists at work. Their perceptions about physiotherapy were also influenced by the skills and techniques that physiotherapists used to restore function and a return to normal for patients.

b. Physiotherapy Skills and Tools

Initial perceptions were also based on the skills and tools of physiotherapy and their effect on certain conditions. The main skills or techniques of physiotherapy that student-physiotherapists were aware of on entering the profession were the administration of massage (8 respondents), exercise therapy (5 respondents), chest physiotherapy techniques (2 respondents), electrotherapy modalities (1 respondent) and physical rehabilitation (2 respondents). *"At first I thought that we'd massage people and take them to the gym and they'd gym and that's that"* (Student focus group interview: E1FG1). *"My perception of physio was that physios do massage and chest physio"* (Student focus group interview: D1FG1).

The most common conditions that were treated by physiotherapists were cited as sports injuries (9 respondents), orthopaedic conditions (1 respondent), respiratory conditions (2 respondents) and back- and neck pain (2 respondents). *"I just thought it was for sports injuries, necks and backs, and that kind of thing"* (Student focus group interview: A1FG2). *"Watching the Olympic Games on TV and seeing the sports physio accompanying the teams or reading in a magazine about how a physio helped a paraplegic patient regain function – that was my motivation to enter the profession"* (Diary: 9). These responses illustrate the relatively narrow perceptions of physiotherapy that student-physiotherapists were aware of, and their limited experience and observation on the range of functions and services that physiotherapists offer. Alternately, this could be interpreted as a reflection of the current focus of physiotherapy practice.

The gaps in their prior knowledge of the profession that student-physiotherapists reflected on after having been in the physiotherapy programme related to the treatment of respiratory conditions, the treatment of patients in acute care e.g. in the intensive care unit or patients with severe burns and amputations, and the treatment of patients with neurological conditions. One respondent indicated an

example of this, *"Well maybe it was my wrong-doing but I was quite clueless. I didn't know that it would involve chests that we had splattering, yucky things to do like suctioning. I didn't realise that we'd be with such sick patients and burnt patients..."* **(Student focus group interview: E1FG1). Four student-physiotherapists admitted that that they had no prior knowledge about physiotherapy but were motivated to join the programme by a friend or on the advice of their parents. This suggests that student-physiotherapists entrance into the programme was based either on an image of the profession, or a narrow view on the scope of practice within a particular context of practice, or they were motivated into the programme by an external influence having no knowledge about physiotherapy themselves. These limited views could have influenced their experience of the physiotherapy programme, either positively or negatively as the programme unfolded during their student years.**

c. Prior Experience of Physiotherapy

Another factor that influenced student-physiotherapists entrance into the profession was related to their experience of physiotherapy during a visit to a site where physiotherapy was practised. This physiotherapy site visit was stipulated as criterion for admission into the physiotherapy programme. The nature of this physiotherapy experience / observation varied amongst participants depending on the selected site and the length of duration of the observation / experience. Student-physiotherapists visited the following physiotherapy sites for the stated duration prior to their entering the programme. Two participants gained physiotherapy work experience at a rural hospital for the duration of 6-7 months, seven participants visited an urban provincial hospital for a few days to a week, ten participants followed a physiotherapist around in a private practice or a private hospital for a few days, four participants watched a physiotherapist at work in an old aged home over a few days, and one participant had the experience of watching physiotherapy being practised at a school for the

disabled on one day. These experiences will be categorised as 'work experience at public hospitals' and 'work experience at a private practice'.

Student-physiotherapists who engaged in long periods of observation of physiotherapists at work at public hospitals developed deeper interests to engage with the profession. These observations / experiences improved their understanding about physiotherapy and deepened their interest in the profession. Some student-physiotherapists had hands-on physiotherapy experience before being accepted into the programme.

"I started working in the physiotherapy department in 1999 as a physiotherapy assistant. I worked in the wards and in the outpatient department and qualified physios would come on the Flying Doctor programme to assist us. They would ask us about what we've been doing and they would give us their recommendations. That exposure had deepened my interest and desire to do physiotherapy at a higher level. It helped me because I worked there for seven months before coming to the interview" (Student focus group interview: D1FG1). "When I came into physio, I had a good idea of what it was because I spent a week at the hospital. I had an idea of what we were going to do but it was different when we were actually doing our pracs in class and in our clinical blocks" (Student focus group interview: B1FG1). The actual physiotherapy work-place experience shaped the image of physiotherapy practice and its appeal for the student-physiotherapist. However reflecting on their workplace experience, student-physiotherapists described their experiences of the curriculum as being different from that of the workplace.

The disjuncture in their perceptions arose when the student-physiotherapists' compared the physiotherapy site visit prior to admission into the programme, with their experiences of the sites that were used for clinical education practice in the curriculum. For example, for student-physiotherapists who visited a physiotherapy private practice or an old aged home to get a sense of that physiotherapy experience, their initial perception of the discipline contrasted

sharply with their curriculum experience of physiotherapy within a public health care centre. The following excerpts highlight this issue. "It's completely not what I expected. I did some work at a private practice and I went to a school, and it's so different from a hospital. You learn to love what you do when you see someone move but that doesn't take away the fact that you entered expecting something else" (Student focus group interview: B1FG2). "I couldn't go to a hospital so I went to a community old aged home in my area. Obviously they don't have all the equipment and the conditions that we see at the hospital. So what I got to know about physiotherapy was on massage and orthopaedics" (Student focus group interview: C1FG2). "We didn't really know about the condition of the state hospitals, to tell you the truth. We were totally unaware of that because most of us took a day or two to follow a physio around to see what it's like and we ended up at private physios and private hospitals. So the state of the provincial hospitals was shocking for some of us" (Student focus group interview: B1FG2).

As the participants reflected on their perceptions of physiotherapy, many agreed that their initial narrow perception of physiotherapy and its association with *just* massage had indeed changed. "When I first heard about physio, it was just the private practice aspect that I had seen. I didn't know anything about the neuro side of it, the chests, all the others, the paras...I didn't know any of that. I just thought that it was for sport injuries, necks and backs, and that kind of thing. But now I know that there is so much more that physios can do" (Student focus-group interview: A1FG2). On near completion of the physiotherapy programme, student physiotherapists described their experience of physiotherapy as being "diverse", "very interesting and demanding" (Student focus-group interview: C1FG2), "a very hands-on discipline" (Student focus-group interview: A1FG2), and "there is so much more that physiotherapists can do besides massage" (Student focus-group interview: B1FG1).

Some reflected that they had been *"naïve"* (Student focus-group interview: E1FG1) about physiotherapy and had a *"romanticised view of life and my chosen career path"* (Student focus-group interview: B1FG2). A changed reality about the initial perception of physiotherapy was reflected in the following, *"I cannot seem to figure out why it seemed so glorified previously. However it does give me a really good feeling to know that I can make a difference or help improve someone's life,"* (Student focus-group interview: B1FG2) and that, *"physiotherapy was not glamorous; just hard work and long hours"* (Student focus-group interview: A1FG1).

These insights reflect the narrow, limited view that some student-physiotherapists had on their chosen career path because of their inadequate experience and knowledge about physiotherapy. For some student –physiotherapists, inadequate knowledge about the practice of physiotherapy had created an image of the discipline that was inconsistent with the reality of its practice. However, for those that had sufficiently long periods of exposure at public hospitals, they were of the view that, *"initial perceptions about physiotherapy whilst in the programme hadn't changed; it improved"* (Student focus-group interview: C1FG1). This excerpt from the student interview data supports longer periods of exposure to the reality of the working world of physiotherapy in order to gain greater insight about the discipline. *"At the beginning when you want to do physiotherapy, you go around and visit physiotherapists, to look at what a physiotherapist does and what I saw was chest physiotherapy and when I went to Hospital X, I just saw someone walk somebody. So you don't base your profession on what you see for that short period of time, and when you are studying it you grow to learn that it's not about those few things that you saw."* (Student focus-group interview: B1FG1).

d. Reflections

As student-physiotherapists reflected on their initial perceptions of physiotherapy and their actual experience of physiotherapy through the undergraduate curriculum, eleven participants reported that they had no regrets about their career in physiotherapy whilst sixteen participants suggested that it was different from their initial perceptions and that they should have found out more about physiotherapy before entering the profession. Four participants were unsure about physiotherapy being their chosen career.

These findings raise a few questions. For example, how is physiotherapy knowledge and practice being perceived by the community? Why does the identity of physiotherapy practice continue to mimic the identity of the medical profession when physiotherapy has established its own skill and technique-base? Why is the physiotherapy image described as glamorous compared to an image that advances social responsibility and issues of social justice, for example? What are the underlying assumptions that guide professional accountability and professionalism within the community of physiotherapy practitioners in this geographic location? Why is the experience of physiotherapy education and training different from workplace practice?

From an education and training perspective, gaps exist in the entrance requirements for the physiotherapy programme by not stipulating explicit criteria for obtaining adequate knowledge about the profession prior to admission into the programme. For example, student-physiotherapists could be informed about a suitable duration of exposure to physiotherapy practice, the varied nature of practice, and the different sites at which the actual practice of physiotherapy could be experienced. These stipulations could improve perceptions, develop a holistic view, and deepen people's understanding of what physiotherapy really is should they have intentions to pursue the degree programme.

Design of the Physiotherapy Curriculum

There was broad discussion on the design and organisation of the physiotherapy curriculum. Student-physiotherapists described the modular designed physiotherapy programme as fragmented. This fragmented design influenced their learning. The physiotherapy programme was also described as a tight prescribed curriculum. The extensive volume of the curriculum, suggests that the design tends to foreground a content-driven, lecturer dominated curriculum. The themes that emerged on the design and organisation of the physiotherapy curriculum will elucidate these issues further.

Student-physiotherapists suggested that the curriculum required re-structuring (Diary: 13, Student focus group interview: A1FG1, B1FG2, C1FG1, D1FG1). *"It is not the content but the manner in which the curriculum was structured that made it stressful"* (Student focus group interview: B1FG2). However, student-physiotherapists commented positively on the organisation and structure of the modules in levels one and two that were arranged to provide a foundation for the skills and knowledge required during physiotherapy practice. *"I feel that in first year the courses are organised very nicely because you are going to learn whatever is expected of you as a physio"* (Student focus group interview: B1FG2). *"First year was a very good introductory programme to the degree"* (Diary: 3). *"Kinesiology and functional anatomy in first year provided a good foundation for practise"* (Diary: 14, 15, 16, Student focus group interview: B1FG2).

The organisation of the curriculum at level four, especially in the second semester, was also described positively because it provided opportunities to engage in integrated, holistic practice. *"In your final year you are more relaxed because there is no added pressure of extensive theory. In the second semester, you*

begin to look at patients more holistically because all the theory and practical skills have been completed" **(Diary: 15).**

a. *Modularisation*

Student-physiotherapists were critical of the modular structure of the curriculum because of the lack of cohesion and the integration of knowledge that it affected amongst modules. *"With the modular system, although it's easier, you tend to divide and separate everything. I think that those students who graduated before the modular system are more critical and integrated than we are. We tend to think that once the one module is over, we must just move onto the next. It's encouraging us to think in compartments"* **(Student focus group interview: B1FG1). Because of the modular system the curriculum** *"lacks correlation between the theory / practical content and clinical practice which tends to reinforce the compartmental way of thinking among students rather than encouraging students to look at a clinical situation in a holistic way by incorporating all aspects of theory and its practical application"* **(Diary: 15).**

Whilst this may be a valid criticism against the modular structure of the programme, student-physiotherapists may be insufficiently critical of the teaching and learning methods in use that could be contributing to their perceptions of fragmented learning.

Another criticism levelled at the current structure was that it did not allow for the same modules to be offered in both semesters. *"It's not the curriculum or the department structure but maybe the university should...you know we have this semesterised structure and they don't offer each course in each semester which would make sense to do"* **(Student focus group interview: B1FG2). A gap in the modular structure of the curriculum related to poor organisation amongst modules that could promote integration of knowledge to facilitate coherence and a deep approach to learning.**

b. Fragmented Curriculum

Student-physiotherapists described how the **sequencing of the modules** contributed to the **lack of coherence** and a fragmented curriculum. These claims were based largely on the inappropriate timetabling or placement of theory and classroom based practical modules, in relation to clinical education modules.

Student-physiotherapists suggested that the arrangement of the modules in levels one and two provided a foundation for the skills and knowledge required during physiotherapy practise. However, the delay in reproducing these skills on patients was criticised. *"First and second year is totally theory, physiotherapy theory. First and second year seems detached from physiotherapy because you don't see the skills materialise or you don't use them until you get to 3rd and 4th year and then it's too late"* (Student focus group interview: D1FG1). In support of this criticism, one respondent suggested that less time should have been spent on the massage module in level one and the practical sessions should have included demonstrations and treatments on patients (Diary: 14)

A major criticism of the design of the curriculum at level three was the absence of coherence and correlation in the sequencing of classroom based physiotherapy theory and practical skills, and the clinical education block that required that specific knowledge. *"The organisation is not correct because we do the theory in semester one and then do the clinicals in semester two. So you're not seeing the patient that you're actually learning about in class. You're storing all the information and then when you see the patient you have to think back and figure out how to treat them. There's a gap, a divide. Maybe if they can do, for example, the theory and clinical of cerebral palsy together so that we can relate the two"* (Student focus group interview: A1FG1). *"If we could have our theory lectures in conjunction with the clinical block, we'd have better experience. Now we are missing a step, that middle*

part" (Student focus group interview: C1FG1). Consequently, this fragmented organisation of modules did not provide immediate opportunities for student-physiotherapists to test their classroom-based skills on patients, experience new knowledge evolve and create new meaning from that experience. In addition student-physiotherapists have to make their own connections between theory-based and clinical education modules.

During level four, student-physiotherapists experienced the fragmented curriculum in the course on neurology. "The curriculum is very scattered, e.g. we did neurodevelopmental therapy in second year and now in fourth year we are getting the full blown neuro" (Student focus group interview: D1FG1). In addition, student-physiotherapists presented similar experiences of the research process that they were required to conduct in their final year of study. The module that provided skills for the research process was disjointed from the research process itself. "I had forgotten everything when I started this year. We had to re-read our notes and our supervisor had to go through everything step-by-step" (Student focus group interview: D1FG1).

The current curriculum prescribed the research design module for the first semester of level three and the formal research process was discontinued until the beginning of level four. (Student focus group interview: D1FG1, E1FG1). A re-structuring of the organisation was suggested to help student physiotherapists with the research process (Student focus group interview: C1FG1). It was suggested that the research process should begin with drawing up a proposal in conjunction with the research skills that were introduced /developed in the second semester of third year and the research process should be continued into the fourth year curriculum (Student focus group interview: E1FG1).

The design of the curriculum in levels one and two is focused on the acquisition of skills. However the fragmented organisation of the modules within the curriculum is experienced in the delay in reproducing these skills on patients. The fragmentation in level three relates to the sequencing between the skills that are taught in the classroom and the scheduling of clinical education blocks where those skills are required. In level four student-physiotherapists have a similar experience as in levels one and two where there is a delay between the period that the skills for research are acquired and their application.

c. Tight prescribed curriculum

There were three main issues highlighted with regards to the prescribed design of the curriculum. These key issues relate to the **regulated prescription of courses, the curriculum volume, and timetabling.**

Student physiotherapists claimed that the **regulated prescription** of the curriculum created a sense of *"being in school. When you begin the physiotherapy programme, you are told, 'Here's your timetable. This is what you must do and when.' We do not have the experience of other students on campus who are allowed to select courses of their choice for their degree"* (Student focus group interview: B1FG2). The curriculum did not allow space for the selection of elective courses. The prescribed curriculum allowed little free time on the timetable for student-physiotherapists to engage other modules at university e.g. isiZulu, computer literacy, sociology (student focus group interview: A1FG1, A1FG2, C1FG2). Within the context of a professional degree the focus in this physiotherapy programme is largely on developing the skills of the profession through prescribed courses. The commitment of the programme to individual development is absent because the programme does not allow spaces for student-physiotherapists to select courses that could enhance their growth or respond to their individual knowledge requirements.

In addition, there were few free spaces allowed on the timetable. *"I think that we are the only degree on campus that doesn't have any frees"* **(Student focus group interview: C1FG1). The timetable of student-physiotherapists was full at every level of study.** *"First year was hectic, attending lectures and pracs from 08h00 – 17h00. It was just too much"* **(Student focus group interview: A1FG1).** *"The curriculum for second year appears to 'crowd' the timetable resulting in very little free time for the students to enjoy. As a result students tend to perform poorly in physiology and anatomy, which are core courses in a physiotherapy degree since they from the basis for problem solving in clinical practice"* **(Diary: 15). The effect of a tight timetable excluded student-physiotherapists from events on campus (Student Focus Group Interview: B1FG1) and it impacted on the quality of student learning with students** *"just learning to pass rather than doing any constructive, quality learning"* **(Diary: 15).**

Student-physiotherapists agreed that level three was undoubtedly the most difficult year of the curriculum. *"There is only one word for 3rd year and that is 'overwhelming'! Third year hits you with the force of a hurricane. Your timetable is overflowing, you have no free time during the day and the lectures start a month before anyone else does on campus"* **(Diary: 23).** *"At the beginning there was so much crammed in, especially third year, first semester. You don't get to enjoy anything. In the workplace itself, you are learning about new conditions and you want to read up stuff but there's no time"* **(Student focus group interview: C1FG2).** *"When it came to third year, that's when the trouble began because there are too many courses to do, too much work"* **(Student Focus Group Interview: C1FG2).** *"Applied pre-clinical sciences was a very complicated course in third year. Having three lecturers, each giving you a workload of a single course and then to write an exam on all three aspects was torture"* **(Diary: 26).**

On the issue of the **volume of the curriculum**, some student-physiotherapists were satisfied with the volume, whilst others were not. *"The problem with the physiotherapy programme is that as the years progress, the number of courses and the volume of work increase greatly* (Diary: 15). *"I think that the content is just too much"* (Student focus group interview: C1FG2). *"Anatomy in second year was the biggest thing...it was the volume more than anything else"* (Student focus group interview: D1FG1). An alternate view was that the extensiveness of the content allowed the student to practise critically and to devise plans for the assessment and treatment of patients (Student focus group interview: B1FG1). *"I think that the content is fine...it's the organisation"* (Student focus group interview: A1FG1). *"I find that in the limited space of time it's very commendable what they've done. We've got the basic necessities in but the frilly, fluffy bits we just can't seem to fit in"* (Student focus group interview: B1FG2).

The clinical sciences courses were criticised for their extensive volume (Student Focus Group Interview: C1FG1). The effect on student learning was that *"a lot of people in 3rd year were doing clinical sciences just to pass. We are missing out on a lot of things in this way"* (Student Focus Group Interview: A1FG2). A possible cause for the extensive volume could be related to the repetition of content in different courses. *"Some areas are repeated e.g. in the orthopaedics part of clinical sciences we did the same conditions this year that we covered in principles of practice last year. It would make more sense to cover the medical and physio management at the same time"* (Student Focus Group Interview: B1FG1).

Student-physiotherapists also highlighted problems with the **timetabling of courses**. The two main issues that emerged related, first to the time that was allocated to certain courses, and second the effect of the organisation of the time-table on student learning.

A key issue that related to timetabling was the inappropriate allocation of time to modules. Some modules, for example, electrotherapy were rushed because of the inappropriate time allocated to that module. By contrast the kinesiology module in level two, semester one was criticised for the excessive time allocated to that module. Student-physiotherapists suggested that the inappropriate allocation of time for modules impacted negatively on the quality of their learning.

For example, *"We spent a whole semester learning how to use a goniometer. You spend two hours learning how to assess the shoulder joint with a goniometer when you can do the whole body in one day. The course gets boring. You start losing interest in it and you stop working at it"* **(Student focus group interview: E1FG1).** *"Some courses are rushed and not well understood which is compromising the quality that is given to us"* (Student focus group interview: B1FG2). With respect to level four, some student-physiotherapists described the research process as 'hectic' because of a full timetable. Time for research in level four was on a Friday afternoon only. Student-physiotherapists claimed that this time allocation was inadequate for conducting the research process (Student Focus Group Interview: D1FG1).

There was also a suggestion that, in order to improve student learning, the third year timetable should be reorganised so that courses that require one's full attention and focus, for example, clinical sciences should be scheduled during the morning rather than the afternoon (Student Focus Group Interview: E1FG1). A day in the life of a level three-student physiotherapist started with clinical education from 8:00 until 12:00. This was followed by a return to the university campus for lectures and / tests from 13h00 until 16h00. This was the practice on four days of the week with a full day of lectures on the one remaining academic day (Student focus group interview: A1FG1, B1FG2). *"Third year was...you go to clinicals, then you come back to varsity to attend clinical sciences. I was always tired"* (Student Focus Group Interview: A1FG1).

An interesting observation was how the curriculum operated implicitly, for example, by stressing the importance of courses that were 'scientific' and medically based through allocation of more space in the timetable to these courses. Student-physiotherapists responded by valuing these courses differently to other courses in the programme.

The design of the curriculum was described as fragmented and tightly prescribed because of factors that related to the sequencing of modules that contributed to the lack of coherence for learning. In addition the regulated prescription of courses, the curriculum volume and factors related to the organisation of the timetable were cited as factors that influenced student learning. In the section that follows issues that relate to the content of the curriculum are presented.

Content of the Curriculum

The content of the curriculum was described as *good* (diary: 17), *fine* (diary: 18), *well sorted out* (diary: 20), and *prepared students for practice* (diary: 11) through *"the hands-on subjects like kinesiology, massage and electrotherapy which, shaped you into the physio that you are because those are the things that you are going to use in your everyday practise"* (Student Focus Group Interview: A1FG2). The main issues that emerged from the student-physiotherapists primary data sources that relate to the content of the curriculum were the **condition and functional focus of the curriculum content,** and **relevance of content to support a humanistic, patient-centred approach of care.**

Condition and Functional Orientation

Student physiotherapists suggested that the content of the curriculum was focused more towards **conditions of patients and the functional orientation** of

patient care. Aspects of the content were incongruent or did not support the knowledge requirements in relation to the expanded role of the physiotherapist in practice. These claims were supported by the inadequacy of knowledge components within the curriculum to influence a more humanistic, patient-centred approach to care, and to provide skills for managerial and administrative functions. Student-physiotherapists suggested that knowledge in the curriculum for the psychological and social aspects of care was inadequately developed. The focus was on the conditions of patients, and the physical rehabilitation related to the condition.

The following excerpts illustrate these views. *"I'd say in terms of the biological aspect we are definitely well equipped from the lectures in clinical sciences, physiology and anatomy. On the psychological part, we are prepared to a certain extent. We do psychology in first year and third year, with the third year course being the more important one"* (Student focus group interview: C1FG2). *"Focus of the curriculum is more physical and functionally orientated"* (Student focus group interview: B1FG1, C1FG2, E1FG1). *"We are putting a condition at the centre of the curriculum, not a patient"* (Student focus group interview: B1FG2). *"I think the social and emotional aspects have to come from yourself. You have to learn as you go along. I feel that I'm 50-75% equipped for the social and emotional aspects but not 100% because we don't have all the background information, tools and skills"* (Student focus group interview: B1FG1). This gap creates a negative impact on the development and promotion of a holistic, biopsychosocial approach to patient care. The following excerpt highlights how this deficit is reproduced in clinical practice. *"From first year we've been told to treat the patient holistically. Taking that into consideration we had to go into the community and treat the patients psychologically even though we're not really equipped to do that"* (Student focus group interview: A2FG1).

However, the curriculum apportioned excessive time for *science-based courses* that were inappropriately designed for integration with physiotherapy knowledge. For example, student physiotherapists suggested that they found the course in biology irrelevant for physiotherapy practice, and the two prescribed physics courses contained content that was irrelevant and inadequately integrated with physiotherapy knowledge. "Physics was a low point in the curriculum. Everyone really worked hard at it and some people still didn't pass at the first attempt. It's a scary subject for us in first year"(Student focus group interview: A1FG1). Students suggested that the content of the two prescribed physics modules should be revised to exclude topics that did not relate to physiotherapy modules, for example, nuclear physics, optics.

It was further suggested that a "physics for physiotherapy" course should be designed so that specific areas of physics that relate to physiotherapy content and practice could be integrated for improved coherence and validation of content for inclusion into the curriculum. "The physics course has relevance for physiotherapy, but not to the depth that they go. It's so frustrating" (Student focus group interview: D1FG1). This suggests that the content of the physics modules is inappropriately designed to support physiotherapy knowledge, despite physiotherapy assessment and treatment procedures being interpreted and analysed in relation to the principles of physics.

Student-physiotherapists recognised the deficiency of the curriculum to prepare physiotherapy practitioners for *administrative and managerial functions in the public sector*. The curriculum did include a course on professional management but the content was focussed on developing skills for management of a private practice. This is in response to the stipulation from the HPCSA for educating and training physiotherapy students (see, HPCSA, Form 96, 2002). The module content was advancing skills for private practice management yet clinical education experiences within the curriculum were based largely on practice experiences within institutionalised contexts in the public health care system.

Skills and regulatory issues that were required for management in the public sector were absent.

This was, first, incongruent with the needs of some community service physiotherapists who assumed the roles of manager and clinician simultaneously in their first year of practice in public health care centres. This suggests that the module was not critical of the changed practice contexts and the corresponding requirements of practice. Second, it suggests an asymmetrical relationship between the practice model that is propositioned and the theoretical elements that support it.

Student physiotherapists suggested that the management module should focus on skills for the administration and management of a physiotherapy department in the public sector (Student focus group interview: A2FG1, Diary: 20). *"They should put in more administration into the professional management module. With professional management they teach you how to run a private practice. They don't teach us how to manage, how to write proposals, how to tender for equipment, take minutes..."* (Student focus group interview: A2FG1, D2FG1). This was considered a largely neglected area of skill development within the curriculum (Diary: 11, 16).

Relevance of content to support a humanistic, patient-centred approach

The modules within the curriculum that should have influenced a more holistic, patient-centred approach were identified as Psychology, Changing Society: Culture, Ideas and Values, and the Faculty wide Community Studies module. However, student-physiotherapists recognised deficits in the content of these modules towards this end. A more detailed description of the experiences of student-physiotherapists with respect to the modules on Psychology, Changing

Society: Culture, Ideas and Values, and the Faculty wide Community Studies module, follows.

a. Psychology modules

The deficits with regards to the content of the two prescribed psychology modules, related first, to the irrelevance of the content of the modules in level one for physiotherapy practice, and second, the content of the applied psychology module in level three was claimed to be inadequate for the role of the physiotherapist in the current context of physiotherapy practice. "The content of the level 1 psychology modules was irrelevant for physio" (Student focus group interview: C1FG2). "I know that we have to do psychology but the type of psychology we did in first year didn't really give you much to deal with different types of people because you're seeing different people in the hospitals" (Student focus group interview: A2FG2). "The content should have included how to deal with different patients and to work with different cultures. The content relating to Freud, etc was interesting but when it comes to the crux, me and my patient, how is that going to help me?" (Student focus group interview: A1FG2).

The applied psychology module which, was scheduled in the second semester of level three, was criticised for being too theoretical (Diary: 4, student focus group interview: B1FG2) and inappropriate for the extent of patient experience that student-physiotherapists had attained by that stage. "Two years of psychology that was text-book stuff and irrelevant for us" (Student focus group interview: E1FG1). "The content was general, not specific for physiotherapists. We already had so much hands-on patient skills and the content was addressing confidentiality and communication with the patient" (Student focus group interview: A1FG2). The content of this module did not take into account the requirements of student physiotherapists during their experiences in clinical education practice e.g.

"dealing with angry and difficult patients, counselling an HIV positive patient and his/her family, counselling the family of a patient that is attached to a ventilator, counselling spinal cord injured patients on their changed body image" **(Student focus group interview: C1FG2).**

Gaps in the content of the psychology modules related to skills that were required for counselling and developing interpersonal skills. *"Despite it being aimed at health sciences the course doesn't allow much room for skills to be developed for the role of a counsellor"* **(Diary: 4).** *"In third year counselling does come in but it is not something that they test. We have a 5-minute role-play where you pretend that your friend is the patient and you counsel her. No one cares about what you said and how you questioned"* **(Student focus group interview: C1FG2). A gap has been identified in the curriculum towards developing a more humanistic, biopsychosocial approach to patient care through insufficient knowledge and skills that the curriculum offers with regard to the psychological and social aspects of patient care. In addition, there is an absence in curriculum knowledge and experiences towards preparing student-physiotherapists for the social aspects of patient care. There is a perception from a foregoing excerpt of data that these aspects of care should be self-taught.**

b. Changing Society: Culture, Ideas and Values

Student-physiotherapists were compelled to subscribe to the compulsory university wide module in their first academic year – Changing Society: Culture, Ideas and Values. The focus of this module was to introduce students to managing changes in the South African context and how these changes impact on their lives and the lives of ordinary people. The module content covered a wide range of issues relating to human rights, ethics and values, conflict resolution in African society, understanding the impact of national budgets and

the impact of HIV/AIDS on the individual and society. There were two issues that student physiotherapists highlighted with respect to this module.

First, student-physiotherapists found difficulty relating the relevance of this course content to physiotherapy at the first level in the curriculum. *"UDW 300S took a lot of our time and it's not directly linked to physio"* (Student focus group interview: A1FG1, C1FG1, C1FG2). Students could have experienced the module content as irrelevant because of the absence of a science focus, the narrow perception of their role as health care professionals, and the placement of the module in the inappropriate academic year of study. Student-physiotherapists, at that stage may not have confronted issues of diversity because of their lack of willingness to disrupt their conceptions of social situations. This was experienced in the latter years, especially during their clinical education experiences when disparities in social circumstances were more visible.

Second, in retrospect student-physiotherapists felt that the module did not provide them with sufficient knowledge on issues relating to diversity that was experienced during clinical education practice. *"It wasn't about lifestyle changes. It covered government issues, taxes, etc. We should have been taught about diversity, the different lifestyles, the traditions and basic norms and values that the different cultures have"* (Student focus group interview: B1FG1). It was suggested that the module's focus on economics would have benefited student-physiotherapists more if it was run in conjunction with the module on practice management in fourth year (Student focus group interview: C1FG1).

c. Faculty-wide Community Studies Module

Some students found aspects of the interdisciplinary faculty-wide Community Studies Module beneficial, for example, visits to a community site in a rural area where they experienced the reality of rural communities, local and international policies on health, different health systems, and some development in interpersonal skills through role playing (Student focus group interview: E1FG1). *"I remember we went to the rural area and that helped more, seeing what people were going home to, their houses, the distances they'd have to walk to get a taxi..."* (Student focus group interview: E1FG1). However, it was felt that too much time was spent in the classroom and this may have prevented the development and acquisition of interpersonal skills that are necessary for interaction with members of the community. *"I think we would have benefited far more if we were out experiencing life and the hardships in the rural community areas doing workshops, working at mobile clinics etc. rather than sitting in an air-conditioned room being told about it"* (Diary: 8). The community studies module did introduce student-physiotherapists to issues that relate to social development however, it was inadequate, insufficiently developed and largely theoretical.

The gap in the content of the curriculum lies in the focus of its content towards a physical and functional orientation and under-emphasising the development of a holistic, patient-centred approach towards patient care. The holistic approach to care is based on the integration of a biopsychosocial perspective and a multidisciplinary approach. In addition the content has not been reviewed to include knowledge and skills for current context of practice (administration and management, social competence in relation to diversity), and in some instances for relevance to physiotherapy (for example, the physics modules). The next section focuses on pedagogical issues in the curriculum.

Pedagogy

There was broad discussion on the teaching and learning strategies that were used to communicate the physiotherapy subject. Student-physiotherapists suggested that the teaching and learning strategies used in the physiotherapy classroom presented physiotherapy knowledge as theoretical, academic and 'ideal'. *"We cannot apply the theory in the way that we're taught, for example, in the applied courses. It would be better if it was taught on patients"* (Student focus group interview: D1FG1). The difficulty was in recontextualising the classroom knowledge for the clinical practice context. *"I think the problem is with the way physio is taught at this varsity. It's not so much the curriculum; we have good courses but we don't spend enough time on certain aspects or we tend to rush others"* (Student focus group interview: C1FG2).

The following factors, that are, teaching and assessing skills on 'normal' subjects and adopting a theoretical teaching approach to the physiotherapy content that is integrated with medical conditions, were cited as factors that presented difficulties for reproducing classroom knowledge in the practice context. The use of group-work as a teaching method and the competency of lecturers in communicating their subject were also cited as factors that influenced teaching and learning.

a. Classroom-based knowledge versus knowledge for practice

Student-physiotherapists claimed that excessive time was spent on acquiring and assessing physiotherapy technical skills on 'normal' subjects in the classroom rather than immediately reproducing the acquired skill on patients. The reproduction of skills usually occurred, to a small extent during the second year clinical education experience and to a larger degree during third and fourth year clinical education practice. The strategy for teaching physical skills was based on demonstration and practice on 'normal' subjects in the classroom. That teaching

and learning experience was not extended into the clinical environment. *"We practice for too long on normal people rather than on patients"* **(Diary: 13).** *"We cannot learn on normal subjects all the time. It doesn't make sense. We do the practical on ourselves, on the normal and when we go out there we are expected to regurgitate theory into practical as we were taught. But it differs, because when you touch the patient and you touch the normal person, it's totally different"* **(Student focus group interview: D1FG1).** *"In class we talk about the ideal and you are shown a video on the ideal. When we go to Home A, you get a culture shock. You wonder, 'how do I handle this situation?' because it's totally different from what you've been shown"* **(Student focus group interview: C1FG1).**

The skills are perfected for use in an ideal, normal context but they are required in a different form in the changed patient context. *"We should become more critical in our thinking. When we are tested on campus, it's just 'demonstrate this or that.' There is no preparation of the patient like we do in the clinical setting. It tests purely technique. It would be better if we were tested through case scenarios. We'd have to think differently"* **(Student focus group interview: B1FG1). In this context, teaching and learning on 'normal subjects' is advancing a view of learning as the technical acquisition of skills. This 'normal' context does not stimulate the use and development of cognitive, reflective processes (process knowledge) that are required in the management of real patients.**

In addition the technical, acquisition of skills in an 'arranged context' different from the actual context of practice, could be promoting a surface approach of learning. *"I don't know what can be included so that we do not forget our electrotherapy modules. When I came here to the clinical area, it was like starting afresh...learning how to use the interferential machine again but when we were doing ET in class and for OSPE's, you could see what you were doing"* **(Student focus**

group interview: A1FG1). There is a suggestion that the problem may lie in the delay in reproducing physiotherapy skills that are learned in the classroom into the patient context.

In addition, there is a mismatch in the learning and the knowledge that occurs in the one context, the classroom, and the nature of knowledge that is required for the clinical context. Whilst students are developing technical competence in the classroom, they are not developing and achieving cognitive and reflective competence. Both technical and reflective competences are required in the environment of clinical practice. In addition encounters in the clinical context require a combination of professional craft knowledge, personal knowledge and propositional knowledge (see chapter 3). The claims suggest that the classroom context is inadequately preparing student-physiotherapists for knowledge requirements in the clinical context.

b. Theorisation of the physiotherapy content

Student-physiotherapists suggested that the approach to the curriculum content was too theoretical, with insufficient practical teaching on patients to support the theoretical base. The physiotherapy knowledge was learned in an ideal, classroom situation. The disjuncture occurred when this knowledge had to be recontextualised for clinical education practice. In addition, the content was described as being too academic. The following excerpts of data illustrate these issues. *"The curriculum is too theoretical. They don't give us enough practical"* (Student focus group interview: B1FG1). *"I think it's too theory focussed"* (Student focus group interview: D1FG1). *"I think that physiotherapy at this university is still very academic and to treat a patient holistically you need more than academia. We need a workshop to integrate the emotional, physical, spiritual..."* (Student focus group interview: C1FG1). *"The reason why our syllabus is not so practical is because*

they are always giving us an ideal situation. There is never an ideal situation in the hospital" (Student focus group interview: C1FG1).

The theorisation of the applied physiotherapy courses emerged as an important issue. An example of the theoretical approach of courses was the applied pre-clinical sciences course in level three and a course that taught physiotherapy techniques for neurological conditions. "In terms of the applied courses, like applied pre-clinical sciences, they should become more practical in terms of things that we see in the hospitals...real care" (Student focus group interview: C1FG1). Similar problems were experienced in other applied modules. The following excerpts of data illustrate this issue. "In the module on principles of practice, instead of presenting on particular conditions in class, maybe we should go the hospital and get a patient with that condition, then present the patient and the treatment of the condition in front of the whole class. I personally don't remember two-thirds of the chest conditions or any of the rheumatology conditions people presented in class. In order for us to be good physios we have to know these conditions but we don't because of the way in which we are taught" (Diary: 12). "With neurology, there's so much we've learnt but we don't know what we're doing because we haven't seen it practically or hands-on. When we get to a school for physically disabled children, we see this child walking incorrectly but we cannot actually sit down and say, 'that's the problem.'" (Student focus group interview: A1FG2). "For example, with neurology, we get taught everything in class. Then we go to the clinicals and we're supposed to treat a stroke patient with a frozen shoulder...it's too complicated. Maybe these are the kinds of things that we should learn in class. It's doing it on the normal individual and then you have to do it on sick people...that makes it difficult" (Student focus group interview: A1FG1). The approach to the content of the principles of practice modules and the clinical sciences modules were also criticised for being too classroom based and theoretical with overlap of content between the two courses (Student focus group interview: B1FG1, Diary: 20).

Another issue that contributed to the largely theoretical approach was the lack of appropriate teaching resources to teach the physiotherapy subject. *"It would be better if you had your lecture on traction where there is a traction machine present because then you can be shown how to set up a patient on traction. It would be more beneficial than doing it in class where we are given notes to read. When you go the traction machine, the notes and doing it on a patient is totally different"* (Student focus group interview: B1FG1). *"Better and more electrotherapy equipment are required for learning purposes. Some of the electrotherapy machines are not working so you don't know the effect of the machines* (Student focus group interview: C1FG2, E1FG1).

c. Group-work

Group-work was a common teaching strategy that was used in the physiotherapy classroom. There were two issues that surfaced with regards to group-work. The first, related to the size of the groups and the other related to teaching approaches that were used within a group-work strategy.

(i) Size of groups

Quality skill acquisition was impeded by the size of the groups when student physiotherapists were gathered around the lecturer to watch a physiotherapy skill being demonstrated. *"Our classes are too big to have one lecturer demonstrating. Even if we were divided into two groups it did not help. This was proven when students were tested in the practical exams and they performed badly because of poor handling"* (Diary: 13). Large numbers of students per group also prevented adequate supervision and correction of hands-on techniques by the lecturer e.g. vertebral manipulation-Maitland techniques (Diary: 16).

(ii) Teaching approaches within a group-work strategy

Student-physiotherapists claimed that the concept of group-work was used differently by different physiotherapy academics. In one instance, the concept of group-work was re-appropriated to shift the didactic delivery of a lecture from the academic physiotherapists to student-physiotherapists. *"We're put in groups. Each group is given a topic and we are meant to teach each other by presenting our information to the class. It's good that they're teaching us to collect information and become independent, but it needs a balance where the lecturer inputs as well. We can't rely on students to present the correct information, because this information is distributed amongst us and used as notes for the exam"* (Student focus group interview: C1FG2). Another physiotherapy academic used group-work as an active teaching approach within a problem-solving and discussion framing. *"If we had a scenario and we could talk about it...we would remember that somebody said something about that. Academic C used scenarios when she taught her course and we would all talk...that was helpful"* (Student focus group interview: A1FG1). Amongst academic physiotherapists there were different perceptions of how group-work should be used and the outcome of that teaching strategy. Consequently, student-physiotherapists had different experiences of learning with different academic physiotherapists.

d. Competency of Lecturers

The physiotherapy lecturers were criticised for advancing an academic approach to the physiotherapy courses that resulted in *"a big gap between the theory and practical application on patients. We need more lecturers that can tie it together. All the lecturers know their work, but in terms of getting it across to us.... there's the gap. The lecturers are physiotherapists, not teachers. They should take courses on teaching"* (Student focus-group interview: D1FG1). As consumers of the programme it was

suggested that there should be measures in place for students to evaluate and provide feedback on the competency of lecturers (Diary: 12).

The foregoing section on pedagogy has highlighted how teaching and learning skills on 'normal' subjects and advancing a theoretical teaching approach to the physiotherapy content, have created the dissonance between classroom-based knowledge and professional knowledge required for practice. In addition the discrepancy in teaching methods used within a conception of group-work, and the competency of lecturers were described as other factors that influenced the teaching and learning process. These issues will be explored in a later chapter that compares the views of the physiotherapy academics and physiotherapy managers with the views of student-physiotherapists.

Part 1: Intentions, Design, Content, and Pedagogy of this chapter, has illuminated the motivations and perceptions that influence student-physiotherapists for entering the physiotherapy profession. An important factor that was highlighted in this discussion was the student-physiotherapists narrow view on what physiotherapy actually is prior to entering the profession. The discussion highlighted the importance of the image of the profession for attracting student-physiotherapists to physiotherapy in the absence of having sufficient knowledge about the profession. Reflecting on the programme, student-physiotherapists elucidated how the design, content and pedagogical issues influenced their classroom experience of the physiotherapy curriculum. In the Part 2 of this chapter, I will present the experiences of student-physiotherapists during the clinical education practice.

THEORY AND PRACTICE

Part 2: Clinical Education

In *Part 2: Clinical Education*, I present the clinical education experiences of student-physiotherapists. The clinical education practice commences from the second level of the physiotherapy programme until level four. The key themes that have emerged from these experiences relate to the design, the content, pedagogy, and evaluation during clinical education. In addition, student-physiotherapists highlighted their experiences during the clinical elective block. During this three-week period, student-physiotherapists are allowed to select a clinical site of their choice that forms part of their clinical education experience.

The factors that influenced the design of the clinical education programme emerged as the condition and competency focus of the blocks, and the sequencing of competences. The key themes that surfaced with regards to the content of the clinical education experience were the sites used for clinical education practice and the theoretical preparation of student-physiotherapists for clinical education. Control of the clinical education process by clinical educators was the main issue that arose around the pedagogical process in place during clinical education. Clinical block assessments were divided between views that were elicited on the end-of-block assessment, and the external case presentations. The assessment procedures highlighted the control of the clinical educators, and relation between assessment procedure and learning strategy.

The clinical elective experience was described in terms of pre-elective anxieties, concerns and expectations. The post-elective experiences were related to student-physiotherapists experiences at the clinical elective sites, that are, urban resourced, rural under-resourced and private hospital sites. From these experiences, emerged the gaps and silences of the clinical education experience within the curriculum.

The dominant themes that shape the clinical education experiences in this physiotherapy curriculum are highlighted by two stories that introduce this part of the chapter. The stories are constructed from clinical elective experiences in two different health care contexts. Both stories illustrate the comparison between the clinical elective experience and the designed clinical education experiences within the curriculum. These are followed by an exposition of the clinical education experiences of student-physiotherapists through the themes that have been illuminated.

The first story, ***The Story of Martin*** highlights the clinical education experiences of an Indian, male student-physiotherapist. Martin selected a large, peri-urban provincial hospital in KwaZulu-Natal for his elective clinical block. The story highlights how Martin's clinical elective experience compares with his experiences during clinical education practice. This hospital's infrastructure and resources resonate with those hospitals where student-physiotherapists are assigned for clinical education practice within the curriculum structure. The key themes that emerged from this story are the clinical competence for work in urban, resourced hospitals, skills for practising in a busy out-patient department, the multidisciplinary-team approach, and compromised care.

The Story of Martin

I felt that our physiotherapy training at varsity equipped me well for my elective experience at this hospital. During this elective, I was given so much more responsibility than I had during the clinical education blocks. I was responsible for wards of patients; supervised the tasks of a physiotherapy assistant and I had to attend ward rounds where the multidisciplinary team discussed the status of the patient's condition in relation to interventions and results of investigations. I became part of the team that was responsible for making decisions about patients who were admitted in the hospital wards. All of these roles were a new experience for me and I began to understand what was meant a holistic management of patients. It felt good to be treated like a qualified physiotherapist. I was put on the same level as the others in that team where I was asked, for example, my opinion on the patient's condition and about the effectiveness of the medication on the patient's condition. There was no power play among the members of the team. I found that it helped to discuss medical or physiotherapy interventions around a real patient unlike the teaching sessions on campus where we have to imagine the problems of an imaginary patient. The experience of teamwork in his hospital improved my clinical reasoning.

My experiences in the outpatient department were different from treating patients in the ward. An important observation at this busy hospital was the compromised quality of treatment that arises from having large numbers of patients and insufficient human resource to handle them. I felt incompetent with my time management skills to treat patients in that busy outpatient department. I needed skills that would have benefited large numbers of patients in the physiotherapy outpatient department. Our assessment and treatment skills are too time-consuming for use in a busy outpatient department. We're too slow for their system. Qualified staff often reprimanded me for the long duration I spent with the patients. Very soon I too was sucked into the work ethic of that department, by shortening the ultrasound treatment times from 10 minutes to 5 minutes, and shortening the assessment format to just identifying and treating the patient's main problem.

I became a technician in this setting, matching a treatment technique for a presenting problem. There was no time for considering a holistic treatment approach. It made me wonder if I went to work in a physiotherapy department at a provincial hospital next year, is it gonna be like this all the time, where the patient intake is so high, the treatment sessions are shortened and patients won't really benefit from the treatment so they'll be coming back for treatment time and time again. We're going around in circles. That's not the kind of physio I want to be.

Our curriculum did not prepare us for the "real" working world. During clinical education we were taught how to handle a few selected patients on a one-to-one basis – an ideal situation. None of the physiotherapy outpatient departments in provincial hospitals operate in this way. In these departments, the physio would be attending to two or three patients at any one-time. However, I felt that I was academically prepared for this setting, especially in terms of the conditions that I encountered. I had the necessary physiotherapy knowledge and skills to treat those conditions. Those made

me feel adequate. What I lacked were skills for making quick decisions, and treatment skills that would achieve the desired effect in a shortened time. This elective has prepared me for independent practice, better time management in a busy hospital, and for working within a multidisciplinary team.

The Story of Asha, elaborates the experiences of an Indian female student physiotherapist who selected a rural hospital in Kwazulu-Natal with out-reach programmes to the community, for her clinical elective experience. This setting was selected in preparation for the yearlong compulsory community service that students would have to undertake on completing their degree. The key issues that emerged relate to physiotherapy skills for under-resourced communities, biopsychosocial approach, multidisciplinary team, culture, empathy, social responsiveness, skills for management and administration.

The Story of Asha

My elective experience at Hospital X has definitely prepared me for next year's community service. On my arrival I discovered that the physiotherapy department at this hospital had no equipment, just ice, infra-red and a TENS unit. I became innovative and thought about different ways of treating patients, using my hands only. I then realised that physiotherapy is not just about the fancy machines and equipment we learnt on in physiotherapy school. It's more challenging in the community; it's about changing the lives of the disadvantaged, rural people to make it better.

The home visits deep in the community extended my thinking to a whole other sphere. From first year at varsity, we've been told to treat patients holistically, that you've got to consider the patient's social background, their home circumstances, etc. but I could never really understand this until I experienced real home visits into the community. When we perform patient assessments on campus, we are meant to ask the patient questions, for example, about the distance of the toilet from their house, or if a wheelchair could fit through the house door. Those questions became so practical, so relevant when we went to a house where the wheelchair couldn't fit through the door. The patient was bound in his home because of this and the sloped landscape wasn't amenable for wheel-chair use.

This made me realise how we could be structuring irrelevant home-programmes for patients that come to seek our services at urban hospitals because we don't have a clue about their home environment. It deepened my compassion for the people I came across. I wanted to make a difference for them. As part of the community outreach programme, I worked very closely with the occupational therapists and speech and hearing therapists and it was the first time that I got to know what it is that these health professionals actually do and how we could work together to achieve common goals.

People look to you for answers for their emotional and social problems and I didn't have enough skill for that. I was not just a physical therapist in that area; I was 'everything'. This was the biopsychosocial approach that we speak about on campus. I felt that I was not prepared for the real community work in this rural area. I wasn't even aware of the cultural practices of the people and I realised how essential this was if I wanted to gain the patient's respect. The reality is that physiotherapists are getting posted to areas like these and if we don't have the preparatory skills for it, we are not going to manage those patients effectively.

Courses should be implemented within the curriculum that will adequately prepare undergraduates for compulsory community service. I think that the physiotherapy department at university should introduce us to physiotherapy intervention programmes within rural communities during our second year in the program. This will give us skills on how to be creative and modify treatment techniques in situations where there is no equipment. We also need skills for project initiation and skills for the sustainability of those projects within the community. This will help us with our role for developing the community and for health promotion. We need skills on how to start a department, departmental administration and management skills,

skills for report writing, referral letters, etc. These were the duties of the community service physiotherapist at Hospital X during my elective.

This elective experience has opened my eyes to what it means to live in a rural community and for what is expected of me next year during community service.

Design of clinical education practice

Two main issues arose from the data with regards to the design of the clinical education programme. The design of the clinical education programme was based on condition-competency focused blocks, and sequencing of competences.

a. Condition-Competency Focused Blocks versus Holistic Care

The clinical education experience was described as extensive and diverse because student-physiotherapists were exposed to a wide range of patients with varying medical conditions (Student focus group interview: B1FG1). The approach to clinical education was described as "condition focused" because of the design of the clinical "blocks" which was structured by grouping patients that presented with similar conditions in the same block. "During clinical education we are focused on one thing. We go in there, for example, the ICU block. We look at the monitors; at the patient and what he presents with...we treat conditions. If we didn't have an exam to focus on, we'd go further and spend more time. Now we focus on the block that we're in" **(Student focus group interview: D1FG1).** "In the blocks we spend time with only one group of patient, for example, spinal patients. It would be better to be exposed to different conditions at the same time, not just one type of condition at a time" **(Student focus group interview: B1FG1).**

The blocks are designed to develop competence in physiotherapy skills that relate to the different medical conditions. The focus on developing skilled physical competences under-emphasises the skills that are required for a biopsychosocial and multidisciplinary approach to patient care. The integration of both these approaches presents a holistic perspective to patient care in the South African context. An absence identified in the physiotherapy clinical education programme related to extending and shaping the physiotherapy programme to meet the home or social circumstances of the patient, by incorporating a home / work visit by the student-physiotherapist into the intervention programme. *"We don't get the opportunity to follow the patient through from the hospital to his home environment. That's the way the blocks are run"* (Student focus group interview: C1FG1).

Another critique of the clinical education programme related to claims of student-physiotherapists that the biopsychosocial approach was not really incorporated into their physiotherapy intervention plans because the focus was mainly on achieving functional competence. *"We don't really apply it because it is not stressed on us to do that. Most of our treatments are supposed to be geared towards function. Throughout our career we are thinking that we have to achieve goals in terms of function. We hardly know about the social and the psychological. We don't think along those lines"* (Student focus group interview: B1FG2).

In addition the multidisciplinary team approach to patient care was not developed in the curriculum. The curriculum and clinical education practice sessions did not provide opportunities for student-physiotherapists to engage with allied health professionals from different disciplines, for example, occupational therapists or speech therapists (Diary: 16). This prevented student-physiotherapists from acquiring knowledge about the offering of skills and services from these health professionals and it eliminated the experience of interacting within and developing skills for a multidisciplinary team approach to patient care (Student

focus group interview: A2FG1, E2FG1). *"We don't get a chance to work with the occupational therapists. We don't even know what they do because we're really not exposed to them during clinicals at all"* (Student focus group interview: D2FG1). *"We should have some back-ground on the other health professions so if you have a patient, you will know to what extent the OT will be involved in the rehab. We are not exposed to the other health sciences disciplines"* (Student focus group interview: B1FG1).

The condition-competency focused blocks determined corresponding sites and suitability of patients for clinical education practice. This subsequently determined the number of students per clinical block. Because there were a few *suitable* clinical education sites identified that supported the ideology for this clinical education model, this translated into large clinical education groups, with fewer patients per student-physiotherapist, and consequently insufficient experience on certain conditions or patients. *"When it comes to exposure at clinical sites, the areas sometimes don't have enough patients and the exposure there is inadequate"* (Student focus group interview: B1FG1). *"I think with the 4-5 patients that you have, you keep 1 or 2 for the afternoon just to make sure that you're doing something"* (Student focus group interview: A1FG2). A suggestion was to access an alternate site for the afternoon sessions of clinical education. (Student focus group interview: A1FG2).

In addition student-physiotherapists claimed that the large clinical groups influenced the extent of supervision that the clinical supervisor could provide to all students in the group. This in turn impacted on the quality of learning because there was insufficient time for the clinical educator to provide adequate individual supervision of student-physiotherapists. *"I think second year clinicals are such a waste of time. We got left there, we did assessments on patients but because we were in big groups, we were unsupervised so we didn't know what we were doing"* (Student focus group interview: E1FG1). There was a similar criticism that was levelled at

the clinical education experience during level three. The number of students that comprised a block (9-11) was too many for quality clinical education to occur because of the difficulty of the clinical educator to create individual, one-on-one teaching sessions with each student. It was perceived that the clinical educator was unable to *"question or challenge each student adequately about theoretical and practical applications in conjunction with patient treatments"* (Diary: 15).

A reflection on the clinical education experience within large groups suggested that skills could not be learned adequately. *"We have a whole lot of techniques for assessment but we don't know how to perform it properly"* (Student focus group interview: D2FG1). The large numbers of students per group prevented *"the supervisors from coming in, sitting with you and really honing in on your skills with you. There is no learning, taking place in a group. Individual supervision is more beneficial"* (Student focus group interview: C1FG1). The condition-focused blocks excluded experiences of student-physiotherapists within a multidisciplinary, biopsychosocial framing of health care. Further, the condition-focused approach to clinical education influenced a particular selection of clinical education sites that was aligned to the condition-focused blocks. This exclusion influenced how student-physiotherapists experienced learning. It focused the clinical education experience towards acquisition and mastery of specific technical skills whilst under-emphasising, for example, skills for communication across disciplines, skills for influencing development within disparate social contexts, and for patient intervention that extended into the psychosocial approach to health.

b. Sequencing of Competences

Clinical education began as an introductory practice in the second semester of level two with increasing hours of practice in levels three and four. The experience and the competences at each level determined the clinical education

experience at subsequent levels. For example, at level two the main intended focus was on attaining skills for assessing a patient. However, student-physiotherapists' had different experiences of this intended goal. *"We had clinical exposure in second year but we didn't touch, we just observed"* (Student focus group interview: B1FG2). *"The second year clinical module needs to be revised. It is during this time that more emphasis should be placed on assessment techniques, various assessment formats for different conditions, record keeping, therapist-patient interaction"* (Dairy: 15). Clinical education at level two was described as *"very watered down. In second year you just go to see what it's about and in third year you get thrown into the deep end"* (Student focus group interview: B1FG2). This could suggest that student-physiotherapists were being socialised into physiotherapy by internalising approaches to practice through observation. Further, their critique of that experience with their focus on improving practical skills, suggests that the ideology of the medical model was being established. Their non-participation in *actual* practice during clinical education at level two of the physiotherapy programme, could suggest that their knowledge at that level was not valued or considered inadequate for practice.

Further, the rigid time frame for each block (six weeks) did not take into account the degrees of complexity that some physiotherapy techniques exhibit and the time taken to achieve competence in different skills. The time frame for each clinical block translated into student-physiotherapists acquiring inadequate skills on patients who presented with certain conditions, for example, patients requiring long-term rehabilitation (Student focus group interview: A1FG2). *"For the blocks that require real rehab like the neuro block, six weeks is not enough. You don't really see where you are going. We don't see the fruit of our actions so we don't know if it's enough. We don't feel confident because of that"* (Student focus group interview: C1FG1).

Student-physiotherapists identified gaps in the design of the clinical education programme. First, the few selected patients that each student was allocated per day for clinical education practice contrasted with the wards of patients that they had to manage during the elective clinical block. Working in a busy outpatient department or being responsible for wards of patients required skills in time management and skills for effective treatment in a shortened time period that they had not acquired during clinical education practice (Student focus group interview: D2FG1). Second, was the absence of clinical education practice at level one (Diary: 3, Diary: 16, Diary: 17, Student focus group interview: A 1FG1, B1FG2, C1FG2). *"In our first year we should go with the supervisor to the clinical areas, not in terms of assessing or treating patients, just in terms of communication with the patient; just how to approach the patient. Then when we go to clinicals in second year, we'd know how to approach a patient"* (Student focus group interview: A1FG1). Clinical reasoning should form part of the clinical education practice from level one to four (Student focus group interview: A2FG1, Diary: 21). Third, the skills and competences that are required for 'real' work-place practice are not being explicitly developed.

The condition-competency focused design of clinical education practice has under-emphasised or neglected a holistic approach to patient care. This perspective is developed through an integration of the biopsychosocial approach that should guide the intervention of the individual physiotherapy practitioner, and the multidisciplinary perspective where the individual practitioner provides information about the effect of his/her skilled practice on the patient and works in collaboration with the patient and a wider group of health care practitioners, for the benefit of the patient. In addition, because of the effect of large clinical groups per clinical site, the quality of learning had been compromised. Consequently the competences that were intended through this design may not have been sufficiently achieved.

Content of clinical education practice

The prescribed clinical sites and the type of the presenting conditions at each site determined the content of the clinical education blocks. The underlying ideology was for student-physiotherapists to become competent in the physiotherapy skills or techniques that were required for intervention in the conditions that comprised that particular clinical block. There were two key issues that arose with regards to the content for clinical education. These were the theoretical preparation for clinical education, and the contrast between sites used during clinical education and the 'actual' workplace experience.

a. Theoretical Preparation for Clinical Education

There was broad discussion about the absence of theoretical knowledge before the clinical encounter at particular clinical sites and particular academic levels of study. For example, the second year clinical encounter was criticised for the poor selection of clinical sites and the complicated nature of patient conditions that student physiotherapists encountered with insufficient background knowledge on the conditions or the suitability of treatment techniques for those conditions, for example, patients presenting with osteoarthritis, spastic stroke (Dairy: 12). *"We didn't know what to do with stroke patients. We are learning about strokes now in fourth year. After four weeks the external examiner would come along for the evaluation and we had no idea what we were doing"* (Student focus group interview: E1FG1). The experience was described as *"scary because people's lives were in our hands and I felt really lost not really knowing what to do"* (Diary: 3).

Student-physiotherapists had a similar experience during level three clinical education practice. There was insufficient correlation in the scheduling between the theoretical knowledge that related to the conditions and skills required for a block, and the clinical education encounter. *"In third year, we did the spinal cord injury block first but we hadn't done the theory behind it. When we did the theory it*

made a lot of sense but when I was in the block, I felt, 'why am I doing physio? I can't handle this patient. I'm pathetic'" (Student focus group interview: A1FG2). The gap lies in a mismatch in the scheduling of the supporting theoretical knowledge, that is, knowledge relating to the conditions and physiotherapy skills, and the clinical encounter experienced at the clinical site that requires that underlying knowledge.

b. Contrast between sites used during clinical education and the 'actual' workplace

The majority of the sites that were selected for clinical education were urban-based hospital settings that were equipped with electrotherapy machines and other physical resources, which made the clinical experience "comfortable" (Student focus group interview: E2FG1). The selection of the clinical education sites that were urban, resourced hospital settings was based on the profile of that hospital's patients relative to the condition-competency focus of the blocks.

The nature of resources at these sites were in contrast to some of the sites that student physiotherapists encountered during their elective placement and the nature of some of the community service placement sites that they would be positioned at in the year that followed. "The problem is that most of the things that I learnt on at physiotherapy school, for example, electrotherapy...in the hospitals that I'm likely to work at there are no such machines. I will have to use just my hands for treatment. There are not enough hospital beds so patients just lie on a mat on the floor. I will have to figure out for myself how to get the patient up for walking because it's different from what we've learnt in the classroom and during clinicals" (Student focus group interview: A1FG1).

Further, student-physiotherapists criticised the institutionalised selection of clinical education sites for community physiotherapy practice at levels three and

four (Student focus group interview: A1FG1, C1FG1, A2FG2, E2FG1). *"The sites chosen are not appropriate for the community block because presently we are going to a home for CP's and we are basically doing neuro. We are not doing community work"* (Student focus group interview: C1FG1). *"In our community block we go to hospital...that's not community. Community is actually going out and doing home visits..."* (Student focus group interview: C1FG1). The hospital or institutional based care settings were re-appropriated for 'community physiotherapy practice'.

The broader focus of community-based practices was not fore-grounded, for example, rural based community care within the district health system. Student-physiotherapists reflected that they had some experience of providing a service in an under-served area. *"We did go to an under-developed township where we were physically teaching mothers how to cope with their cerebral palsy kids. That was community work, going into some set-up where there was nothing and building something"* (Student focus group interview: C1FG1). However, this limited exposure was insufficient to develop the wider skills for community outreach.

"I think we need to be actively involved in the community when we do our community clinical blocks. We should have one block where all we do are home visits or workshops etc" (Student focus group interview: E1FG1). Because of the current selection of the sites for 'community physiotherapy', skills for providing home-based care and developing skills for patient education workshops were inadequately developed (Diary: 12). It was suggested that, *"community should be introduced at level 2 and it should be in a disadvantaged community where they really need health services not in semi-urban areas like we do this year. The department should organise 3-4 weeks of community practice in a rural area where we can really learn about community physiotherapy. It will also teach us how to be creative so that we can modify treatments in situations where there is no equipment"* (Diary: 21). In addition to the skills that are required for physiotherapy

intervention, student-physiotherapists recognised the need for departmental administrative and managerial skills. *"I think we need to know / learn about administration"* (Diary: 21). *"I feel that we should be given lectures on administration because we are going to be running a department. We have to buy equipment. We have to prioritise. We don't know which one to do first"* (Student focus group interview: A2FG1).

This suggests that the clinical education sites are largely selected to extend opportunities for practise of the physiotherapy skills that are learnt in the classroom without being sufficiently critical of the needs of the changing health care context. As a consequence, well-resourced urban physiotherapy departments in large hospitals are selected for clinical education practice where skills that are learned in the classroom may be reinforced. Student-physiotherapists have recognised their role in response to social inequalities and social injustices. The gap in the selection of clinical sites lies in accessing under-resourced facilities in response to the primary health care philosophy and improving service delivery. The skills that are required for practicing at these sites are under-emphasised in the design of clinical education practice.

The introduction of student-physiotherapists at these sites could provide opportunities to develop knowledge, skills and techniques that are required for that practice context, in preparation for compulsory community service and its contribution to the broader scheme of social development. Experience within these contexts could also have the potential to develop the commitment of student-physiotherapists towards social responsibility by them becoming critical of the disparities in that context and acting towards transformation. The experiences of community physiotherapists at these settings will be explored in a later chapter.

Pedagogy during Clinical Education

The key issue that emerged in relation to pedagogy in the clinical environment was the control of the clinical educator in the clinical education process. This was evidenced through the **dominance of the clinical reasoning process** that was exhibited by the clinical educator, the ***limited hours of clinical supervision*** that the clinical educator provided, and the use of particular **teaching strategies**.

a. Dominance of the clinical reasoning process

Student-physiotherapists suggested that their learning approach and clinical judgements were sometimes silenced by the dominance of the clinical reasoning process of the clinical educator. Student-physiotherapists suggested that their learning approach should be considered and there should be space for the student to develop his/her judgements for treatment. *"You can't teach people to learn but you can teach observation skills. Examiners have so many years of experience behind them and we are seeing things for the first time and they expect us to see exactly what they see. The learning approach needs to be addressed"* **(Student focus group interview: D1FG1).** *"Sometimes what we get taught at varsity doesn't work on the patient. So you find that you add your own modifications and then when the exams come, they* **(the clinical educators)** *ask you, 'What is this? Is this what you're taught?' You answer, 'No Mrs So and So, but it works for this patient.' Then they ask you about the physiological basis for what you are doing. I may not know the physiological basis but it's safe and it's working for the patient. That's the difference between academics and clinicians"* **(Student focus group interview: D1FG1).**

In response to these experiences, some student-physiotherapists suggested that a framework for assessment of the various conditions was necessary for clinical education practice. *"We should have a format / framework of each condition that we*

are likely to see in the clinical area. If we figure out an assessment for a patient, the examiners correct you. There is no time that you are given something right, especially for assessments" (Student focus group interview: D1FG1).

b. *Limited Hours of Clinical Supervision*

Many of the student-physiotherapists articulated that the duration of clinical supervision sessions were inadequate. "There should have been more teaching done at the blocks and supervision should have been more frequent and for longer periods of time" (Diary: 18). "We pay a lot of money for clinical supervision but we get supervision just once a week. When the supervisor comes along it's good because we learn so much and we do tutorials around a patient. We would have learned so much more if the supervisor came along more often" (Student focus group interview: E1FG1). "I am not happy with the supervision. All the people that are supervising us are busy with other things so there's not enough time to supervise us" (Student focus group interview: D1FG1). The limited supervision sessions may have impacted on the learning experiences of student-physiotherapists.

c. *Teaching Strategies*

Student-physiotherapists criticised the 'verbal' teaching method that was used by clinical supervisors during the supervision sessions rather than a practical demonstration or a 'hands-on' approach. It was suggested that more demonstrations by the supervisor were necessary rather than verbal corrections. "Show corrections to techniques on the patient using hands-on skills rather than verbal corrections" (Diary: 11). "You hardly see them doing hands-on or showing you how to do this or that. You have nothing to fall back on or visualise or try out because you have never seen them do it" (Student focus group interview: D1FG1). More group discussion sessions about patient-management with the clinical educator was desired as these sessions proved valuable (Student focus group interview:

C1FG1, E1FG1). A contrary view suggested that individual supervision was more beneficial than a group discussion (Student focus group interview: C1FG1). *"Individual corrections occur at the end of block exam where the student is questioned about the theory-practical application and this is where I tend to learn the most through the remarks and corrections of the examiner"* (Diary: 15).

The clinical education experience of student-physiotherapists could be enhanced if the diverse learning approaches of student-physiotherapists were recognised, classroom-based knowledge was related to the clinical environment to develop competence in physiotherapy techniques, and guidance was given to student's clinical reasoning process. It was suggested that the allotted time for clinical education at the clinical sites could be structured to maximise the benefits to the student. *"Clinical supervision could be improved if we could use the one or two hours in the morning whilst the patients are having breakfast, to practise on the electrotherapy machines or we could do a tut around an interesting or unusual patient"* (Student focus group interview: E1FG1). Another suggestion to improve the integration with the theoretical and the clinical was for lecturers to access patients on whom to demonstrate the application of the theoretical knowledge. *"When we go to the wards, it would be nice if our lecturers could come and do a prac session in the ward. Then our theory and prac is integrated"* (Student focus group interview: C1FG1).

Another suggestion was to include more hospital-based clinicians who worked at the clinical sites as clinical educators because they are *"more hands-on; more in touch, and they were there all the time"* (Student focus group interview: D1FG1). *"I think the clinicians often know more about how you have improved after each treatment and they are quite helpful because they are there all the time"* (Student focus group interview: C1FG1). Whilst student-physiotherapists were dissatisfied with the limited hours of clinical supervision, they expressed their dissatisfaction with the inconsistency when two clinical educators were present on a block.

"There is sometimes a conflict of interest when there are two supervisors per block. One of them says to you that they believe in this or that and when you're assessed by the other supervisor, they are unhappy with the technique that you're using that the first supervisor recommended. There's no consistency" (Student focus group interview: C1FG2).

Student-physiotherapists were being socialised into normalising judgements by the imposition of the clinical reasoning process of the clinical educator and the under-valuing of alternate clinical reasoning by student-physiotherapists. Consequently they have difficulty experiencing alternate view-points on patient management from clinical educators.

Clinical block assessments

There were two main issues that emerged with respect to the clinical block assessments. These were the end of block assessment, and the external case presentations.

a. End of block assessment

Student physiotherapists described how the assessment process influenced their learning strategy. Because of the nature of the clinical block assessment where the focus is on the evaluation of the "product" at the end of the block, student-physiotherapists *"get into this mode where all you can see is scoring 50% to pass. You reach a point where you neglect the finer aspects because all you want to do is pass"* (Student focus group: D1FG1).Student-physiotherapists claim that, *"we learn more of what we're supposed to know during our exam whilst being tested on the assessment and technique"* (Student focus group: C1FG1, C1FG2).

It was suggested that the process of clinical block evaluations should be changed to a continuous assessment where the end of block mark should be calculated by the summation of various assessment marks that are acquired throughout the block. *"Wouldn't continuous evaluation be better than a final end of block evaluation? if we get evaluated at the end of the first week an we didn't know anything, at least we know that we would have at least five other chances of improving"* (Student focus group interview: C1FG1).This "process" conception would serve to identify the deficiencies in patient management throughout the block which would create opportunities for improving competences. The clinical examination team should include a member of the clinical staff from that clinical site to balance the academic and clinical expectations of the assessment (Student focus group interview: B1FG1).

b. External case presentations

There was broad discussion around the "external case presentations" that student-physiotherapists experienced during level three clinical education. These marks obtained from the "external case presentations" contributed to the students' assessment mark for that block. During this encounter, student physiotherapists had to present the management of a patient to the group of students that formed that clinical block, the clinical educator of the block and two 'external examiners' of the physiotherapy academic staff. Student physiotherapists were evaluated on their performance by the 'external examiners'.

The following reflections were elicited from student physiotherapists on the experience of "case presentations". The experience added to the stress of third year (Student focus group interview: D1FG1). The process would have been more beneficial if it was intended for learning purposes rather than placing emphasis on the evaluation (Student focus group interview: D1FG1). A positive

reflection of the experience was that the case presentations, which engaged group learning should be continued but with the clinical group and the clinical educator responsible for that group (Student focus group interview: D1FG1). *"It wasn't a learning experience. It confused me because we have our own supervisors in the hospital. People who were examining for the case presentations were expecting something different from what we learnt from the supervisors. I know that we have different ways of doing things but we should accept another person's point of view"* (Student focus group interview: C1FG2).

There was no consensus in some clinical blocks between the expectations of the external examiners and the learning that the student physiotherapists experienced in conjunction with their clinical educators in the six-week duration of the block which left student physiotherapists feeling confused (Student focus group interview: C1FG2). The experience was demoralising because *"it allowed the people sitting on the top to really make students feel small and degrade them"* (Student focus group interview: C1FG2). It was not a constructive learning experience because the verbal criticisms from the external examiners were not followed by a practical, hands-on demonstration of how the student-physiotherapist could correct a technique/ skill (Diary: 23).

The assessment processes reflect the power and control of the clinical educator, and it highlights how the assessment strategies influenced the learning approach used by the student-physiotherapist. The continuous evaluation is the favoured method of assessment, which shifts the focus from the assessment to learning. The "case presentation" could be used as a teaching method in the clinical area where student-physiotherapists present a patient and their clinical reasoning for selecting the techniques that was chosen for that patient's condition. This could provide opportunities for the clinical educator to enhance the performance of the techniques for the benefit of the group and promote a holistic approach to patient-care. During these sessions, the student-physiotherapists could be

introduced to the biopsychosocial patient approach and the interventions of other members of the health care team that would promote a multidisciplinary team approach. In the next section, I present the experiences of student-physiotherapists on their clinical elective block.

The Clinical Elective Experience

The clinical elective was positioned during the second semester of level four. For the elective experience, student physiotherapists were allowed to select a clinical site of their choice where they could practice physiotherapy within the context of the world of work. The main issues that emerged from the elective experience were the pre-elective anxieties, concerns and expectations of the elective encounter. The issues that emerged from the post-elective reflections were described in relation to the sites or contexts of practice.

Diverse clinical sites were selected for the elective. These included urban provincial hospitals within and/or outside the province that provided general patient care and physiotherapy services within that institution, urban provincial hospitals with outreach services to outlying rural areas, private hospitals that provided physiotherapy services, rural hospitals that provided physiotherapy outreach through mobile clinics and home-based care and one student went to a general hospital in the United Kingdom (Student focus group interview: A1FG1, A1FG2, B1FG1, B1FG2, C1FG1, C1FG2, D1FG1, E1FG1).

a. Pre-elective Anxieties, Concerns and Expectations

Reflecting on their anxieties and concerns about the elective experience, some student-physiotherapists claimed that they felt confident and prepared for the experience (student focus group interview: C1FG1) whilst others expressed their fears about working without the support of their peers and clinical supervisors

(student focus group interview: A1FG2, C1FG1). *"I am prepared for the elective. The curriculum has given me quite a few skills"* (Student focus group interview: A1FG1). *"I feel prepared but I'm scared. I don't think that I'm confident enough"* (Student focus group interview: A1FG1).

There were concerns about working out of the 'clinical block' structure and working independently at a community site. *"I think that all the clinical experiences over the past two years have been valuable but it prepares you for 'clinical blocks'. When you are working you are expected to treat any condition"* (Diary: 26). *"I just feel that I don't have all the skills that I need to be a physio. We know the theory but the practical part of it, I'm not so sure of. Especially if I have to go to a community area where I am going to be the only physio, I don't think I'll cope alone"* (Student focus group interview: B1FG2). Another concern was around the issue of time management and the dissonance between the clinical education experience and the real working world. *"I feel a bit scared because I don't know how much responsibility is gonna be placed on us. Here when we are doing our normal clinicals, not much responsibility with respect to numbers of patients on us...we don't learn time management in the way that you are gonna have to practise it when you are working full time"* (Student focus group interview: A1FG2).

Student-physiotherapists expectations of the elective experience included gaining some insight into the teaching and learning approach that is used by student physiotherapists at other universities (Student focus group interview: C1FG2), and the level/extent of clinical supervision that those student physiotherapists receive (Student focus group interview: D1FG1). Student physiotherapists thought that the clinical elective provided an opportunity for them to add to their existing knowledge base from the physiotherapists at the elective sites (Student focus group interview: C1FG2, E1FG1).

Other student-physiotherapists were using the elective period for revision of and improving on physiotherapy techniques in preparation for the final examination, and preparation for the world of work in the following year. (Student focus group interview: E1FG1, B1FG2). One student-physiotherapist was using the clinical elective as *"the gauge of my readiness that will reflect the real me"* (Diary: 21), whilst another was using the opportunity to experience a multidisciplinary team approach in a community setting. *"Working in a 'full blown' community setting with an occupational therapist, something that we were not exposed to in our community clinical blocks"* (Diary: 20). Being treated like a qualified physiotherapist was another expectation that student-physiotherapists were looking forward to (Student focus group interview: A1FG2, B1FG2).

b. Post-elective Reflections

The students experienced their electives differently depending on their choice of clinical site. The sites identified are the hospitals within an urban/peri-urban area, hospitals in rural / under-resourced settings, and private hospital settings. The elective experience was described as *"quite exciting"*, *"an experience that makes you realise what real work is about"* (Student focus group interview: post-elective), *"really beneficial for students because it allows you to grow as a physiotherapist and an individual"* (Diary: 18), *"not easy but the elective was a nice experience that has prepared me for community service as well as for the exam"* (Diary: 13).

(i). Experience at Urban /Peri-urban Provincial Hospital

Whilst some students felt inadequately prepared for some contexts of practice, other students coped well in hospital environments that were similar to those used for clinical education practice, for example, well-resourced provincial hospitals with intensive care units. These student physiotherapists felt that when

compared to the practise of students from other universities who were present at the same time at that clinical site, *"our students are academically better prepared than they are but they display more confidence in themselves than we do"* (Student focus group interview: A2FG1).

In addition the following comments were elicited about their elective experience at provincial hospitals. First, it changed initial perceptions about deficits in their physiotherapy knowledge base when physiotherapy skills used by physiotherapists of that clinical site were identifiable and familiar to student physiotherapists (Student focus group interview: B1FG1). *"We thought that we didn't know enough but when you get there and actually see the stuff that's being done with patients, you realise that it's things that you know"* (Student focus group interview: B1FG1).

Second, some student-physiotherapists were disillusioned by the compromised quality of patient care at a busy provincial physiotherapy department that had insufficient human resource to attend to the large numbers of patients requiring physiotherapy. As they worked in this environment, student-physiotherapists were also socialised into the compromised practice. *"The quality of assessments and techniques just went down because there you're pushing out quantity, not quality. I was doing ultrasound for fifteen minutes as we were taught, but then the physio came along and asked me why I was taking so long with the patient. I was forced to decrease the dose. You have to go with the flow eventually. You couldn't help yourself"* (Student focus group interview: E2FG1).

Third, the experience of being given more responsibility and being recognised as a member of an interactive multidisciplinary team (Student focus group interview: A2FG1, E2FG1, D2FG1) and, fourth, the experience of being socialised into other roles of a physiotherapist that are not normally encountered during clinical education practice, for example, referring patients to other members of the health

team, writing reports on patients, managing wards of patients. (Student focus group interview: A2FG1, E2FG1, D2FG1).

(ii). Experience at Rural / Under-resourced Hospitals

The student-physiotherapists described their experiences at under-resourced, community out-reach centres. First, was the distinction between the community physiotherapy experience of the curriculum and the reality of practice which provided physiotherapy services, for example, through mobile clinics and home-based care in deep rural communities. Student-physiotherapists claimed that, *"we were not prepared for the real community stuff, for real outreach. Our community block during clinicals is institutionalised"* (Student focus group interview: A2FG1, E2FG1). Second, recognising the bigger role of physiotherapist in uplifting people and their communities (Student focus group interview: A2FG1) and third, being recognised as a member of an interactive multidisciplinary team (Student focus group interview: A2FG1, E2FG1).

(iii). Experience at a Private Hospital

Two student-physiotherapists cited a difference between the clinical approach that is adopted during clinical education practice and the experience of working at a private hospital. *"When I went on elective to Hospital X, their approach to physio is completely different to ours. I think when I came into physio that's what I thought it would be like. But it really wasn't. It was more clinical"* (Student focus group interview: B1FG2). This could suggest that the human, relational aspect of practice is being neglected in this curriculum, with the focus being more technique-oriented.

Gaps and Silences

The following are suggestions of gaps and silences in the physiotherapy curriculum that were recognised by student-physiotherapists following their

elective experience. The key issues that emerged from student-physiotherapists who went to an **urban / peri-urban, resourced provincial** hospital for their elective was related to time management and interaction within a multidisciplinary team.

With regards to time management, student-physiotherapists suggested that the practice of treating patients on a one-to-one basis within the physiotherapy curriculum experience was idealistic when compared to the reality of practice in busy hospital departments. There was the discrepancy between the patient load and the amount of time that student physiotherapists are allowed with each patient during clinical education, and the shortened time period for treatment that they were introduced to whilst working in a busy outpatient department. *"We're too slow for their system. Our assessment techniques and skills are too long,"* (Student focus group interview: A2FG1, D2FG1). Skills that are required to treat large numbers of patients are under-emphasised in the curriculum, which probably translates to the compromised quality of care that is experienced at busy hospital departments. *"All that we learnt in four years was undone. We felt that we couldn't use the techniques as we learnt them. We felt that we didn't benefit the patients at all. There we were technicians. Here we're being taught how to handle a patient on a one-to-one basis in an ideal situation. But we are not living in an ideal situation. This is not a first world country"* (Student focus group interview: D2FG1).

The second absence in the curriculum related to skills that were required to attend to wards of patients or large numbers of patients, and skills in the absence of equipment (Student focus group interview: A2FG1, D2FG1, E2FG1). Third, the need for knowledge about the role of other health professionals within a multidisciplinary team and skills for interaction within that team (Student focus group interview: A2FG1, D2FG1, E2FG1) and fourth, the need for skills to assess levels of disability and skills for reporting one's findings (Student focus group interview: D2FG1)

The gaps and silences that were recognised with respect to **rural and under-resourced elective sites** were described. First, there was need for more social and psychological skills in order to operate within a biopsychosocial model of care (Student focus group interview: A2FG1, E2FG1). Second, there was need for skills and techniques that could be used in the provision of physiotherapy services through community outreach structures and in a multidisciplinary team (Student focus group interview: A2FG1, E2FG1). In addition there was the need for knowledge on cultural norms and traditions of the people that physiotherapists would be serving (Student focus group interview: A2FG1, D2FG1, E2FG1). Third, student-physiotherapists suggested that there should be follow-through of patients to their home environment. This suggestion arose following their experience of going out on home visits and their realisation of the inappropriateness of prescribing a physiotherapy home programme for a patient without visiting or having sufficient understanding of his/her home/social circumstances and physical resources (Student focus group interview: A2FG1). Fourth, the management and administrative role of the physiotherapist was under-emphasised in the curriculum.

In *Part 2: Clinical Education* I have presented the clinical education experiences of student-physiotherapists that relate to its design, content, pedagogy, clinical block assessments, and the clinical elective experience. These issues will be compared in a later chapter to issues that have emerged from the interview data of the physiotherapy academics and the physiotherapy practitioners. In the next section, I present the views of student-physiotherapists on the relationships in the physiotherapy curriculum.

Part 3: Relationships in the Curriculum

In part 3 of this chapter, I focus on how relationships are constructed by student physiotherapists within the physiotherapy curriculum. The key themes that relate to relationships in the curriculum emerged from the focus group interview data and the diaries of the student physiotherapists, are the following, (a) interaction between student-physiotherapists and patients, (b) interaction between student-physiotherapists and the physiotherapy academics, (c) interactions amongst student physiotherapists, and (d) interaction between student physiotherapists and practising physiotherapists.

The dominant factors that influenced the interactions between student-physiotherapists and patients were issues that related to language, caring and the interpersonal relationship, cultural diversity, appearance, the student-physiotherapists' level of confidence in the interaction with patients, and the dress of the student-physiotherapist. These themes will be elaborated on in greater detail with support from excerpts of data that reflect the experiences of the student-physiotherapists in the clinical education settings.

In the interaction between student-physiotherapists and the physiotherapy academics the dominant themes that surfaced were relations of power, and caring. The poor interaction amongst student physiotherapists was cited as a broad area of concern. With respect to the poor interaction amongst student-physiotherapists themselves and other members of the university student body issues relating to race and a tight prescribed curriculum were cited as the factors responsible for the non-interaction.

Student-physiotherapists perceived contrasting attitudes towards them from practising physiotherapists employed at some of the clinical education sites. These were compared to the attitudes exhibited towards them by those physiotherapists with whom they worked during their clinical elective block

experience. The key issues in this regard related to perceptions of exclusion and inclusion.

The dominant themes that shape the relationships in this physiotherapy curriculum will be highlighted by two stories that introduce this part of the chapter. These will be followed by an exposition of the direct experiences of student-physiotherapists through the themes that have been illuminated.

The first story I present is the ***Story of Nonhlanhla***, who illuminates the experiences of a Black female student-physiotherapist in the physiotherapy undergraduate programme. ***Nonhlanhla*** was admitted into the physiotherapy programme on the basis of this university's increasing access policy. This policy broadened access for students who were previously disadvantaged on the basis of race and on their inability to meet the existing university entrance criteria. The story highlights the tensions that relate to issues of race, inclusion/exclusion, discrimination and cultural diversity that exist in the physiotherapy curriculum.

The Story of Nonhlanhla

"Discrimination by colour will not change; it was here when we were born, we are now living with it and we will die with it."

As African students we are accepted on an affirmative action basis but when it comes to access of information and help, we are treated no different from the others. I think it should not be said that we are being admitted on the basis of affirmative action; rather we should be admitted if we are fit for it. It's been very taxing and frustrating getting to where I am now but I think the problem is not with physiotherapy itself, but with the way the programme is taught and run.

There is a lack of consistency in the way students are treated in this department and it's discouraging. The way I see it, more African students are experiencing problems than maybe Indians, coloureds or whites. If only we could be treated equally and with respect. The solution to this problem lies in creating equal numbers of White, Black, Indian and Coloured lecturers – maybe this will bring some changes. I also believe that we should be evaluated by people outside this province; by people who don't know us. The gap that exists between the students and lecturers must be reduced.

It is important for us to know and understand the diversity of other cultures but this is not addressed in this department. We are oriented in such a way that we don't know other cultures. There are tensions between the different race groups in the different

levels and amongst students of the same race as well. There should be some initiative by the department to close the gap that exists in and between the different levels of study amongst students of different racial/ethnic groups. There isn't that bond between us. We need to have some talks or role-playing that will bring students together and unite students. As it is everyone is doing his/her own thing. We need racial balance at all levels, students, lecturers, throughout. This physiotherapy curriculum changes you depending on the kind of person that you are and the experiences that you've gone through. It makes you strong, responsible and disciplined.

The ***Story of Tracy*** represents the voice of a Coloured female student-physiotherapist. ***Tracy's Story*** introduces the reader to the nature of the relationships that are constructed between the different role-players within the curriculum. It illustrates how these relationships shape the context within which the physiotherapy curriculum functions, in the classroom and outside of it through issues of inclusion/exclusion, power relations, language and diversity, confidence and caring.

The Story of Tracy

You learn a lot whilst in the physiotherapy programme, not just about academic physiotherapy. You learn about relationship dynamics, between yourself and other students from different backgrounds, between yourself and lecturers, practicing physiotherapists, patients.

As a student, a lot of the times you don't feel like you are part of the university. There is no time to interact with people other than those from your class. The one thing we never had was good class dynamics, which is so unfortunate because during the final practical exam, we definitely helped each other pull through. Which makes me wonder...how much more would we all have known if we had gotten along better earlier? The mixing in the clinical groups did help to bring us closer as we practised and learned our skills on each other. Within the department there is no interaction amongst students between the different levels of study or with students from within the faculty.

The department is not as understanding to student problems as they would like to think they are. There needs to be more contact and better relationships between students and lecturers. I don't think anyone on the staff would know if a student was having personal difficulties. It was difficult to reach out to anyone in the physiotherapy department when we're having a personal crisis unless you found someone as a friend. Being in the physiotherapy department feels like being in

school...the lecturers have some authority, some hold over you. I used to be so enthusiastic in first year, raising my hands to answer questions but now it's about maintaining a low profile, obtaining my degree and leaving.
I've learnt a lot about people's skills whilst at the hospitals, something I didn't really get from the courses on campus. I've learned through my interactions with patients how different each patient is and how limited we sometimes are in a whole lot of things. For example, my inability to speak and understand Zulu was limiting during interactions with patients at the hospital.

I've realised that diversity does not only mean differences in race, creed or colour. It could also be the ability of a person to understand what you are trying to say because of differences in levels of understanding or language proficiency. That doesn't mean that the patient must be treated differently. I've learned to respect the patient I'm treating by putting myself in that person's shoes and asking myself, "If this was me, how would I have liked to be treated?" In this way, I've learned to adjust to the level of my patient and show that I care.

Another experience that we encountered whilst at the hospitals was that the practising physiotherapists don't always make students feel welcome. The students have their own student room and the qualified staff, has a separate room. The qualified staff has authority over us when our clinical supervisors are away, giving us their patient load without much support. I wonder if we will be like that once we've qualified, forgetting that we were also struggling students at some stage. When I went on elective I was included as a 'qualified' member of the staff of that hospital's physiotherapy department and I was given the same responsibilities as the qualified staff of that department. It felt so different, almost strange to interact at that level. But that increased my confidence because I realised my abilities as a physiotherapist outside of the university environment.

Interaction between student-physiotherapists and patients

In their interaction with patients, student-physiotherapists recognised several key issues that influenced the development of an inter-personal relationship. These issues related to **language, caring and the interpersonal relationship**, **cultural diversity**, **confidence**, and the **appearance of the student-physiotherapist.**

a. Language

Whilst difference in 'language' was presented as an explicit issue that affected the interpersonal relationship between the student-physiotherapist and patient, under-cover of this label, were the implicit values that linked language, racism and caring.

Some student-physiotherapists described the benefits of subscribing to a course in isiZulu. There were suggestions that the course enhanced communication between patient and student-physiotherapist during the clinical education experience. *"I had free time in first year, which provided me with a great opportunity to study basic Zulu as an extra course. This course proved to be the most beneficial course throughout my study as it allowed me easier communication with patients during clinicals. Being able to break down the language barrier was very important as I was able to gain better understanding of the patients [who are majority Zulu speaking] and their conditions and it will definitely prove to be beneficial for future clinical practice"* (Diary: 15). This improved the relationship between the patient and the student-physiotherapist, which had deeper influences on the patient's level of commitment and co-operation in relation to the physiotherapist's planned intervention. *"If I could speak someone's language, I can actually communicate with the person. The person is gonna trust me and make the extra effort to do something. It's necessary to have a proper relationship with a person, especially in a profession like*

physio...it's the whole personal thing" (Student focus group interview: B1FG2). By engaging in the first-language of a person different from one's own, the barrier between the two people was crossed and this allowed one access to experience the world of the other through the experience of a common language. But, it was not enough to know the Zulu language. "It's also about understanding what it means to be Zulu" (Student focus group interview: B1FG2).

The deficiency of isiZulu in the curriculum was cited as a barrier to effective interaction with patients whose first language is isiZulu, and consequently influenced the effectiveness of the treatment programme. "I still can't speak Zulu and I think it's an important issue. You have to have that communication. If you don't know what the patient is saying and if you can't speak the language, your session is never gonna be beneficial" (Student focus group interview: B1FG1). "In our province, we have a lot of Indian students who cannot speak Zulu fluently. How will you reflect your interpersonal skills if you cannot speak in the language of the patient? I think every department in the health sciences does a compulsory course in Zulu, yet we don't" (Student focus group interview: B1FG2).

A tension arose between the curriculum's insufficiency for attending to courses that focused on improving patient-student physiotherapist interaction, and the explicit evaluation by clinical educators of those skills during the clinical block assessments (Student focus group interview: B1FG2, D1FG1). In this regard, the absence of a course in isiZulu was presented as a major gap in the curriculum. "I think that our communication skills are poor. We have to improve it" (Student focus group interview: A1FG1). "There is nothing that the physiotherapy programme offers to improve one's skills when interacting with a patient but during the clinical assessment, the examiners expect you to have those skills" (Student focus group interview: B1FG2). "When you relate to your patient, I've never drawn on any skills that I've learned in psychology" (Student focus group interview: D1FG1). The

majority of the respondents suggested that a course in isiZulu should form part of the prescribed syllabus for non-Zulu speaking students (Student focus group interview: A1FG1, A1FG2, B1FG2, C1FG1, CiFG2, D1FG1, diary number: 4). *"Zulu should be compulsory, not optional"* (Student focus group interview: A1FG1). One student physiotherapist presented an opposite view to the deficit of a course in Zulu in the curriculum. *"I don't think it has anything to do with the language personally because I didn't speak a word of Zulu when we entered but I can gather the basic necessities from the patient. So when I take the social history of a patient, it isn't very good but it's more the point that if you can communicate what you are trying to get across to the patient by demonstrating on yourself or on them, the language thing isn't such a problem"* (Student focus group interview: B1FG2). There is an underlying assumption in the above excerpt of data, that during interaction with patients, it was sufficient to communicate the technical requirements of treatment to a patient through an alternate effective medium. In this regard there is an assumption that the focus is on the physical aspects of care to the exclusion of the broader patient's world into the interaction.

isiZulu, caring and racism

The following vignette highlights how the non-acquisition of skills for communicating in isiZulu may be linked to deeper individual ideologies that influence the level of care that the student-physiotherapist will deliver (Student focus group interview: C1FG1). The student voices presented in this vignette are Indian. The names used are fictitious.

Mohamed: *This is something away from Zulu. This is a serious point I think. With some of our students, when they go to Zimbambaleni or when they are treating a Black person...it is not about knowing the Zulu language. If they really wanted to learn Zulu, they would have made the initiative. It's not that. You know the thing about...because you are a Black man and I feel dirty to do treatment with*

you...and they'll do a two-minute treatment instead of a half an hour treatment. It's so blatant; you can actually see it. So the Zulu issue is not even an issue.

Mike: I think it depends on your upbringing. You can teach someone to do this and that but it depends on your mind-set...it depends on you as an individual and how you are willing to change. In my approach to a patient, it doesn't matter what race they are but it's my willingness to help. That's my upbringing...to care for someone, to help them. It's just from your upbringing, I think.

Sue: But as lecturers you are here to guide us and although Mike says that it is in your upbringing, you can give us more guidance...just mould us.

The vignette raises important issues that inter-relate language, racism and caring. There is an underlying assumption that the race and language of the patient maybe limiting the extent of care that the student-physiotherapist is willing to deliver. With regards to the language, student-physiotherapists have articulated that the lack of proficiency in isiZulu is a limiting factor to effective treatment. This may be interpreted in the following ways. First, there maybe a genuine desire by student-physiotherapists to improve their skills for better understanding of and communication with the patient, with a view to provide improved care. Alternately, their incompetence for communicating in isiZulu and their lack of enthusiasm to acquire the language on their own will, suggests the tension within some student-physiotherapists to overcome the divisions that are created by issues related to language and race, especially in the context of South African history. Some student-physiotherapists may have insufficient skills or knowledge to transcend existing ideologies that relate to race. The extent of commitment and level of caring that they extend to a patient of a different race, maybe influenced by this lack of knowledge of how to transcend existing ideologies and accommodate difference.

b. Caring and the Interpersonal Relationship

Caring for patients emerged as another broad theme in the data obtained from student-physiotherapists. The key issues that surfaced related to **skills for developing an inter-personal relationship**, **empathy**, and whether **the curriculum produces caring.**

(i) Skills for developing an inter-personal relationship

The curriculum was criticised for its inadequate preparation of student-physiotherapists with skills to enhance the interpersonal relationship during the patient-student physiotherapist encounter. There was an assumption that a necessary characteristic for displaying caring was being equipped with skills and a supporting knowledge base for developing an interpersonal relationship with the patient. *"If you can't have an interpersonal relationship, you can't be a physio...it's physically impossible"* (Student focus group interview: E1FG1). For example, some student-physiotherapists claimed that it was first necessary to make the patient feel comfortable by ascertaining some understanding of the patient and his circumstances in order to maximise the benefit of the treatment session. *"You get to know the person for who they are, before you even touch the patient"* (Student focus group interview: D1FG1).

The gap in the curriculum was related to skills that would develop the capacity to listen, assess and manage the psychological problems of patient. *"We really need to introduce a block of psychology skills because sometimes we have to motivate the client but we don't know how. The questions that clients come to you with, you cannot answer e.g. 'am I going to get better?' 'I am having trouble at home, what should I do?' 'What is going to happen to my life?' and we reply, 'it will depend...' we keep saying this because we don't have the correct skills"* (Student focus group interview:

A2FG1). Skills for communication and developing an interpersonal relationship could be incorporated into the curriculum through *"scenarios, which worked to stimulate your thinking in that kind of way"* (Student focus group interview: B1FG2).

(ii) Empathy

Some student-physiotherapists explained how their interactions with patients produced caring and empathy. The effectiveness of their treatment was based on empathy and an underlying notion of delivering the best possible treatment and care for the patient. *"With every patient that I came into contact with, I asked myself, 'what if this was me or my brother or my sister?' I practised compassion and empathy from that stand-point"* (Student focus group interview: D1FG1). *"I also put myself in the shoes of the patient and I would treat the patient like I'd like to be treated. I don't look at it from the basis of race. I approach anyone the best that I can do"* (Student focus group interview: D1FG1). *"You have to respect the patient that you are treating. Because you're helping them, that doesn't allow you to be arrogant or speak to them as you please. You have to either bring yourself down to their level or take yourself up to theirs"* (Student focus group interview: D1FG1). *"When I was on elective, for the first week, I would actually go home and cry because of the patients I'd seen trapped in broken bodies. I had to pull myself together and say that we had to make a difference for them"* (Student focus group interview: A2FG1).

Empathy had the potential for transcending the barriers created by race and difference, and it had the potential for transforming the individual (student-physiotherapist) and the patient's world through physiotherapy intervention. In the excerpts of data above, empathy was produced because the *patient* was the focus. The recognition for including human values in the patient-student physiotherapist encounter also had the potential to realise a shift in the power relations that may present itself in a 'helping' relationship. Empathy was triggered

in these student-physiotherapists by working within a context that exposed the injustices and disparities in the social and health status of that particular population. The notion of empathy may be interpreted as a valuable characteristic for providing the foundations of a caring, transformative relationship at individual and societal levels. It had the potential to transcend difference.

(iii) Does the Physiotherapy curriculum produce caring?

There were differences of opinion on whether the physiotherapy curriculum produced the quality of caring or whether this quality was an innate individual quality that stemmed from one's upbringing or family background. One respondent suggested that the curriculum did produce caring but it was not described how this caring was produced. *"Our training does instil caring for patients. By showing caring you learn to get respect from the patient and you would probably get more out of the patient"* (Student focus group interview: B1FG1). This notion of caring is probably focused on how one would approach the patient and the interpersonal relationship that develops.

However there were suggestions to support the notion that caring could not be taught. Caring was described as an innate, implicit quality. *"You can teach clinical efficiency, you can't teach care. You can't teach someone how to respond to patients"* (Student focus group interview: A2FG1). *"No-one can teach you to be compassionate or to be kind. These are things we bring from home"* (Student focus group interview: B1FG2). However, there were claims that the patient-student physiotherapist interaction was limited because of insufficient knowledge and skills to effect change in the emotional aspects of patient care. Another aspect that produced a direct effect on the interaction between the patient and student-physiotherapist was cultural diversity.

c. *Cultural Diversity*

Issues that related to culture surfaced as another dominant theme from the student-physiotherapist data. Student-physiotherapists recognised a gap in the curriculum with regards to knowledge and attitudes on cultural norms and traditions of the different ethnic and religious groups. *"It would help if we could have lectures on how to incorporate the different cultures; different races...the approach to different religions. When there is contact between a white and black person, there are always differences"* (Student focus group interview: E1FG1). There was also an expressed need to have knowledge about the beliefs of different ethnic groups, for example. Sotho and Zulu to foster better relationships by uncovering existing assumptions (Student focus group interview: C1FG2).

The inclusion of diverse cultural knowledge in the curriculum was necessary to improve interactions in the clinical education environment and in the classroom. This would promote understanding of the patient's perspective and gain the respect of the patient during the patient-therapist encounter (Student focus group interview: A1FG2, A2FG1, C1FG1, D1FG1). *"We should be taught a bit more on the different cultures because sometimes the patient doesn't understand me or they have no confidence in me because I'm young or a female. At the same time, I also don't understand some of them. To be more effective in what we do, we need to understand their living circumstances, their beliefs with which they've been brought up. We don't have that understanding because we've all been brought up in traditionally Indian or Black families. It's important to get that background to be effective"* (Student focus group interview: D1FG1).

Student-physiotherapists have recognised the need to have knowledge that relates to cultural diversity to facilitate and enhance interactions and relationships across different race, religious and ethnic groups. Having this knowledge could improve their confidence during the patient-physiotherapist interaction.

d. Confidence

Student-physiotherapists reflected on their confidence as practising physiotherapists. Some students felt confident in their interactions with patients. "Personally I feel confident. When I'm qualified I will be able to work as a physio but I'm quite sure that there are people sitting here saying about themselves, 'I can't. I'm too scared.'" (Student focus group interview: E1FG1). Others expressed a sense of inadequacy during their practice as student-physiotherapists. "You are never confident as a student. You always feel that you are lacking something" (Student focus group interview: C1FG1). "Speaking of confidence, it's something that students from this department tend to lack. Although we may know what to do, many lack the confidence" (Diary number: 17).

A student-physiotherapist articulated how the curriculum was responsible for effecting confidence. Some student-physiotherapists were of the view that the curriculum did not produce confident physiotherapists. "The curriculum does not really make you confident because it's too theoretical. They don't give you enough practical. It has too much content" (Student focus group interview: C1FG1). "Physio students from other universities are so confident when they are with their patients. They may not know everything but they appear confident, unlike our students" (Student focus group interview: A2FG1). Another view that related to confidence and independent practise was the following, "The curriculum does build your self-confidence in a way. But I think that the only time we will really know whether we're prepared for independent practise is when we get into the working world, the hospital setting. But at this stage, I don't feel that I could go into independent practice" (Student focus group interview: C1FG1). "The curriculum does not give you skills that make you independent. You become independent because you are thrown in the deep end" (Student focus group interview: E1FG1). The strategies that are used within the curriculum to produce independent physiotherapy practitioners are not

explicit. In addition, the data suggests that there is a need to identify the causes that produce decreased confidence in the interactions exhibited by student-physiotherapists. It is necessary to develop confidence in student-physiotherapists as independent practitioners. Another factor that affected the student-physiotherapist - patient interaction was the dress or appearance of the student-physiotherapist.

e. *Appearance of the student-physiotherapist*

Factors relating to the appearance or dress of the physiotherapist also influenced the student physiotherapist-patient interaction. This was in response to the protective attire that student-physiotherapists adorned during practice. *"Some students went to treat kids at a school wearing their white lab coats. The students refused to take their lab coats off and the little kids saw them coming and burst into tears. They all had experiences of hospitals and they associated white coats with doctors, with pain, with being sick"* (Student focus group interview: E1FG1), *"I feel the compulsory glove wearing so uncomfortable. Patients think that you don't want to touch them because there is something wrong with them. This generates a negative attitude from the patient towards you"* (Student focus group interview: E1FG1).

In the current context of health care, the need for protective attire has become necessary. This should be explained to the patient in an effort to decrease the divide that the nature of the protective attire creates in the interaction between student-physiotherapist and patient. This could help to improve the perceptions and attitude of the patient towards the physiotherapists' intervention. However, for student-physiotherapists wearing the white coat could be an extension of their initial image of physiotherapy and its association with medicine.

The factors that influenced the interaction between student-physiotherapists and patients included issues that related to language proficiency, caring, race,

cultural diversity, the confidence of the student-physiotherapist and the adorning of protective wear. The extent to which these factors were developed or dealt with in the curriculum had a direct effect on the interaction and level of care that the student-physiotherapist displayed.

Interaction between student physiotherapists and physiotherapy academics

In their interactions with physiotherapy academic, student-physiotherapists alluded to several factors that influenced their relationship. The key issue that emerged was the **relation of power** between the academic- and student-physiotherapists. Student-physiotherapists perceived that a divide was created between themselves, and academic physiotherapists because of the non-participation of physiotherapy academics in student related events, relations of authority and disrespect that were displayed towards student-physiotherapists. and perceived discriminatory practices. These factors were linked to the capacity for **caring** that academic-physiotherapists displayed in their interaction with students.

The poor interaction between student and academic physiotherapists was not the norm for all relationships that existed between the student-physiotherapists and academics. *"There is a divide between students and lecturers but this is not the case with all lecturers"* (Student focus group interview: D2FG1). *"It depends on the nature of the lecturer. Some talk, some don't. You just have to understand that this is the way this person is"* (Student focus group interview: A1FG1). *"I really think we have been lucky to have had such a kind, caring clever bunch of lecturers. Everyone seems to take their job to heart and it is a good example to us all"* (Diary number: 8). An alternate view that influenced the academic- and student-physiotherapist relationship was related to the sharing of knowledge. *"Our lecturers are like these huge filing cabinets with tons of information but all the drawers are locked and the*

keys are lost. I believe that our graduates could be the best out there if our lecturers' knowledge could be adequately dispatched" (Diary: 24).

a. *Relations of Power*

The **non-participation of physiotherapy academics**, and the perceived lack of support in relation to events that occurred outside of the academic environment, were cited as factors that contributed to the divide that existed between student- and academic- physiotherapists. "When we participated in the comrades and in the strapping competitions, our staff weren't with us. The staff don't attend the physio ball. These are major events in the 4th year calendar but we get no support from our staff" (Student focus group interview: D2FG1). "I think that we need to interact a little more in our department" (Student focus group interview: C1FG1). Student-physiotherapists felt that they did not have a voice in the physiotherapy department. "We are not part of the department. We just exist. There is no communication. Nobody takes our view-point into consideration" (Student focus group interview: D1FG1).

Relations of authority and disrespect were also experienced by student-physiotherapists. "Being in the programme taught you how to deal with lecturers who aren't teachers but who still hold some sort of authority over you" (Student focus group interview: B1FG2). "Sometimes lecturers are too intimidating to approach. We don't share a good relationship so it's difficult to talk to them and approach them with our problems. That makes things complicated and difficult for us as students" (Diary Number: 18). "Lecturers have a boss-worker relationship with us" (Diary Number: 12). The divide that was created by relations of authority functioned to exclude student-physiotherapists.

The perceived disrespect that student physiotherapists experienced at the hands of physiotherapy academics was also criticised. *"Some lecturers in the department have shown disrespect towards students by saying whatever they wanted to say, not minding what/how the students might feel. At times they humiliated students in front of patients during the exams"* **(Diary: 13). However, one student expressed how she found a way to overcome her challenge in her interaction with the academic staff.** *"You know this thing about lecturers...if you've been taking this course and it is giving you some trouble and you've been failing it, you end up having a little hatred for the lecturer. It helps to put the failing course to one side and approach her like nothing has happened, even if it is difficult to knock on her room door"* **(Student focus group interview: A1FG1).**

The discrimination of students was another key issue that generated discussion amongst student-physiotherapists. This arose from the non-standardisation and individualised nature of course allocation (Diary: 7, 11, 13). This has been highlighted in *Nonhlanhla's Story*. *"I didn't like the registration because the rules in the prospectus were not followed. It applied to some students and not others. I think whatever they do for Student A they must do for the rest of the students. I don't know if it's racist, but certain students are being favoured. When you look at it more African students are experiencing problems than maybe Indians, Coloureds, or Whites. That's the way I see it from first year to now"* **(Student focus group interview: C1FG2). It was suggested that the lack of racial equity amongst lecturers was a possible cause and the solution would be to equalise the lecturers on the basis of race. (Student focus group interview: C1FG2, Dairy:11).** *"Course allocation should be standardised because it frustrates a lot of students"* **(Student focus group interview: D1FG1).** *"There's no consistency in the way people are treated in the department"* **(Student focus group interview: D1FG1).**

The power of the physiotherapy academic has been illuminated through issues that have been perceived to create the boundaries in the relationship between student- and academic-physiotherapists. This could be in response to the hierarchical medical model that this curriculum design and structure is based on. In addition, the power of the academic-physiotherapist has become conflated with the power that relates to the racial hierarchy within the South African context. This was experienced through the discriminatory practices that student-physiotherapists claimed were exercised. The power relations influenced the extent of caring that student-physiotherapists experienced at the hands of the academic-physiotherapists.

b. Caring

Caring was cited as another factor that influenced the relationship between students and academic physiotherapists. This was articulated in *Tracy's Story*. Student-physiotherapists felt that the academic staff did not display enough caring towards them. "The lecturers from the other health sciences departments have this protective, caring thing for their students. 'Those are my students. They will get the best, they will benefit,' you know..." (Student focus group interview: D2FG1). "It seems like no-one cares for us" (Student focus group interview: A1FG2). "I feel if I have a problem, the department will not help. They are not really concerned" (Student focus group interview: D1FG1). "Lecturers need to improve their approach towards students that are struggling" (Student focus group interview: A1FG1). Student-physiotherapists felt that the academic physiotherapists were not receptive to their concerns. "Take the students more seriously...when they come with grievances it should be addressed" (Student focus group interview: D2FG1). "There is no regard for anything and people don't stop to listen to you and you have a whole lot of issues. Lecturers must listen to what students have to say" (Student focus group interview: D1FG2).

Relations of power and the extent of caring displayed by academic physiotherapists were identified as factors responsible for the poor interaction in the student-academic physiotherapist relationship. This resonates with the observations that emerged from the data of academic physiotherapists. It is also ironic that student-physiotherapists should experience the curriculum in this way when the espoused theory of teaching and learning of physiotherapy academics is underscored by an element of caring. This will be discussed further in a later chapter.

Interaction amongst student physiotherapists

Student-physiotherapists expressed concern about their interaction amongst students in the same level of study, between the different levels of study in the physiotherapy programme, and with the rest of the university student body. A perceived **racial divide** and a **tight prescribed curriculum** emerged as the factors responsible for the poor interaction.

a. Racial Divide

A racial divide was suggested as a possible other factor that hampered student interaction. It was suggested that this stemmed from student ignorance about cultural diversity. *"There are spheres between the races and amongst the races themselves in all levels of study. There is racial tension. It needs to be investigated"* (Student focus group interview: D1FG1). *"It is important to address diversity but in our department I don't think it's applying. It needs to be there definitely because most of the students are going to suffer if they go out to places with the problems we have now. They are oriented in such a way that they do not know other cultures"* (Student focus group interview: C1FG2).

With regards to the interaction amongst students in the same level of study, student physiotherapists observed that, *"the demographics and gender in a class does matter but either way there is some interaction between students that's really missing"* (Student focus group interview: C1FG1). It was suggested that interaction amongst students should be facilitated at the start of the programme. *"Class dynamics...you have to start building that from first year...do something that make people interact"* (Student focus group interview: C1FG1). A possible contributing factor cited was the absence of a common room for physiotherapy students. *"We need a student room where we can sit and actually work together"* (Student focus group interview: C1FG1, Diary: 23).

b. Tight Prescribed Curriculum

With regards to the interaction of students between the different levels of study it was observed that, *"there is no interaction with students from first to fourth year"* (Student focus group interview: D1FG1). There was a need to establish contact with students from the other disciplines within the Health Sciences faculty in order to improve the understanding of the practices of other health sciences professionals (Student focus group interview: B1FG1, B1FG2, A2FG1). Student physiotherapists expressed how the prescribed timetable limited their interaction at university meetings and with the rest of the university student body. *"A lot of the times, you don't feel that you are part of the campus. You're a student and it's supposed to be fun and exciting but we don't have a life. We don't interact with other people or have friends in other faculties because we don't have a chance to be on campus"* (Student focus group interview: D1FG1). *"Our life just passes us by because it's just work, work, work. We don't get a chance to enjoy campus life. We are excluded from the happenings on campus"* (Student focus group interview: B1FG1). *"We get here at 8 o' clock in the morning. We go to our department and we don't have*

a common break with the rest of the campus. So we don't see people" (Student focus group interview: B1FG2).

The silence in the curriculum lies in the department's non-intervention to enhance the interactions between student-physiotherapists. It was suggested that the *"department should do something to unite students and lecturers and build good relationships and improve contact between students and lecturers, and between the students themselves"* (Student focus group interview: D1FG1). These could be achieved by, for example, forming sports teams within the department (Diary Number: 12) or initiating bonding/teamwork sessions from first year (Diary Number: 8) or through talks on improving relationship dynamics (Student focus group interview: C1FG1) and the initiation of a buddy system (Student focus group interview: C1FG1).

Interaction between student-physiotherapists and practising physiotherapists

Student physiotherapists expressed their dissatisfaction in their interaction with practising physiotherapists at clinical education sites. The key themes that emerged from the data relate to **inclusion / exclusion**.

Inclusion / Exclusion

With regard to **inclusion** student-physiotherapists claimed that practising physiotherapists at some hospital departments were supportive and made them feel welcome whilst on their clinical education blocks. *"It was pleasing to have helpful staff and supervisors in the clinical areas"* (Diary number: 4). The experience was emulated at the clinical sites that student-physiotherapists visited during their clinical elective experience. During their elective clinical block student

physiotherapists were incorporated as part of the physiotherapy team at the clinical site of their choice. *"We all sat together and had lunch together. We socialized and they treated us like their peers not inferior. We weren't treated like students who knew nothing. It felt nice actually"* (Student focus group interview: D2FG1). *"We sat in the staff room with everyone. We were treated as though we were qualified, joining in their meetings. It felt strange, different"* (Student focus group interview: A2FG1). *"I was treated as a colleague, not inferior. I was responsible for a ward of patients and I supervised the tasks of a physiotherapy assistant. I attended ward rounds where I had to give input on the patient's condition"* (Student focus group interview: A2FG1).

Student-physiotherapists felt **excluded** at some of the clinical sites that were used for the purpose of clinical education. *"Hospital physiotherapy departments treat students like outcasts"* (Diary number: 23). *"At Hospital X it was wonderful. We walked into the staff-room, we were introduced and they told us if we had any problems, we should come to them. That was our first block. Since then we haven't been introduced to the person in charge or to the other physios at the hospitals we've been to during clinicals. We feel uncomfortable around the staff, like we're a nuisance"* (Student focus group interview: A1FG2). There were suggestions that relations of power operated between themselves and practising physiotherapists, especially in the absence of the clinical educator.

A dominant theme that resonates amongst the relationships that student-physiotherapists developed as they journeyed through the curriculum, relate to inclusion / exclusion. In some instances the student-physiotherapists practised 'othering' or they experienced 'othering'. This was played out in some of the key factors, for example, race, culture, caring, and relations of power. This discussion will be continued in a later chapter.

Conclusion

In this chapter, Student Perspectives on the Physiotherapy Curriculum, I have presented the key themes that have emerged from an examination of student views in relation to the design, content, pedagogy and assessment of the theory and clinical education modules in the physiotherapy undergraduate curriculum. The relationships within the curriculum were also explored.

With respect to the design of the theory modules, the key themes that emerged related to a fragmented and tightly prescribed curriculum. The influencing factors in this regard arose from the arrangement of the modules to achieve an intended purpose, for example, skill acquisition, and the lack in correlation between the theory and practice modules, which translated into a state of un-preparedness for clinical practice. Student-physiotherapists were highly critical of the volume and timetabling within the curriculum. The curriculum content was inadequately developed to reflect the changing needs of practice.
The content of the theory modules was condition and function-focused and there was little evidence to promote knowledge for social and emotional aspects of care. In addition, the focus of the design for clinical education was on improving the competency of physiotherapy skills to the exclusion of developing a more holistic, patient-centred and multidisciplinary approach to patient care. The sites that were selected for clinical education practice were well resourced, urban/ peri urban venues. Student-physiotherapists had insufficient experience at under-resourced clinical sites. Hence the development and acquisition of knowledge and skills was focused more towards well-resourced hospitals to the exclusion of centres that would develop skills for use in under-resourced settings.

The main issue that arose from an exploration of the pedagogical issues was the difficulty in recontextualising the largely theoretical, classroom-based knowledge and skills into clinical practice. Within the clinical practice settings, the large clinical groups resulted in a smaller patient load per student-physiotherapist and

shorter duration supervision sessions per student-physiotherapist. Skills in time management required for managing wards of patients and busy outpatient departments were under-developed. The multidisciplinary team approach to patient care was absent.

Issues that related to tight prescribed curriculum, race, culture caring, and relations of power underscored the relationships constructed in the curriculum. These were interpreted as factors that influenced inclusion and exclusion within relationships.

In the chapter that follows, I present the perspectives of Physiotherapy Practitioners from the Workplace.

CHAPTER 6

Physiotherapy Practitioners' Perspectives and the Workplace

In this chapter, I present the reflections and observations of physiotherapy practitioners in the workplace. This first level analysis examines data from both experienced and novice physiotherapy practitioners employed in the public service. The analysis is constructed around two categories of physiotherapy practitioners and the chapter is organised in two parts. These are, firstly, *Part 1: Experienced Physiotherapy Managers* employed at large urban / peri-urban hospitals who reflect on student physiotherapists during their clinical education practice and the novice physiotherapy practitioner in the health care environment. *Part 2: Novice or Community Physiotherapists* refers to physiotherapy practitioners in their first year of practice. Many of these novice practitioners were responsible for managing rural-based hospital physiotherapy departments in their first year of practice.

The workshop: physiotherapy managers and the physiotherapy curriculum

The reflections of physiotherapy managers on the practice of student and novice physiotherapy practitioners in the health care environment were elicited from an engagement of physiotherapy managers in a discussion workshop. The physiotherapy managers were organised into six small groups (Groups A-F), comprising 3-4 participants per group. Each group consisted of a combination of physiotherapy manager or a senior physiotherapist from a rural and an urban-based hospital physiotherapy department. Every participant was given a copy of the 2003 physiotherapy undergraduate curriculum for this academic institution. Each participant was to offer a critique on the content, design and pedagogy of

the curriculum in relation to their reflections of the practice experiences of student and novice physiotherapists within the changing contexts of practice. These views were declared during a whole group discussion that followed the perusal of the curriculum document and discussions within the small groups.

The analysis is illuminated firstly through stories, which makes visible the changing roles of physiotherapists in public service in response to a changed health care policy. It further illuminates how the physiotherapy undergraduate curriculum enables and /or constrains physiotherapy practice within a changing public service and health care environment. The constructed stories of physiotherapy practitioners provide an alternative perspective and understanding of the meeting of theory and physiotherapy practice compared to academic and student physiotherapists in response to resources, health care policy, and organisational structures within a changing health care environment. For each category of physiotherapy practitioner, the following four dominant areas of discussion were identified, that are, content of the curriculum, design and organisation of the curriculum, pedagogy, clinical education and relationships in the curriculum.

Two stories, ***The Story of Sindisiwe*** and ***The Story of Mary-Ann***, illuminate *Part 1: Experienced Physiotherapy Managers*, that is, the experiences and observations of the urban / peri-urban based physiotherapy managers. I have chosen to write two stories because one refers to the physiotherapy managers' reflections of student physiotherapists during clinical education practice and the other refers to the physiotherapy managers' reflections of novice physiotherapists in their first year of practice. A single story, that is, ***The Story of Sumaya***, is used to highlight the main themes of *Part 2: Novice or Community Physiotherapists.* These themes emerged from the experiences of novice or community physiotherapists' in their first year of practice.

Part 1: Experienced Physiotherapy Managers

The first story of a physiotherapy manager that I present is the ***Story of Sindisiwe.*** This story presents the perspective of an experienced Black female physiotherapy manager of a large urban- based hospital in Kwazulu-Natal. This story provides a manager's perspective on her observations of the practice of student physiotherapists in that hospital environment. In addition, the story provides critique of the intended undergraduate curriculum. The critique is derived from reflections of student physiotherapists during clinical education practice and a perusal of the physiotherapy undergraduate curriculum document. The main themes that are highlighted include issues that relate to the relevance of the content of the curriculum, the curriculum design and structure, pedagogy, and skills for interpersonal relationships.

The Story of Sindisiwe

The content of this curriculum looks very comprehensive and rather intimidating. Some of the content needs updating. For example, the content should reflect more of the common patterns of disease and dysfunction that are prevalent in the current South African context. In addition, more time should be spent on skills that can be used to achieve greater effectiveness in busy hospital departments. Some techniques, for example, massage should be allocated less time during classroom teaching because long massage sequences are not appropriate for use in busy hospital settings.

Community physiotherapy in this curriculum is very institution based. This is irrelevant for preparing students for rural, under-resourced community placements. It is important for students to be exposed to rural communities in preparation for home-based care and rural clinic experiences during their community placements. The module on practice management is also inadequate in preparing students for community service. It is too private practice oriented. Someone from the public sector

should be invited to give lectures on this module so that it will prepare students for administration and management of a physiotherapy department in the public sector. A module that focuses on "the patient" should be developed that focuses on diversity management, cultural traditions, an African language, skills for communication, skills for health education and promotion, and social development. Students should be made aware of the patient's rights and ethics that relate to maintaining the privacy and dignity of the patient.

The main problem that I have experienced with students during clinical education is that they don't have a good theoretical background before starting clinical practice. The timing of the theory modules and its practical application on patients is inadequately synchronized. The other problem that I've experienced at my hospital is that students tend to focus only on the conditions that the clinical block outlines, for example, in the out patient block, they want to see only patients that have a neck or low back complaint. They don't want to treat anything else. As a result their learning is so focused on the condition of the patient and the physical complaint; everything else about the patient is forgotten. Their treatment and assessment skills tend to be focused more locally on the affected area of the patient's dysfunction rather than looking at the patient holistically.

I suggest that students should be sent to general clinical blocks, blocks that do not have a specific focus. If the specific blocks have to be maintained then a block should be created at the end that looks at patients in general, not a neuro or ortho patient. I think there should be clinical workshops where patients are presented to students and they develop an idea of how to identify and analyse problems using a holistic approach. Students also focus their learning far too much on the end of block assessments. Students tend to lack confidence in their skills in the clinical area. This may be because too much of time is spent learning practical skills in the classroom,

on each other rather than on patients. I see students who are just here to get their degree. I don't see the passion of people that are keen to learn.

The ***Story of Mary-Ann*** illuminates the female voice of an experienced, coloured physiotherapy manager who is employed within a large peri-urban hospital in KwaZulu-Natal. The story introduces the reader to the skills that physiotherapy managers say, are required of physiotherapy practitioners and the extent to which novice practitioners in the public service display these. The main themes that are highlighted relate to the relevance of physiotherapy skills and content for practice requirements, and pedagogy that promotes holistic patient management.

The Story of Mary-Ann

The public sector is changing drastically with greater focus on quality assurance. Commitment and responsibility for patients need to be instilled into students at the start of the physiotherapy program so that it is continued into practice. In this regard, it's important for physiotherapists to know about the principles of Batho Pele for improving service delivery because when they start hospital practice they tend to hear these things for the first time.

It's important for lecturers to keep abreast with the changes in the public sector in order to prepare physiotherapists adequately for public service. Lecturers should be better informed about these changed requirements for inclusion into the physiotherapy curriculum. Physiotherapists are being given more responsibility in the public sector. For example, with the implementation of the new International Classification of Function and Disability coding, physiotherapists should be able to assess a patient and comment on their level of disability. This role is no longer the function of the occupational therapists alone. Physiotherapists will have to look at the patient holistically to make that assessment. As first-contact practitioners, I think that's a huge responsibility because this will determine if the patient qualifies for a disability grant.

Another focus of the teaching should be on the process of diagnosing patients especially because we have the mandate to practise as first-contact practitioners. But graduate physiotherapists are inadequately prepared for this role. This has to change completely. In addition newly qualified physiotherapists lack confidence in interaction at a multidisciplinary level. We tend to see this during ward rounds and in the absence of referrals to other members of the multidisciplinary team. I wonder if they are aware of the roles of the other team members.

Some newly qualified physiotherapists are unable to cope with the patient load in a busy outpatient department. They need to use their hands more effectively.
Physiotherapy graduates are under-prepared for administration of a physiotherapy department in the public sector. They should be familiar with the different committees and their purpose within the hospital structure, for example, management committee, cash flow, etc. in order to input meaningfully at that level. Our hospitals are undergoing accreditation but when you look at our physios in the hospital departments, they are not prepared for their role in the accreditation process.

An analysis of the physiotherapy manager data that emerged following the workshop discussion where the physiotherapy undergraduate curriculum was presented for comment, revealed one fundamental issue. The imperatives of the physiotherapy managers were largely directed by the requirements of the physiotherapy practice setting. Their imperatives for the curriculum were very practice oriented and were driven by their practice context. Their reference to wider policy issues, the physiotherapy profession's response to national policy goals and the role of the physiotherapist in the larger scheme of societal transformation was less significant.

It therefore follows that a large focus area of discussion was on the **management of patients in practice.** With regards to patient management, issues relating to patient ethics, professionalism of the physiotherapist, and holistic patient management were discussed. Physiotherapy managers suggested that the barriers to holistic patient management arose from the curriculum's inattentiveness to developments in physiotherapy practice and therefore their exclusion from the physiotherapy undergraduate curriculum, the under-preparedness of student physiotherapists to practise as first-contact practitioners i.e. practitioners who are skilled in diagnosing a patient's condition without the intervention of a medical doctor, and the absence of a multidisciplinary team approach during clinical education practice.

Other main themes that emerged from the physiotherapy managers' data relate to the relevance of the content of the curriculum, the design and organisation of the curriculum, pedagogy, clinical education and relationships in the curriculum. In the section that follows the dominant issues that were raised by physiotherapy managers that related to the management of the patient by student and novice physiotherapists will be presented.

Managing Patients in Practice

The three main issues that were highlighted by the physiotherapy managers for managing patients in practice in the current health care context related to **patient ethics, professionalism** and the development of **holistic practitioners.**

a. Patient Ethics

There were broad discussions about the physiotherapists' role in the management of patients. With regards to physiotherapists' approach to the patient, the issue of ethics and "patient rights" were mentioned. In addition the physiotherapy managers claimed that the principles of "Batho Pele" that have been formulated to improve delivery in the public service were neglected in the curriculum design and content. These were expressed as gaps in the physiotherapy curriculum with respect to patient management. *"I felt that there is a gap in ethics and in things like patient privacy"* (Participant: Group C). *"It's important to include things like Batho Pele"* (Participant: Group D), *"There are these papers on the rights of the patient, the rights of the physio, even the Batho Pele principles that you are supposed to know off-hand. Students need to have this as a whole preparation, especially maintaining a patient's dignity and the rights of the patient"* (Participant: Group C).

b. Professionalism

The physiotherapy managers suggested that student physiotherapists should be shaped into the regulatory codes of professionalism in the early years of their physiotherapy education and training. It was further suggested that deviance from these professional norms and conduct would place the status of the profession at risk. These regulatory behaviours were couched in the guise of improving service delivery. These included issues that related to dress,

responsibility, and punctuality. *"Students should be exposed to professionalism and work etiquette in second year before clinical exposure and reinforced in the professional management module. This will include aspects such as punctuality, being responsible and dressing in the acceptable uniform. If these things are not stressed, it brings your whole profession down"* **(Participant: Group B).** *"There should be stricter discipline put on students in physio school before they go out, on punctuality"* **(Participant: Group C).** *"Things like responsibility...I know a lot of people say that you can't teach that, but these are things that need to be instilled at the very start; that this is a responsible profession"* **(Participant: Group F). It is suggested that these regulatory practices should be learned within the discipline by getting students to internalise these norms and behaving predictably. Student physiotherapists should be socialised into the community of physiotherapy practitioners through authoritative forms of identification and hegemony. It is suggested that this will continue and reproduce the community of physiotherapists and the image of the profession outside of the learning environment.**

c. Holistic Practitioners

The curriculum's inappropriate response to developments in practice, under-preparation of student-physiotherapists as first-contact practitioners, and the absence of engagement of student-physiotherapists within a multidisciplinary team, were cited as barriers to the development of holistic practitioners. In addition, the organisation and structure of the clinical education practice were criticised. Factors such as the focus on condition specific clinical blocks and inadequate preparation of student physiotherapists before entering the clinical environment were cited as barriers to the development of holistic physiotherapy practitioners. The factors that relate to the organization and structure of clinical education will be explicated later in his chapter.

Physiotherapy managers claimed that for student and newly qualified physiotherapists to be competent health care providers they should be aware of the **developments in practice** and changes in the health care environment. The following excerpt of data is an example of a current need for practice. *"They need to know all the new things that will be implemented like the Classification of Function and Disability. If you are going to look at a patient holistically, you are going to determine if the patient should be classified disabled or not. So students need to be prepared now for this"* (Participant: Group C). It was suggested that the academic physiotherapists were responsible for the absence of current practice developments in the curriculum. *"Academics are prescriptive and out-doted in relation to what's happening in the clinical environment. They should come out more, do more hands-on and interact with the consultants"* (Participant: Group C).

The status of physiotherapists as **"first contact practitioners"** was being placed at risk or undermined by the under-preparedness of student physiotherapists as holistic practitioners with regards to patient management. *"They are not being prepared to make a diagnosis as first contact practitioners"* (Participant: Group C). *"Students must be taught how to make a diagnosis of a patient and that's were the holistic approach is going to come in"* (Participant: Group E). *"Holistic treatment requires exposure to all the disciplines that a patient would require as well as the various integrations of the different disciplines. A lot of physiotherapy graduates are going out to places and starting up departments without this knowledge"* (Participant: Group F). *"As first time practitioners we need to be very skilled in what we do, realise the need to refer and realise our limitations"* (Participant: Group C).

These gaps in the physiotherapy curriculum were interpreted as deficiencies in practice knowledge. In addition it suggests that the essential elements of practice were neglected in the academic imperatives of the physiotherapy curriculum. These silences in the physiotherapy curriculum are creating a disjuncture in

developing and maintaining a fundamental role of the physiotherapist as a health care provider i.e. diagnosing a patient as a first-hand practitioner. This affords the physiotherapist similar status as a medical practitioner. If this function of the physiotherapist is under- or inadequately developed, then the power of the physiotherapist may be lost. On the other hand it could suggest that the academic physiotherapy curriculum is lagging behind the developments of physiotherapy practice in the health care environment.

In the current context of health care, a **multidisciplinary team approach** was necessary for the holistic management of the patient. The physiotherapy managers suggested that they observed incompetence on the part of newly qualified and student physiotherapists during interactions within a multidisciplinary team. There was an expressed need for student physiotherapists to interact with other members of the health care team in order to be socialised to the dynamics of multidisciplinary teamwork. *"They need to learn about the other health sciences disciplines and to bridge the gap between disciplines because they work as a team in the community setting"* (Participant: Group D). It was observed that newly qualified physiotherapy practitioners lacked confidence when interacting within a multidisciplinary team. *"Interacting with other disciplines is a problem. The newly qualified physiotherapists ask me, 'how do I talk to that doctor?'"* (Participant: Group D).

Physiotherapy managers claimed that by allowing student physiotherapists the responsibility of wards of patients rather than a few selected patients might develop and promote their interaction within a multidisciplinary team. *"If everyone did a case presentation, it would improve students' confidence when dealing with other disciplines. Do a patient presentation of one patient, for example, an amputee and every discipline will present their role on that patient. That will allow students to learn about other disciplines, disability grants etc."* (Participant: Group C). *"Give students a ward to run. The students will become responsible for the patients by liaising with*

the nursing and medical staff about the patient's condition. This is how the holistic approach can be developed" (Participant: Group C).

The preparation of student physiotherapists for the appropriate management of patients required knowledge of ethical practice, professional attributes and a holistic approach towards patient care. Physiotherapy managers claimed that the deficiencies in the curriculum to address these requirements obstructed the full development of a student physiotherapist to meet the requirements of practice. In the section that follows, the views of the physiotherapy managers on the curriculum content, organisation and pedagogy, still with reference to practice will be presented.

Content, Organisation and Pedagogy of the Curriculum

There were three main areas that were highlighted with regard to the content, organisation and pedagogy of the curriculum. These were the relevance of the content, the organisation of the content for improved integration and coherence, and the teaching and learning methods that were used in the curriculum. In the section that follows the views of physiotherapy managers on the relevance of the content in the physiotherapy undergraduate curriculum will be illuminated.

a. Curriculum Content

Physiotherapy managers expressed varying views on the content of the curriculum. Whilst some managers reported that the content of the curriculum was adequate, other managers had a different view. Physiotherapy managers reported that, "the content is okay" (Participant: Group D) and "there's not much wrong with this curriculum but I think that the selection criteria for physiotherapy must drastically change and we must look at the quality of the students that we are

admitting" (Participant: Group A). A dominant theme related to curriculum content was **relevant physiotherapy skills for the practice context.**

The following vignette from the workshop whole group discussion illustrates the need to revise curriculum content for the health care requirements within the South African context.

The participants are indicated by their group designation.

Participant: Group F: *I must say, graduating way before the modularisation system, this curriculum looks very intimidating and comprehensive. There are some things that I will take out of here because they do not pertain to the clinical setting at all. They are out-dated.*

Facilitator: *like what?*

Participant: Group F: *ultraviolet. Who uses that now?*

Participant: Group C: *but physio's travel all over the world. If you go to Britain, they will use it...*

Participant: Group F: *but we are not training for that setting, we are training for our setting. Why don't you emphasize the background on laser for example, because rural hospitals are getting that sort of equipment. You need more of a theoretical background on current modalities. Even Burger's disease...if you look at the ratio of incidence, it's probably 1: 10000, whereas you need to look at current things like problems with gangrene. Ninety percent of our patients have amputations rather than these obscure things that you are going to see once in a lifetime as a physio. I'm saying that the syllabus should become more current.*

The vignette suggests that there are inherent tensions between what the nature of the physiotherapy knowledge should be, for it to be recognised as authorized knowledge, and the actual knowledge that is relevant for practice in the South African context. The tensions are derived from the local-global imperative, and

the subtle underpinnings of the history and origin of Physiotherapy knowledge. The tension is created on the one hand by a desire to retain aspects of the physiotherapy curriculum because it is legitimate, authorized and conforms to an acceptable western physiotherapy perspective. Shaping the curriculum so that it foregrounds knowledge and skills for the South African health care context might compromise the curriculum's value from a western perspective.

On the other hand, there is an under-emphasis of 'current' knowledge in the curriculum to develop the skills and knowledge base for physiotherapy practice in South Africa. In addition to the deficit in the knowledge base cited in the vignette, another example of a physiotherapy knowledge deficit cited by community physiotherapists was related to HIV and AIDS. This suggests that the curriculum is not critical of the context in which it functions and is resisting influences from the context of practice. Consequently it does not allow new forms of identification and negotiability of meaning that will respond to issues of physiotherapy practice and professional development for the South African context.

b. Relevant Physiotherapy Skills for the practice context

Following a perusal of the 2003 curriculum document, physiotherapy managers suggested that there was an under-emphasis of physiotherapy skills in the curriculum that could enhance and shape physiotherapy practice for the current context. With regards to relevance, it was suggested that the content of the massage modules should be condensed to *"include more updated stuff, for example, myofascial release"* (Participant: Group C and Group: F). Physiotherapy managers suggested that in busy outpatient departments the limitations on treatment time did not support the use of long, time consuming, massage sequences. This resonates with claims from the student-physiotherapy reflections. In addition, physiotherapy managers suggested that the section in the curriculum that related to orthotics and prosthetics should be given more

emphasis and include the prescription of artificial limbs (Participant: Group C and D). This claim was made in reference to the practice experiences of novice physiotherapy managers in rural contexts where they felt inadequately qualified to arrive at a decision when consulted by patients who required mobility aids and devices.

In keeping with the current changes in the health care environment and the expanding role of the physiotherapist, two suggestions were made with respect to the module on professional management and jurisprudence. *"The module in 4th year that teaches them to run a private practice should be changed to administration of a physiotherapy department in the public sector"* (Participant: Group A), and the module required input from the public sector, for example, on the accreditation processes in hospitals (Participant: Group E). Physiotherapy managers also claimed that some aspects of the physics modules were irrelevant for physiotherapy practice. It was suggested that a course in physics should be tailored to make it more relevant for physiotherapy (Participant: Group F). These suggestions resonate with some of the claims that student-physiotherapists expressed in relation to their experience of the curriculum content.

c. Organization of Curriculum and Pedagogy

Physiotherapy managers observed that student physiotherapists experienced problems with the integration of theoretical and practical knowledge. The **sequencing of modules** was regarded as an important factor in this regard. For example, aspects of knowledge from the physics modules were necessary for the module on electrotherapy for physiotherapy. However, the physics and electrotherapy modules were placed at different levels in the curriculum and operated as isolated pockets of information, hampering negotiation of meaning. *"Physics must be applied with the electrotherapy modules because once physics is completed, it is forgotten and students can't see the relevance to electrotherapy"*

(Participant: Group C). Similarly, physiotherapy managers suggested for the purpose of improved integration that would promote a deep approach to learning, the techniques of mat-work (i.e. kinesiology in 2nd year) and its application to conditions in 3rd year should be integrated into one module.

Factors relating to pedagogy that were regarded as barriers to integration of theory and practical knowledge included **classroom-based skills learning, and the competency of the lecturer**. Physiotherapy managers claimed that the teaching methods that were used in the physiotherapy classroom could be influencing the integration of the theoretical and practical knowledge. The physiotherapy lectures were classroom-based, theory-oriented and skills were practised on the normal person (Participant: Group A). There was no immediate follow-through with the learning of classroom-based skills to practice of those skills on a patient. This criticism of the teaching and learning method resonates with the experiences of student and academic physiotherapists.

The competency of lecturers to communicate their subject was another important factor that influenced the student-physiotherapists' experience of teaching and learning. With regards to pedagogy, it was suggested that because, *"physiotherapy is a broad subject, when choosing lecturers match the competency of the lecturer to the subject being taught"* (Participant: Group F). This resonates with the views of student-physiotherapists and an academic physiotherapist.

The views of the physiotherapy managers on the content, organization and pedagogy suggest that this physiotherapy curriculum is technocratic. In addition, the organization of the curriculum and the pedagogical practices has little effect on the integration amongst the theory and practical components, and the changing requirements of the socio-cultural and socio-political contexts in the health care environment. There exists an underlying resistance to transform the physiotherapy knowledge base towards the requirements of the current South African health care context. The following section will focus on the views of

physiotherapy managers on the content and structure of clinical education practice within this physiotherapy curriculum in relation to the context of practice.

Clinical education practice

The main outcome that the physiotherapy managers identified with regards to the content and structure of the clinical education models was the focus on achieving **competence in technical skills**, whilst under-emphasising the holistic management of patients. The sites for **community physiotherapy practice** were criticised and alternatives were suggested.

a. Focus on technical competence

The focus on developing technical competence was aligned to the design of specific clinical education blocks. "Suppose they are in the orthopaedic block, they will look only at the orthopaedic assessment of the problem. They don't look at the patient as a whole" (Participant: Group E). The following excerpt of data is an alternate positive view on the design of clinical education that confirmed its focus on competence. "I want to go against what everyone is saying. I liked the idea of a neuro block, etc because when you are in that block you have to get certain skills and the only way to get those skills is if your mind-set is on ortho or neuro. I think that the idea to have a block at the end where you see a general patient is a good idea (Participant: Group C). The level of competence achieved in the application of technical skills on patients was affected by the large number of students per clinical group under supervision of one clinical educator. The deficit in the organisation of the clinical education practice was having few clinical sites, which translated into large numbers of students per clinical group. "Increase the number of clinical blocks that they work in because the other universities have a maximum of three students/ hospital and I running a department can see how much better that

would work rather than having twelve students to worry about" (Participant: Group A).

The focus on specific 'conditions' rather than 'patients' was suggested for hampering the development of a holistic integrated approach to patient care. "Students should be allocated to a general place and they will be taken as part of the staff there and they will see much more as opposed to saying, 'now it's a chest block, now it's that'" (Participant: Group C). Another view of a physiotherapy manager suggested that the inadequate preparation of student physiotherapists before entering the clinical education environment also impeded the holistic approach to patient care. It was observed that student physiotherapists did not always have adequate theoretical preparation before entering the clinical environment because of the sequencing in the curriculum between the theoretical components of the curriculum and the requirements for clinical education practice (Participant: Group E).

To compensate for the deficits that relate to this competency-based clinical education experience, physiotherapy managers suggested that student physiotherapists could be socialised to the actual experience of practice by placing students in a general clinical block that focuses on 'the patient' towards the end of their clinical education experience. Physiotherapy managers claim that the end-of-block assessments are also responsible for shifting the focus away from the actual management of the patient to the competence of skills that are required for that block (Participant: Group E).

The deficits that were observed by physiotherapy managers of this competency-based clinical education curriculum resonate with the experiences of student-physiotherapists.

b. Community Physiotherapy Clinical Modules

There was broad discussion by physiotherapy managers on the community physiotherapy clinical education modules. The two main issues that were highlighted were the sites selected for community education practice, and skills for rural physiotherapy practice. The current sites that were selected for community physiotherapy practice were criticised for their mismatch with the 'actual' nature of the sites where community service physiotherapists practised. The current sites selected for community clinical education practice, were described as being institutional based rather than sites which were under-resourced. *"Community should be a rural module. The students need real exposure to real rural communities so that they know what it really is, even if it is for a week. Other universities have put out areas for community which they will develop rather than students going to such urbanised areas"* (Participant: Group D). Consequently, the skills for practice in an under-resourced setting, and physiotherapy's response to social development were under-emphasised. *"Students need to be exposed to the reality of doing clinics...using pumpkins and sand for therapy"* (Participant: Group D). In addition, the requirements for interacting in diverse settings and across cultures were also absent. The following section will focus on the views of physiotherapy managers on the relationships in the curriculum.

Relationships

Physiotherapy managers reflected on their observations of the interactions that were constructed among student physiotherapists, academic physiotherapists, and patients.

a. Interaction between academic and student physiotherapists

Some physiotherapy managers claimed that relations of power underscore the interaction between student and academic physiotherapists. The relations of power authorises who is allowed to speak by controlling legitimate forms of communication. It is claimed that the nature of this relationship has a negative effect on the confidence of the student-physiotherapist. "Lecturers must come down to the level of the students and they need to be open to suggestions. Most of these students are so afraid to ask questions. They lack confidence. Maybe it's the way in which they are told that they are wrong that affects their confidence" (Participant: Group A). In addition academics were described as being "prescriptive" (Participant: Group C) which supports the element of control that is experienced by student-physiotherapists.

b. Interaction between student physiotherapist and patient

The inter-personal relationship between the student physiotherapists and patients needed improvement. Issues that related to diversity limited the interactions between student physiotherapists and patients. These limiting factors related to race, culture and language. The curriculum was silent on these issues. "They have to know about the different black cultures. You have to know the patient's culture to maximise your treatment. Students must be made aware that they must learn Zulu, especially if you're not a Zulu speaking person. This will make it easier when you get there. It's difficult to communicate with people" (Participant: Group E).

These interactions were especially necessary when student physiotherapists were exposed to patients within the patients' community and home environment. Physiotherapy managers suggested that student physiotherapists should be equipped with knowledge for interaction with *"the diverse people and cultures within a community"* (Participant: Group E). In addition there is absence of knowledge in the curriculum on the cultural and traditional practices of people, especially within the South African context. *"When entering a rural community, students should know who to meet to discuss plans for intervention, e.g. the induna in the area, the acceptable dress code and the cultural practises that one needs to be cautioned against"* (Participant: Group D).

The curriculum's silence with regards to knowledge on diversity and improving interpersonal relationships were also resonated by student physiotherapists.

The preceding discussion highlighted the views of the experienced physiotherapy mangers employed within large, urban-based provincial hospital departments on the physiotherapy curriculum. Their experience of the physiotherapy curriculum is through their observations of student and novice physiotherapists in the clinical environment. Issues that related to patient management, the relevance of the content of the curriculum, organisation of the curriculum, pedagogical practices, clinical education practice and relationships in the curriculum were illuminated. These discussions were fore-grounded by the context of practice, the skills and knowledge that were required for competent physiotherapy practice in the current context of health care.

The critique of the curriculum by the physiotherapy managers does allude to some of the goals and objectives that are highlighted in the policies on the transforming health care system and improved public service delivery, which are inadequately addressed in the curriculum. This was evidenced in the discussion on patient ethics and the physiotherapy requirements for under-resourced practice. Their recommendation for creating a module that focuses on 'the

patient' suggests a need for the curriculum to shift from a 'condition- and competency-focus' towards a patient-centred approach of health care that is consistent with the policy on health care. The patient-centred approach will shift the focus from the technical skills that are needed for competent practice to a merging of a competent, holistic practitioner and an individual adept in interpersonal skills. In the section that follows the views of community service physiotherapists will be illuminated with regards to the curriculum and their experiences of practice.

Part 2: Novice / Community Physiotherapists

The ***Story of Sumaya*** is a reflection of the experiences of an Indian female community physiotherapist who was assigned as a physiotherapy manager to a rural, under-resourced hospital in her first year of work. ***Sumaya's Story*** shifts between her encounters in the rural community and the extent of her preparedness to cope with the presenting situations. It provides an assessment of the recontextualisation of the physiotherapy undergraduate curriculum in the context of current health care strategies and policies. The story highlights the main themes that relate to the relevance of curriculum content, the design of the curriculum, clinical education and skills that relate to diversity in interpersonal relationships.

The Story of Sumaya

My experiences during community service have allowed me entry into a world of physiotherapy that I've not experienced previously. I was at once a physiotherapy practitioner and a manager of a physiotherapy department. At the start of my community service I was responsible for establishing a physiotherapy department within a small rural hospital in addition to providing an outreach physiotherapy service to the areas surrounding the hospital. That was a challenge because I lacked the skills required to establish and manage a department, and to manage staff that had been providing physiotherapy services in the capacity of assistants in the rural areas for many years before I arrived.

I was grateful for the good clinical foundation that the undergraduate physiotherapy curriculum provided. There were many conditions that I recognised that could be helped by physiotherapy and I began to teach people how to help themselves for the ailments and dysfunctions they presented with. I've realised that we are very sheltered

at varsity and we see physiotherapy mainly within institutionalised settings. We need to be exposed to the reality of patients lying under beds and all over the place...the reality and the curriculum are too far apart.

The curriculum did not talk to the current physiotherapy practice, for example, when we where on campus we weren't given opportunities to go on mobile clinics, render physiotherapy in rural, under-resourced areas or do home based care in rural communities. As a result we didn't get those skills. In addition, I was inadequately prepared for patients that had chronic diseases and for those who were geriatric. I became aware of the extent of devastation that HIV/AIDS had on the community, the orphans it leaves behind and very often I was unable to cope with the death of my patients from this disease. Another challenge arose from my ignorance about Black cultural traditions and norms, the relevant dress codes, the significant role of the chief /induna in the area. In addition my inexperience to communicate in Zulu often made me feel inadequate.

The community physiotherapy module on campus did provide us with situations where we had to expand and adapt our treatment techniques in a changed environment. But treatments during community service required a lot of creativity especially in the settings that had no equipment like on mobile clinics, or in home-based care settings. I felt that I needed more skills that could achieve effective treatment with the use of my hands only. The curriculum needs to focus more on hands-on skills that are required in community intervention and skills for patient education programmes.

During community service I worked as a member of a multidisciplinary team. I didn't really know how to function as a member of that team because I wasn't exactly aware of each person's role in that team. The curriculum should bridge the gap between the disciplines and students should be allowed to acquire the skills that come from

taking full responsibility for wards of patients. This would have allowed me to gain confidence in liaising with other disciplines and I would have learnt how to manage my time better. I often felt helpless, being the only physiotherapist with limited resources, a large patient load and administrative and managerial responsibilities. I enjoyed my community service and I've grown as a result. I've learnt that people really need and appreciate our service. My experience has been humbling, challenging and it provided lessons for life.

Community physiotherapists in practice

The practice experience of community physiotherapists was influenced by the nature of the health care context where they were employed. The nature of the health care centres, and the roles and responsibilities of the community service physiotherapists within those health care centres were described.

The **health care centres** where community physiotherapists practised are categorised as follows. First, small rural district general hospitals comprising 156-460 beds, with an out-patient department and outreach programmes via mobile clinics, rural clinics and home based care (9 respondents). Second, were regional general hospitals in peri-urban areas that comprised 500-1500 beds and outpatient department (8 respondents). Third, a chronic hospital for terminally ill and geriatric patients with community outreach to rural clinic and home visits (2 respondents), and fourth, a psychiatric hospital that accommodated mild to severe mentally retarded children and adults, including a physiotherapy out-patient department (1 respondent).

a. Roles and Responsibilities

The roles and responsibilities of the community physiotherapists were identified. Fourteen of the community physiotherapists were responsible for independently

establishing / restarting and managing a physiotherapy department and initiating physiotherapy outreach programmes to rural communities in the hospital surrounds. Of the remaining six community physiotherapists, one worked independently at a psychiatric institution, whilst the other five community physiotherapists were absorbed into existing hospital physiotherapy departments. The community physiotherapists described a range of duties that they were responsible for. There were two main themes that were described. These were the **managerial role** of the community physiotherapist, and the role of the community physiotherapist with regards to **patient care**.

With regards to the **managerial role**, those who were responsible for establishing a physiotherapy department and outreach services, or who worked as independent practitioners in an existing physiotherapy department, had the added responsibility of administrative and management functions. The administrative duties included recording daily statistics for the department, ordering of consumables and physiotherapy equipment, maintenance of the physiotherapy department, and conducting an evaluation of services provided by the department. In addition, the managerial duties included supervision of physiotherapy assistants, volunteers and student physiotherapists who visited the hospital for a three-week clinical elective experience, representing the physiotherapy department at hospital management meetings (cash flow, health and safety, disaster management, rehabilitation meetings, meetings of departmental heads), and serving as a member on interview panels within and outside the department, conducting staff meetings, implementing quality improvement programmes, and writing departmental reports.

There was similarity amongst the community physiotherapists in their description of responsibilities with regards to **patient care**. All community physiotherapists were responsible for providing hospital-based physiotherapy services to inpatients and outpatients, attending ward rounds and liaising with other members of the multidisciplinary team for holistic patient management.

They were also responsible for conducting functional assessments of candidates who applied for disability grants, surgical appliances and wheelchairs. For two days of the week these novice practitioners were responsible for providing out-reach services in the community. These included providing physiotherapy services at rural clinics or on mobile clinics, and at surrounding non-governmental organisations. The community physiotherapists were also responsible for conducting health education and health promotion workshops in the community, and district rehabilitation awareness programmes. Included in their duties was the provision and identification of patients that required home-based care.

Reflecting on their year as community service practitioners, three community physiotherapists described the experience positively (Respondent: D, Q, J), one respondent described it as *"a learning experience"* (Respondent: R), another as a *"truly humbling experience"* (Respondent: T) whilst two respondents described the experience negatively because of the lack of physical and human resources (Respondent: E, S). *"I truly feel that community service is a total waste of time due to the lack of equipment. Hospitals and community centres must be equipped to accommodate community physiotherapists"* (Respondent S).

b. Transformation

Working in under-resourced environments had the potential to **transform** the initial assumptions that community physiotherapists held. The transformation was experienced through critical incidents that ranged from, for example, experiencing the reality and devastation of HIV / AIDS. *"Witnessed ignorance towards HIV/AIDS on various occasions e.g. patients believed that they have been bewitched and due to confidentiality their family often does not know the patient's status. This depressed and frustrated me. Ignorance prevents education and empowerment"* (Respondent: J). *"I was treating a baby with HIV (with chest*

complications). Her twin was not positive. I grew very attached to her and, while my patient's condition deteriorated, her sister developed good and timeous milestones. My patient died on the day I brought her a teddy bear and a camera to take pictures of her. I was devastated" (Respondent: Q).

Transformation was also effected through experiencing the lack of funding and resources on health care. This transformation was effected at individual and societal levels. "While attending the clinics I came across many patients with disabilities that can be corrected by physiotherapy. This urged me to work hard with them and encourage them to help themselves" (Respondent: D). Other critical experiences that had transformation potential arose from having to deal with conflict situations, and having to establish and manage a physiotherapy department independently. 'Lessons for life' were experienced through the following situations. "My first home visit to the community had a huge impact. People led such a simple, honest existence. They are happy and they appreciate their few possessions in life. Made me realise that most urbanised people are never satisfied with what they have and I now strive to appreciate everything that I do have" (Respondent: R). "I value life more and I have learnt to appreciate what I have. It has truly been a humbling experienced and I realise just how much our services are needed and appreciated" (Respondent: T).

In the section that follows, the views of community physiotherapists on the content and structure, pedagogy, clinical education and relations in the curriculum will be illuminated in relation to their experiences during community service.

Curriculum content and structure

Reflecting on the experience of community service and on the experience of the physiotherapy programme, one respondent claimed that, *"Community service can be a good thing if one is adequately prepared for it"* (Respondent C).

Thirteen of the community physiotherapists found the **content** of the undergraduate physiotherapy curriculum adequate in relation to their practice experiences. They found it adequate with respect to first, providing a **foundation for physiotherapy knowledge**, second, **theoretical knowledge** that could be applied to a wide range of patient conditions, and third, a range of **physiotherapy skills** that could be used in the clinical setting. However, there were deficiencies in the curriculum content with respect to management and administrative skills, skills for psychological intervention, holistic patient management, skills for rural community development and a multidisciplinary team approach.

Community physiotherapists made the following claims with respect to the curriculum providing a **foundation for physiotherapy knowledge**. *"I would not have been able to complete these 10½ months as smoothly as I did if I was not trained in the way I was. It has given me basic insight into the field of physiotherapy, allowing me to perform my duties"* (Respondent: G). *"It has provided me with a base from which to build on my knowledge and competency through clinical practice and post-graduate courses"* (Respondent: K). *"The programme has given me sound knowledge of physio principles"* (Respondent: L).

Community physiotherapists claimed that the **extensive theoretical knowledge** was useful for patient management, as indicated by the following excerpts of data. *"We were given all the knowledge needed to treat any condition we encountered even if we had to improve"* (Respondent: C). *"By giving their students as much exposure (theoretical and practical experience) in majority of the conditions managed*

by the profession" (Respondent: N). "The clinical sciences modules were very good and comprehensive" (Respondent: K, O). These claims regarding the knowledge base suggest that the focus of the curriculum content was on patient conditions that community physiotherapists would encounter in practice. However, knowledge relating to sports injuries, chronic conditions, for example, HIV /AIDS and geriatric conditions were under-emphasised in the curriculum content (Respondent: J, T, L)

Some community physiotherapists suggested that the **skills for physiotherapy practice** that were learned through the curriculum were adequate. "Provided adequate training on clinical skills" (Respondent: E). "In terms of physio skills, I was prepared" (Respondent: P). "To a certain degree in terms of patient assessment and management, the undergraduate programme has equipped us reasonably well" (Respondent: M). Community physiotherapists suggested that the physiotherapy skills that required the use of the physiotherapists' hands only were found useful during practice, especially in settings that was under-resourced with respect to physiotherapy equipment. The following excerpts of data evidence this. "The emphasis placed on the use of our hands rather than machines which are scarce in the community setting" (Respondent: L), "non-electrotherapy techniques, for example, neurodevelopmental therapy" (Respondent: Q), and "orthopaedic manipulation therapy" (Respondent: B, G).

However, five respondents suggested that there was a need for more "hands-on skills" in the curriculum. "Being able to render a physio treatment by the use of your hands only and using creativity" (Respondent T). "Be more practical - hands on" (Respondent D). "Courses should be more clinically and practically orientated" (Respondent: M). It was suggested that techniques e.g. myofascial release (Respondent: F), and peripheral and vertebral joint manipulation techniques (Respondent: K, I) that enable a physiotherapist to administer an effective

treatment using only one's hands, required greater emphasis in the curriculum especially for rural physiotherapy practice. *"We had to adapt physio techniques to treat in rural areas"* (Respondent: Q).

In addition the **structure and design** of the curriculum had not altered to respond to the current requirements of practice, as indicated by the following respondents. *"Have more practise time for Maitland techniques as these are increasing in demand"* (Respondent: I). *"Decrease the amount of time for massage and increase community intervention strategies"* (Respondent: C). The need for more effective use of one's hands is reflective of the view of physiotherapy managers. In addition, more knowledge was required on the prescription and intervention of orthotics and prosthetics for patients with disabilities (Respondent: G).

Gaps and Silences

There were gaps and silences in the physiotherapy curriculum with regards to skills for management and administration of a physiotherapy department (Respondent: B, E, F, G, P, L, M, O, J, R, S, D, C, K, I, T), skills for rural community development (Respondent: C, Q), skills for practice within a multidisciplinary team (Respondent: E, J), and skills for psychological intervention, for example, coping mechanisms in conflict and stressful situations (Respondent: J). Many of these silences resonate with those identified by student, academic and practising physiotherapists. One respondent (B) claimed that the curriculum was silent on skills to assess and treat a patient holistically, and on the assessment of levels of disability with regards to the administration of disability grants (Respondent: R). The structure of the curriculum was criticised for creating the dissonance between the theory and the practical, under-emphasising the holistic approach to patient care (Respondent: B, C).

These gaps resonate with those articulated by and student physiotherapists and physiotherapy managers as skills required in the current context and role of the physiotherapist in practice. The focus of the content of the curriculum is on the competence of physiotherapy techniques in relation to the conditions that would be encountered in the clinical setting. A focus of the content towards a more patient-centred approach is neglected. The curriculum is unresponsive to the socio-political and socio-cultural context of practice. Consequently it is responding inadequately to the development of the physiotherapists' role in the context of health care and social development.

Pedagogy

Some community physiotherapists suggested that the case presentations and seminars that were used as teaching and learning methods in the classroom, had prepared them for their role as health care educators in the clinical environment (Respondent: M, T). Community physiotherapists claimed that the teaching and learning practices were inadequate because of its focus mainly on the 'normal' with insufficient reproduction of the skills on patients, insufficient time for discussion and practise of practical skills, and the large focus on assessments and evaluations within the curriculum.

With regards to **classroom-based teaching and learning**, it was suggested that student physiotherapists should be exposed to 'real' patients instead of learning on themselves in an ideal situation. *"Students should be exposed to e.g. real peripheral nerve injury with faradic current, and gynaecological problems e.g. PID with ultraviolet treatment"* (Respondent: H). *"Teach theory and practice on real patient s in the clinical block"* (Respondent: D). More learning resources, for example, text-books and hand-outs were necessary to free time for more **discussion and practical sessions** in the classroom (Respondent K). The extensive number of **tests** in the curriculum shifted the focus of the student

physiotherapist towards a surface approach to learning. *"The number of tests written during the course makes students place more emphasis on studying for and passing the test rather than learning for the future"* (Respondent F). It is suggested that more active and experiential learning strategies should be incorporated into the pedagogical practices in the curriculum.

Clinical Education

Community physiotherapists have cited the benefits of having a diverse clinical education experience in the undergraduate curriculum. However, there were three dominant issues that emerged with regards to clinical education in the physiotherapy curriculum. These were issues relating to time management, independent practice, and the structure and design of the community clinical education module.

a. Time Management and Independent Practice

With regards to **time management**, community physiotherapists expressed the need to develop skills for better time management within the curriculum. *"Allow students opportunities to take full responsibility of entire wards in order to gain confidence in liaising with other disciplines and learn time management"* (Respondent: E) and *"Teach how to manage workload"* (Respondent: I).

Some community physiotherapists suggested that the structure and design of the clinical education programme was helpful in developing the skill for **independent practice**, which they required during their practice as community physiotherapists. *"The independent time we got to assess and treat patients"* (Respondent: I). *"Space for my own discretion during clinical practice"*

(Respondent: H). *"Limited clinical supervision during blocks makes one a more independent and self-sufficient therapist"* (Respondent: F).

b. Community Physiotherapy Module

With regards to the preparation for community service, nine of the respondents reported that the **community physiotherapy module** was helpful in preparing them for this purpose. Others found it inadequate. Those who found it useful stated the following. *"The community based rehabilitation course did prepare us in terms of understanding community work but we had to adapt physiotherapy techniques to treat in the rural areas"* (Respondent: Q). *"The focus on 'community-based' physio was helpful as it provided a bit of insight"* (Respondent: R). *"Courses in community based rehabilitation and community studies helped prepare me for dealing and interacting with the community"* (Respondent: T).

However, nine respondents suggested that the content and duration of the community studies module needed restructuring. *"Community modules throughout the course needs to be condensed and made more intensive in order to prepare students for community service"* (Respondent F). *"Increase the length and content of the community module. Restructure it so that one is familiar with the proper channels of communication, etc in the community"* (Respondent N). It was suggested, that, *"a community block should be included close to the end of the programme"* (Respondent G).

With regards to the sites where the community physiotherapy module could be practised, community physiotherapists suggested that the community module should *"include a proper rural community setting"* (Respondent E). Within these sites, the content of the module should address strategies for patient intervention programmes at rural clinics and home-based care. The following excerpts

highlight these requirements. *"Increase community intervention strategies e.g. building equipment / improvising"* (Respondent C). *"Add rural home visits and clinic visits to the community module"* (Respondent A, Q, L).

The clinical education curriculum had responded inadequately to the imperatives of the changing context of practice that community physiotherapists were positioned in. The skills for physiotherapy intervention and social development were insufficiently addressed by this curriculum. Clinical education practice was focused on developing competence in resourced hospital settings to the neglect of under-resourced community settings.

Relationships

There were three dominant areas of interaction that the community physiotherapists referred to. These were the interactions among student physiotherapists, and students from other disciplines, academic physiotherapists, and patients.

a. Interdisciplinary Interaction

Community physiotherapists claimed that there was limited interaction between student physiotherapists and students from other disciplines. This prevented sharing of information and interaction across disciplines. The structure of the clinical education programme did not facilitate interaction across disciplines. *"Allow students to take full responsibility of wards in order to gain confidence in liaising with other disciplines"* (Respondent: E). *"Encourage a multidisciplinary approach during clinical blocks i.e. working with occupational therapists, etc"* (Respondent: J). *"Create an environment where physio students and e.g. sports science students can share information"* (Respondent: H). This silence with respect

to interaction within a multidisciplinary team resonates with the observations of student physiotherapists and physiotherapy managers.

b. Interaction between Student and Academic Physiotherapists

The relationship between student physiotherapists and academic physiotherapists was highlighted. Whilst some community physiotherapists were satisfied with the relationship between student and academic physiotherapists, others commented negatively on the relationship. With respect to those who commented positively on the relationship, the positive relations were experienced through a construct of caring by the academic physiotherapists during clinical education practice. *"An important aspect was having willing lecturers who sacrificed personal commitments to assist us at any time with problems, especially towards the end of the programme"* (Respondent: G). Another positive attribute was having, *"Dedicated lecturers who delivered a high standard of service"* (Respondent L).

The construct of caring is contradicted in the following excerpts of data. Some community physiotherapists highlighted the relations that existed between student and academic physiotherapists based on discrimination and relations of power. The confidence of student physiotherapists was affected by the attitudes of the physiotherapy lecturers. *"I think some lecturers of the department should be more encouraging towards student interests instead of discouraging and having attitudes towards certain students"* (Respondent H). *"The fact that many lecturers are very 'hard' on students plays a huge role and has an enormous impact on the future therapists' self-confidence"* (Respondent F). Student physiotherapists and physiotherapy managers on the relationship between student and academic physiotherapists highlighted similar observations.

c. Interaction between community physiotherapist and patient

Issues relating to diversity presented barriers to the development of interpersonal relationships between the community physiotherapist and the patient. African language and cultural traditions and practices created boundaries in the interpersonal relations between the community physiotherapist and patient. The curriculum was silent on developing proficiency in an African language and in African cultural traditions to facilitate interpersonal relations in the South African health care context. To facilitate communication, four respondents suggested the inclusion of a course in isiZulu in the undergraduate curriculum (Respondents Q, R, S, T) and one respondent suggested that *"understanding different cultures and backgrounds will help a lot"* (Respondent B).

The relations that have been highlighted suggest that the physiotherapy curriculum is providing insufficient opportunities for boundary crossing. The boundaries that have been created by relations of power, discrimination, diversity and academic turfism is reproducing the relations of society outside this curriculum.

Conclusion

In this chapter, I have presented the observations and reflections of experienced physiotherapy workplace managers and community physiotherapists, many of whom were required to manage and administer a physiotherapy department in their first year of work. These observations have allowed the practise of the workplace to engage dialogue with the intended and implemented physiotherapy undergraduate curriculum. The workplace needs have been highlighted together with the strengths and gaps within the academic programme. Suggestions to close the gap between academia and the workplace have been explicated. In the following chapter, I present the perspectives of physiotherapy academics on the physiotherapy undergraduate curriculum.

CHAPTER 7

Physiotherapy Academics on the Curriculum

In this chapter, I present an account of the views and introspections of physiotherapy academics on their experiences of the undergraduate physiotherapy curriculum. The data is derived from interviews with seven full-time members of the physiotherapy academic staff. From the data, the following five dominant areas of discussion were identified i.e. (a) Intended goals and underlying ideologies, (b) Content of the curriculum, (c) Structure of the curriculum, (d) Pedagogy and (e) Relationships.

The intended goals and ideologies of the physiotherapy academics explicate the values and beliefs that underpin their initiatives and motivate their actions within the physiotherapy undergraduate curriculum. One broad area of discussion that was of concern to physiotherapy academics was around the content and structure of the curriculum. With respect to the content and structure of the curriculum, the physiotherapy academics made reference to the volume, the nature and relevance of the physiotherapy knowledge for the current context, and the organisation of the curriculum that tends to promote the theory-practice divide. In the section that follows on pedagogy, I highlight the approaches that physiotherapy academics use for teaching, the factors that influence the teaching and learning environment, comments on assessment strategies, how skills learned in the classroom are re-contextualised for workplace practice and, a focus on the development of caring and empathy in student physiotherapists. The issue of relationships will be taken up as a separate section later because it emerges as a key theme in the data derived from physiotherapy managers and student physiotherapists. In this level of analysis a different alphabet distinguishes the seven academic voices from each other (Academic A-G).

This first level of analysis of the experiences of physiotherapy academics is depicted by two stories that are produced from the interview data. The stories highlight the main themes and the organising categories that were identified from the data production. It shows the diversity on perspectives and ideologies that were shaped by different identities of race, gender and experiences in South Africa post-apartheid. In addition it focuses the reader to the themes that will be enunciated in more elaborate detail in this first level of analysis through a selection of the data of what the physiotherapy academics actually say about their experiences.

The first story I present is ***The Story of Victor***. This story represents the ideology and voice of an Indian male physiotherapy academic. The story focuses strongly on the enactment of the physiotherapy undergraduate curriculum and the underlying frames and ideologies that guide the selection of the content. In addition it alerts the reader to issues that relate to the structure of the curriculum and pedagogy. The story highlights how the underlying ideology resonates with the intended goal to produce a competent, generalist physiotherapy practitioner. It uncovers the tension between an *espoused theory* of what the guiding philosophy of the physiotherapy undergraduate curriculum should be and *what actually guides* the production of physiotherapy knowledge and the undergraduate curriculum.

The Story of Victor

To me, physiotherapy is rehabilitation; it is a caring profession. The guiding principle that should underlie the training of physiotherapists at this university should be 'caring'. At this university we produce a physiotherapist who is a generalist and competent to fulfill the need of physiotherapy in the country. We want them to treat patients with expertise and to be good, safe and effective clinicians. The challenge has been, in addressing the needs of the country and for physiotherapists to be competent we had to include community physiotherapy into the curriculum. This was more a topping up of the curriculum and compounding the volume. When physiotherapists went out to practice as community physiotherapists they found that they could not cope in certain areas because of gaps in their training. So the training is good, but it has its challenges.

The syllabus is loaded and the undergraduate training is very labour intensive. The physiotherapy syllabus, which is science-based, covers physiotherapy intervention to the entire medical spectrum. We need physics, biology, physiology, and anatomy in the physiotherapy curriculum. One can never remove these, as Physiotherapy research

is understood from a medical model point of view. It has to be scientific and scientifically viable. However, there has been a dearth of research that has emanated from this department.

To me it's absolutely essential that current lecturers should take courses in education because that definitely affects the quality of the programme. I think that a balance should be struck between a master-apprenticeship model of teaching, and helping students to be independent learners. Otherwise there would be too much of guidance and policing during physiotherapy education. The key person is the educator by which one imparts the aspect of caring but this cannot be legislated as to how. Physiotherapy will lose its identity if we lose that aspect of caring. That's my conviction.

The ***Story of Zodwa*** presents the view of a Black, female physiotherapy academic on the relationship amongst conceptions of transformation, national policies and the structure, design and enactment of the physiotherapy curriculum. The story highlights how the term "transforming education", because of the lack of clarity has ambiguous interpretations. ***Zodwa's story*** accesses one interpretation of "transforming education" that focuses on engendering a more collaborative discourse amongst relevant stakeholders in the education of a physiotherapist. This is the underlying philosophy that guides the intended goal to develop a holistic, insightful physiotherapist who displays attributes of social responsiveness, caring and the skills to think critically.

The Story of Zodwa

I see the goal of higher education as producing individuals who are flexible, lateral thinkers who can cope in any situation. The government has a beautiful bunch of policies but nobody makes sure that it is applied, that each principle is explained. The government talks of transformative education. To tell you the truth, I don't think they understand what they actually mean. It may be that they want to transform education so that there's equity according to majority or it could mean that we should be working in collaboration with other government departments in the province, like the department of health. The government is trying to promote social development through health and education. But physiotherapy is working in isolation. For example, the manner in which the Professional Board for physiotherapy operates is not integrated. It doesn't integrate the different departments i.e. the departments of health and education. In addition, this collaboration is not reflected in our curriculum and I think that we are really lagging behind. In a situation where we are training people to look after patients, we should be the ones that should be ahead really.

The curriculum needs to really change. We need to look at things differently and fit in with what is happening. I think we are not serving the communities at all. We should take our teaching out to the communities that need uplifting.
In my teaching I don't just look at academic work. I look at a whole lot of factors that make a person who they are. That's the central feature of physiotherapy curricula in other African countries, but we don't want to learn from African countries. My focus is on developing students not just as physiotherapists rather as people, who are going to deal with other people, empowering the students for the future. It is important to train our graduates to come out as people who have the social aspect in developing. We need that. They will read physiotherapy books and pass the course but we are not giving them any challenges really. Whereas if you give them those challenges of thinking laterally, it develops them as people and then they would just want to read and listen and do all sort of things that develop them as people.

In my teaching, I emphasize relationship dynamics. I tell students that they must look at the patient as a person first and approach everything they do with patients from a humanistic point of view. The problems that arise between students and patients, between professionals and patients, are because we want to be prescriptive. Educated South Africans stop being people. We're supposed to be a caring profession and we are not doing it. As lecturers we need to look within ourselves because the caring has to start here. There are students who think that there are lecturers who don't care for them.

Intended goals and underlying ideologies

The teaching and learning environment is shaped by many influences such as issues that relate to policy, the intended goals of the programme, the relationship between the physiotherapy academics and student physiotherapists, the relationship between the physiotherapy academic and institutional management, the demands of the professional board for physiotherapy and /or the workplace. These intersect with individual ideologies and philosophies that underpin the selection of teaching, learning and assessment strategies in the classroom.

a. Transformative Education

Physiotherapy academics declared their interpretations of 'transformative education'. Two of the physiotherapy academics (C and E) interpreted 'transformative education' as the process that involves the transformation of the student, for academics A and D it meant transformation of the lecturers, and for Academics G and D it meant educating student physiotherapists for social responsiveness and empowerment of communities. On the view of transforming the student, Academic E suggested that the teaching approach should encourage student-physiotherapists to look at things differently or more broadly, whilst Academic C suggested that, *"it could mean moving towards a multidisciplinary approach by producing a critical mass of people"*. Academics A and D suggested that the transformation should start with the lecturers first, *"to be more open-minded to new ideas from each other, patients and students. It starts with us first"* (Academic A).

"Transformative education" for Academic G meant social responsiveness and empowerment, *"we should go out there to the communities. We should be teaching there. We should empower and teach them, see that the area develops and then move out"* (Academic G). Academic D had a similar vision of empowerment of patients

and communities. *"It's not just transformation of the students or the academics but transformation of the patient as well"* (Academic D). The broad range of opinions that physiotherapy academics articulated on 'transformative education' suggests that there are differing views about the goal and mission of transformative education and insufficient understanding and clarity on the objects and /or subjects of transformation. Transformation education, in its broad sense, refers to first the transformation of the individual with respect to social, emotional, empathetic and cognitive development. These characteristics are necessary to produce social responsiveness for transformation at societal level. This is a goal of adult and higher education. However, this understanding is insufficiently articulated by the physiotherapy academics, which could suggest that this goal of higher education may not be achieved explicitly in student physiotherapists during the educational encounter.

b. Intended goals

The following excerpts highlight the intended goals that physiotherapy academics claim they would like to achieve through their interaction with the physiotherapy programme. The goals ranged from focusing narrowly on the development of a **skilled, competent physiotherapist** to a broader imperative of developing a **holistic individual for society.**

(i). Competence in Physiotherapy Skills

Academic B enunciated that the outcome of this physiotherapy undergraduate curriculum was to produce a generalist physiotherapist who displayed skills that were relevant for a transforming health system. *"We produce a good general physiotherapist, who would be competent in any area. Physiotherapy education addresses the production of health professionals from a needs basis and relevance with*

a slant to affecting the national health policy. The emphasis for primary health care has kicked in very well from first to fourth year" (Academic B).

Academic E and Academic A were focused on developing a physiotherapist who displayed competence in physiotherapy skills and techniques. "We want them to be good, safe, effective clinicians" (Academic E). A similar view is articulated by Academic A, "To be able to treat patients in the profession with expertise" (Academic A).

(ii). Critical holistic individual for society

In contrast, Academics C, D and G articulated their intended goal to produce a critical holistic individual for society, for example, "to produce flexible, lateral thinkers who can cope in any situation. We cannot produce physiotherapists narrowly with blinkers" (Academic C), "it is necessary to train our graduates to come out as people who have the social aspect of developing. We want them to qualify as physiotherapists but we want them to be part of the world. They must be insightful physiotherapists" (Academic D), and "I think it's to produce holistic individuals for society. We are working to transform people, into something that is more effective in society with a fixed syllabus" (Academic G).

Three physiotherapy academics elucidated how the role of the physiotherapist has developed through extrinsic influences such as policy and changes in the health care environment. Two main themes could be identified in this regard i.e. a holistic approach to patient-care and a shift in the role of the physiotherapist from hospital-based practice to community-based practice in keeping with the philosophy of primary health care. "Our job often involves a holistic management of the patient" (Academic F), "the role of the physiotherapist has changed in keeping with the dynamic changes taking place in the hospitals. There is the psychosocial aspect that is coming in much more now than it was years ago" (Academic A), and

"we focused on hospital, now we focus out on home-based care, primary care. We have multi-roles; we have developed. We're very distant in the way we practise physiotherapy now. The HIV is scaring everybody. Suddenly the glove is creating a barrier between the patient and us. We are gonna lose the positive charge that we have in our touch; that's the healing, the gift" (Academic G).

(iii). Social and Community Development

Academic C was critical of the inadequacy of this curriculum in addressing and preparing student physiotherapists for issues that related to social and community development. "I think we are not serving communities at all. We have communities right around us that we are not doing anything for. Because we don't have support from management we are not doing what we should be doing and maybe our workload restricts our creativity too" (Academic C).

The lack of collaboration and the isolated workings between this academic physiotherapy department and the departments of health and education at a national level (Academic C and D), the lack of consultation with all the stakeholders of physiotherapy on addressing the needs of the nation (Academic D), the lack of integration between all the relevant government departments and the Professional Board for Physiotherapy at the level of the HPCSA (Academic C), and inadequate, structured feed-back from community physiotherapists on how this curriculum impacted on their community service experience (Academic E) were cited as possible reasons for the gap in improving this physiotherapy programme's contribution to social and community development.

The broad range of conceptions of physiotherapy academics on the intended goals of the physiotherapy programme resonate with narrow ideologies of technical competence to broader goals that link physiotherapy with individual and societal transformation. A critical observation of these conceptions is that whilst

some academics have aligned their intentions of the programme with the goals of national policy, others continue to view physiotherapy as a health care service independent of the changed practice context. However, the collective ideologies of the physiotherapy academics tend to resonate with the programme for transformation.

The varying claims on the intended goal of the programme suggest that academic physiotherapists have not arrived at a conclusive agreement on a guiding ideology for the physiotherapy programme. Therefore a disjuncture exists between the intended goals that are articulated by some of the physiotherapy academics and the actual needs of practice within a transforming health care context. On the other hand, some academics espouse the need for physiotherapists to respond to transforming societal needs, yet the reality of the curriculum is inappropriately aligned to meet this goal because of the inadequacy of its content and design to respond to these changing requirements.

This has been attributed to the lack of collaboration between physiotherapy academics and important stakeholders on issues that pertain to the current or changing needs of practice that would inform the process of physiotherapy curriculum development. This could also be attributed to a lack of clarity on what the intended goals and processes of a transforming education system meant for physiotherapy academics. Alternatively, the curriculum could be resisting this philosophy. This could be due to the nature of knowledge and the underlying ideology that legitimates current physiotherapy practice.

Curriculum Content

The physiotherapy academics articulated their views on the content and structure of the curriculum. There were suggestions by Academic E to evaluate the content against the needs of physiotherapy practitioners and for the curriculum to reflect the changes that were occurring nationally (Academic D) and internationally

(Academic G). A reason cited for the 'static' curriculum was that the process of curriculum development held different meanings for different people. "We just look at content or we tend to look at content and juggle content around and we see that as curriculum development. There are different understandings of what the curriculum is and often it means 'the content'. We need to be looking way beyond that to where we are sending our graduates and what's out there, how our curriculum is impacting on services. We don't evaluate our curriculum like we should" (Academic E).

A consequence of an inadequately evaluated curriculum was that the content of the curriculum had not shifted from its focus on **symptom-based treatment,** under-emphasising knowledge components that are required to treat a patient using an integrated biopsychosocial approach. "We're treating symptoms and we don't look at the psychological. We're training people who are not skilled to deal with the psychological and social problems. Our curriculum does not address the whole person. We're not looking at the total patient but when we treat we encounter cultural, biological, social problems" (Academic G). This curriculum perspective would have an influence on the holistic approach to patient care.

In addition the curriculum had not prepared student physiotherapists for their role as managers and administrators (Academic B). This is a claim that resonates with claims made by community service physiotherapists who identified this gap in their first year of practice when they were required to function as administrators and/or managers of physiotherapy departments at rural hospitals. This was an additional function to their role as practising physiotherapists. Another gap that was identified by the community physiotherapists in the physiotherapy curriculum was the multidisciplinary team approach to patient care that underscores a primary health care philosophy. "The community physiotherapists said that it was the first time that they actually saw occupational therapists, speech therapists and physio's working together because they were all pushed into one room. In many ways, we made the community physio's go out and do

something that they have never done before. We've thrown them into the deep end and they had to swim" (Academic G).

The **excessive volume** of the curriculum was cited as a concern. This resonates with the views on student physiotherapists on this issue. Two of the physiotherapy academics elucidated the consequence of this 'overloaded' curriculum. It prevented the inclusion of new areas of content and it had negative effect on student physiotherapists. For example, "The addition of community physiotherapy was more topping up and compounding the volume. Also physiotherapists protect their turf and it's time that we threw some things out. I think if you compare this degree to any other degree, I don't think it comes anywhere near the volume of physiotherapy. It is a problem" (Academic: B). "The overwhelming volume of work in third year gets students down" (Academic: D).

The nature of the content had not shifted sufficiently to respond to the needs of the context of practice, for example, knowledge for working within an integrated biopsychosocial approach or a multidisciplinary approach. Further, the intentions and goals that academic physiotherapists desired through the curriculum were insufficiently supported by the nature of the content. The overloaded curriculum was a consequence of the resistance of this curriculum to adopt an integrated approach to health care, curriculum re-structuring and integrated learning approaches. This integrated approach would perhaps balance the focus between acquisition of content and learning.

Curriculum Structure

The organisation and structure of the curriculum was criticised for creating the divide between theoretical knowledge and clinical application on patients. The inappropriate sequencing of theoretical modules and the application of that

knowledge on patients were suggested as factors responsible for creating the disjuncture.

Three of the physiotherapy academics suggested that the **absence of a clinical setting** in close proximity to the classroom was responsible for the disjuncture that was evidenced between the theory and practice. *"We are too far removed from the clinical setting. We seem to cause the barrier between theory and clinical and it seems as if there are two different entities where there isn't an integration. We need to create a proper teaching and learning environment"* (Academic F). This is due to *"us being divorced from the clinical areas"* (Academic A) and *"one of the shortfalls in our environment here for learning, is that we can't bring in a patient where students can actually focus"* (Academic E). Student physiotherapists were unable to experience the immediate effect of newly acquired techniques or theoretical knowledge on patients because of learning being classroom-based. This delayed the reproduction of the skills that were learned in the classroom and its recontextualisation in a clinical setting. This created the 'artificial' gap between theory and practice.

Another factor suggested for hampering the integration of theoretical and practical knowledge, and preventing a holistic approach to patient care was the structure of the **clinical 'blocks'** that were in use for clinical practice. The focus of the clinical block was to develop and acquire competence in the skills that were related to that block, for example, a neurological block would focus only on those patients that present with neurological-related dysfunctions.
"We should go back to the old time where there was no neuro block, no orthopaedic block. You just work in a hospital with diverse patients. Now we're just stuck in boxes. There's no openness. We talk of interdisciplinary, holistic treatment but we're not even doing it in our teaching, so how do we expect them to function out there" (Academic G). This claim by Academic G suggests that the absence of a holistic intervention

for patient care was as a consequence of the lack of contact between members of the multidisciplinary team within the undergraduate curriculum.

The main concerns with regards to the content and structure of the physiotherapy curriculum that were raised by the physiotherapy academics may be summarised as follows, first, that the content should reflect the national and international trends in patient care and the knowledge that is required to function efficiently within the expanding roles of physiotherapy practice, second, the content and structure of the curriculum should be evaluated to provide opportunities for the inclusion of new knowledge and, third, a reorientation of the structure of the curriculum is required that would facilitate the integration of theory and practice knowledge towards a holistic approach to patient care. Another broad area of concern that was cited by the physiotherapy academics related to issues of pedagogy.

Pedagogy

Physiotherapy academics provided insights into the ideologies that guided the selection of teaching approaches that they used in the physiotherapy classroom. Other aspects of pedagogy that generated reflective discussion from the physiotherapy academics included the range of factors that influenced the teaching and learning environment and the process of recontextualisation of skills that are learnt in the classroom into the patient world.

a. Guiding ideologies

Physiotherapy academics identified the ideologies that underlie their selection of teaching and learning strategies. The guiding ideologies were characterised by two main themes. The first guiding ideology that was illustrated was an approach of caring that was linked to being a parent, and the second focused on developing a competently skilled physiotherapy practitioner.

Three physiotherapy academics (B, D and G) identified **'caring'** as a suitable approach to teaching. This is illustrated in the following excerpts taken from the data. "I approach my teaching of students as a parent first and I don't just look at the academic work. I look at all the factors that make a person who they are focusing more on empowering students for the future rather than for exams" (Academic D), "you need to start from how a family starts...that nurturing of a mother, it starts from there and the same thing for our students. We've come in without a teaching background and we've tried ways of learning. A mother is first teacher...we have some teaching in that way, but we're experimenting, we're shifting all the time" (Academic G).

Three other physiotherapy academics (A, C and E) identified the development of a **competent practitioner** as a guiding ideology for the selection of teaching and learning approaches that were used in the classroom. "The focus shouldn't be on teaching but on learning. If we want to produce enquiring problem solving minds, students must be taught to think for themselves" (Academic C). Two physiotherapy academics focused their teaching on achieving practical competence. "A lot of the way I teach and evaluate students is practically oriented" (Academic E). "My philosophy is that if you see it and do it and touch it, the learning outcome is far better as opposed to just talking about it in theory" (Academic A). The different ideologies would have created tension in the curriculum experiences of student physiotherapists.

b. Teaching Approaches

Physiotherapy academics claimed to use a wide range of teaching approaches. The selection of a particular teaching approach was guided by the underlying ideology and the achievement of intended learning goal. A suggestion by Academic B to improve the teaching and learning process was for lecturers to

take courses in teaching practice. *"To me it's absolutely essential that current lecturers should take courses in education, the knowledge of how to communicate your subject. I think this definitely affects the quality of the programme"* **(Academic B).** **Physiotherapy academics claim to use different approaches for teaching the physiotherapy subject. These included** *"practical work and demonstration on students while you are teaching kinesiology, for example, followed by students working amongst themselves under supervision of the lecturer. The master-apprenticeship model should be maintained. But at the same time we need to strike a balance between getting a student leaning for too much guidance, and helping them to become independent learners"* **(Academic: B). One of the dominant themes that emerged with regard to an active teaching strategy was the use of group-work.** *"I believe in active learning. I really don't believe that we can learn if somebody stands there and teaches. One of the problems we see with our brighter students is that they end up as non-thinkers. Somewhere along the line we killed something"* **(Academic C).**

(i). Group-work

Group-work was used in different ways to achieve different outcomes. For example, Academics C, E and F used group-work with a focus on students whilst the approach used by Academic D was more teacher-directed. Academics C and F used group-work as a strategy to facilitate diversity amongst student-physiotherapists. *"Group discussions have a lot of value because everybody thinks according to their own world-view. Students come from diverse backgrounds and if you group them, then everyone will learn from everybody else. This adds value to the learning process. Students bring patient cases from where they practice clinically. I facilitate and they have to think and work things out"* **(Academic C).** *"That's were I bring in diversity because I dictate the groups and I make sure that they are racially interspersed. There is no discrimination of race or gender. They are told what they are*

allowed to do and how they have to respect their colleagues. So we learn to integrate amongst each other and learn to appreciate the next person" (Academic F).

Academic E used small group work as a strategy to encourage participation from quieter students in the class. "I like a participatory kind of learning environment. I feel in a big class its difficult to get that kind of participation and that's why I feel that small group work is helping that kind of situation to bring out the quieter, weaker students in small groups. Students are assigned tasks related to a particular area of the body. They would look at the clinical application and make presentations to the class. I give my own input during the presentation" (Academic E).

The teacher-directed approach of Academic D was used as a strategy to direct the thinking of student-physiotherapists. One of the intended outcomes of this strategy was to direct the integration of theoretical knowledge that was experienced in the earlier years of the curriculum into the clinical practice experience. "I have used group work all the time in all my lectures because I found that students learn better when they are in a group but each person in that group has a responsibility. Most of the time I take them back to the beginning of the training and if there is something that I'm doing that brings in anatomy, physiology...I integrate all that. They have to do the thinking and putting all together, through my questioning. I pick on anybody in the group so they are always alert and I say, 'so and so come here. I'm going to be doing this and you tell me what I'm doing.' This has changed them because it makes every student ready for me, for my question" (Academic D). **A teacher-directed approach within a group-work strategy suggests that the dominance of the teacher in the teaching and learning process. Traditional teaching strategy has been re-appropriated within an active learning strategy.**

The teaching strategy that was used in the classroom for the acquisition of physiotherapy skills and the assessment strategies that were used to evaluate

those skills were criticised by Academics E and F. These strategies focused on achieving practical competence that was isolated from the holistic intervention that was required during the patient-physiotherapist interaction. "When students get to fourth year nothing is coming together in their clinical assessments. I think it's because we are teaching and assessing them in small isolated ways. I think that's where our OSPE's are at fault, in the way we are assessing. Our first and second year students perform technical skills well but they don't know why they're doing what they're doing. Also we should create assessment forms that would appeal to everyone. We may be forcing something down on them that may not be suitable to their learning style at all" (Academic E). Academic F made the following comment: "We are showing them something isolated in class. They never get to see the total interaction between a physio and the patient."

(ii). Simulating the clinical environment

In the absence of immediate application of theoretical knowledge and practical skills onto a patient, an attempt to simulate a workplace setting is created in the classroom by using the following strategies. Academic: A claimed that after a practical skill is acquired, students are given a clinical scenario in the classroom that mimics a patient-physiotherapist interaction. During this 'created' interaction, the skill is practised and transferred onto the 'patient' through role-play (Academic A). Another strategy used by the lecturer was sharing with student physiotherapists his/her experiences with patients, "we have a story-telling session where I give them different case histories of difficult patients and how I used some creative ability to get around the difficult problem. It's very relevant and usually fits in with whatever they were doing" (Academic F).

In addition to the role-playing and practise in the classroom setting, Academic F extended the application of the acquired skill onto a patient. This was in the form of a clinical assignment / single case study that student physiotherapists had to

undertake individually for that module in the first level of the physiotherapy programme. "They gotta understand that what you teach in class is not the same picture that you'd get in the real world" (Academic F). The strategies were used for skill application in the absence of patients. This was an attempt for student physiotherapists to experience the application of skills in a changed context.

(iii). Producing Caring and Empathy

The educator as a role model was highlighted in transferring skills and developing qualities of caring and empathy in student physiotherapists for reproduction in the patient's world. "A lot of practicals and role playing are done by the educator as to how you handle, assess and treat a patient. To me it's the educator who imparts the caring aspect. So it's the transferral of the very disposition or character of the person in the educator..." (Academic B). Physiotherapy academics claim that attitudes of caring and empathy are encouraged and developed in student physiotherapists for reproduction during clinical practice.

Academics D, F and G elucidated how they infused these attitudes during their interaction with student physiotherapists. "They get the idea that every patient is precious and every patient has to be treated like it's somebody's mother, father, brother or sister. I tell students that you can only know what the person's going through if you've walked in their shoes and felt where it pinched" (Academic: F). "It's important to approach everything you do with patients from a humanistic perspective. I always say to students, 'put yourself into the shoes of the patient. Look at the patient as a whole, not just at a particular aspect and be guided by the wishes of the patient'" (Academic D). Academic G advises student physiotherapists that for effective physiotherapy intervention on a patient who has cerebral palsy, it is necessary to simulate the dysfunction of the patient for an improved understanding of the condition. "It's like a world out there that you are reaching, because the patients are

trapped and if you can feel how they feel then you will know what will make them feel good. You've got to be sort of 'CP-ish'" (Academic G).

The selection of teaching approaches is directed by the intended outcome that the physiotherapy academic would like to achieve, for example, developing practical competence of physiotherapy skills or developing a critical, interactive student. The learning process may be directed by the teacher or it may occur through self-directed / discovery learning with some facilitation by the teacher. The type of teaching approach selected is one of the influencing factors that shape the teaching and learning environment.

c. Shaping the Teaching and Learning Environment

The teaching and learning environment was influenced by the approach used for teaching, motivational strategies that are used by physiotherapy academics, accessing student feed-back following lectures and tests, the physical resources, and students' motivation for registering in the programme.

(i). Motivational Strategies

The motivational strategies that were used to inspire student physiotherapists to remain focused on the programme included a re-focus on the students' motivations for entering the programme, highlighting student physiotherapists' academic achievements and by physiotherapy academics presenting themselves as role models. Academic E and F encouraged student physiotherapists to remain focused on their motivations for entering the physiotherapy degree programme.

Academic achievements were highlighted by using praise (Academic A), Academic C *"rewarded their work that they do with marks"*, whilst Academic D gave recognition to the struggling student when he/she produced some achievement,

"When the struggling student comes up with something really good, I highlight that so that others can gain from them and see them as achievers as well. By making each and every student feel, that they deserve to be there" (Academic D). Academic G claimed that the passion she displayed for her physiotherapy interventions on patients served as a role model for student physiotherapists, "just by me loving what I'm doing and even a small change on a patient is a milestone that we cheer" (Academic G).

(ii) Feedback

The teaching and learning environment was also shaped by the verbal feedback (Academic: E) and the written feedback (Academic A) that physiotherapy academics received from student physiotherapists following lectures, tests and assignments. Academic D presented an opposite view with regard to accessing feedback from student physiotherapists, "there is no time to get the student's perspective. We just try to push the syllabus. Once you give students time to reflect and talk about what happened in the test, you end up not teaching because they have so much to say and we have not given them a chance to talk, to tell us what they feel about what we teach" (Academic D).

Academic C recognised that "the classroom becomes a stressful environment because there are other people listening and they have to think on the spot. Giving them a take-home exam allows them to reflect in a non-stressful environment and it brings out other important skills for life like the use of the library, consultation and communication" (Academic C).

The evidence suggests that some of the physiotherapy academics are responsive to student physiotherapists' feedback and attempt to effect changes to the teaching and learning environment. However, time constraints prevented the access to student physiotherapists' feedback by one academic.

(iii). Physical Resources

Academics C and E claimed that the poor physical resources influenced the nature of the learning environment in the physiotherapy department at this academic institution. *"I think the resources are very poor. In fact I think it's one of the worst universities in the country"* (Academic C), *"I'd like for management, from a student point of view, to visit us to look at the physical environment because I feel it impacts on our student learning and we have great pitfalls in our physical structure here in our department"* (Academic E).

The deficiencies of the physical environment have influenced the nature of the relationships between the physiotherapy academic staff and student physiotherapists, and between student physiotherapists themselves. *"...it's how we interact with students. I think the problem is that we don't have space here. If we have a common room, it would make so much difference because we could walk in when there are students and we could have a few laughs with them...even amongst students themselves there isn't that cohesion because there isn't a time when they are all together"* (Academic D).

(iv). Students' intentions for entering the physiotherapy program

Another observation by physiotherapy academics that influenced the teaching and learning environment was the reflection by student physiotherapists about the reality of physiotherapy, and their *actual* motivation for entering the programme. These are reflected in the following excerpts. *"For them it is just to pass the exam and earn a living"* (Academic A), and *"Some of the students don't know what they want. They are really only doing physiotherapy because they know of someone else doing it, and it looks nice..."* (Academic G).

"At third year level students want to drop out because now they really know what physio is about, students really do an introspection on, 'is this what I asked for?'" (Academic F).

Physiotherapy academics claim that the teaching and learning environment is shaped or influenced by the motivational factors used during the teaching and learning process, the physical factors of the environment and attitudes that student physiotherapists themselves bring to the classroom. In addition the teaching and learning environment is shaped by the ideology of the physiotherapy academic and the factors that guide the selection of the teaching approach used to achieve an intended outcome.

Relationships

Another broad area of comment that arose from the physiotherapy academic data was around the issue of relationships. In this section, the following three themes will be discussed, that is, the relationship between student physiotherapists and academic physiotherapists, the relationship between members of the physiotherapy academic staff, and the relationship between the institutional management and physiotherapy academics. The construct of caring was identified as a common theme in all the relationships.

a. Relationship between student and academic physiotherapists

Two main themes underscored the nature of the relationships between student physiotherapists and the academic physiotherapists. Relationships were either constructed within the ideology of a **parent-child association** or through **relations of power**.

Academics D and F described how they constructed their relationships with student-physiotherapists on the basis of a **parent-child association**. "To me they

are not really students. They are children. When they are at university, I stand in for their parents. There are always those lines that have to be drawn because students can take advantage" (Academic D). "I always look at them and say, 'you're children.' Those that I show caring for, I can discipline very nicely because they know I care" (Academic F).

Academic G observed how **relations of authority and power** created a barrier in the relationship between students and academic physiotherapists. "The moment they see us, a figure of authority, they freeze. And I think this basically comes from us as individuals...what we project. We have this teacher-child barrier. We have to break through this barrier and become a part of all this." (Academic: G).

Physiotherapy academics claim that there is not enough caring displayed towards student physiotherapists. "We are not giving our students love, care, to open and blossom. We're just giving them books to read, assignments and irrespective of their background, they must perform well" (Academic: G).

Academic F states that the boundaries created by academic physiotherapists between themselves and student physiotherapists are interpreted by student physiotherapists as a lack of caring by academic physiotherapists. "If you talk care, you must show care. We need to show our students that we care. Previously we had to set boundaries. Students think that we're so far away from them that we can't reach them" (Academic F).

The construct of caring is interpreted in different ways in the relationship between student and academic physiotherapists. In the relationships that are constructed using the parent-child association, there is an assumption that physiotherapy academics display caring towards students in the same way that a parent would care for his/her child. However, this relation is underscored by a power differential because the act of caring can be manipulated to exert authority as a

maternal referent over the student physiotherapist. Through this relation boundaries are created which, student physiotherapists, in turn, interpret as the absence of caring by physiotherapy academics. It is ironic that some physiotherapy academics do not display elements of caring towards student physiotherapists when the attitude of empathy and caring towards patients is encouraged in the delivery of the espoused curriculum.

b. Relationship among physiotherapy academics

In the relationships constructed amongst physiotherapy academics, a dominant theme that emerged was the absence of cohesion. The physiotherapy academics operated in an isolated manner that was interpreted as a lack of caring and understanding for each other. *"We seem to be in our own little corner, and trying to get together to transform things is difficult. We don't share ideas and nobody knows what the other is doing. Our culture is rubbing off onto the students. We have to change; we are the change agents"* (Academic A). *"We can't care for people if we don't understand people. But we lecturers need to look within ourselves because it has to start here. There is a lot that can be addressed if we can meet and mix more regularly"* (Academic D). *"Each of us has our own personal ways of achieving the goals of higher education. As it is we are all doing our own thing and we think that we are doing our best. We don't even get together to discuss how we teach"* (Academic E).

c. Physiotherapy Academics and Institutional Management

The relationship that was constructed between the physiotherapy academics and the institutional management was also underscored by the absence of caring by management and a sense of isolation of this physiotherapy department within the larger institution. For example, academic A claimed that *"the institutional management was very divorced from our department"*, whilst Academic C stated that *"the management does not care because not once has any of them found out about*

our department or even paid us a visit. They are worried about the image of the institution rather than what's going on inside the institution."

Physiotherapy academics claimed that because of the lack of contact the institutional management did not recognise the difference of physiotherapy academics from the other academics within the institution. The differences arise from the additional sites of curriculum delivery within the programme for the purpose of student clinical education. This has gone unrecognised by the institutional management. The institution makes the same demands of physiotherapy academics with respect to research output as it does for the rest of the institutional academic community. "Management tends to lump all of us together. They need to see that our delivery is different from other faculties in the university. Our workload and the time that we put into students are different" **(Academic E).** "They are not adequately informed about what takes place in the clinical areas and this is where we have suffered. I think we have reasonably good support but when it comes to the core functioning, the running of the programme itself and then complying with the requirements of an academic institution...research production, they are not being supportive, they have not understood. One is judged with the whole university" **(Academic B).**

Academic D stated that there needed to be more collaboration between the institutional management and the relevant stakeholders in issues where decisions have to be taken. "In its planning the management must be all inclusive. They must include staff and students when decisions are made so that decisions are informed by what everyone feels. What makes people unhappy is when things are imposed on them" **(Academic D).**

Lack of caring and inadequate collaboration has emerged as dominant themes in issues related to the construction of relationships with physiotherapy academics.

This will be compared with data that was produced from student physiotherapists in a later chapter.

Conclusion

Physiotherapy academics espouse progressive ideologies and goals that guide the delivery of the curriculum. However, there is evidence to suggest that the actual delivery of the curriculum could be occurring in very traditional ways. For example, academic physiotherapists claim that they use group-work as a teaching approach yet traditional power-relations, which contradict the philosophy of group work, are constructed with student physiotherapists in the group-work setting. This also contradicts the espoused theory of 'caring' that some academic physiotherapists claimed to have guided the educational encounter. The lack of collaboration and sharing between the academic physiotherapists and other relevant stakeholders who could provide meaningful input on issues for curriculum development and curriculum transformation, suggests that this physiotherapy curriculum is bound by its history and seeks to protect its boundaries.

In this chapter, I have elucidated how physiotherapy academics experience the physiotherapy undergraduate curriculum through five dominant themes, these are, ideologies and intended goals, content of the curriculum, structure of the curriculum, pedagogy and relationship construction. In the following chapter, I present a cross-sector analysis of the main themes that emerged from the data of student physiotherapists, academic physiotherapists and physiotherapy practitioners.

Chapter 8

A Cross-sector analysis: student, academic, and practicing physiotherapists

In this chapter, I move from the data and themes that were generated within a critical-feminist research framing to linking the themes with the literature. Any work necessarily highlights some issues and interpretations while it neglects others. In this chapter, I go back to the start of my musings, to the disruptions that began my questioning about how this physiotherapy curriculum is responding to societal transformation in South Africa, and why is the curriculum responding in the way that it does. The study abstracted the experiences of three constituencies, the student, academic and practicing physiotherapists who were shaped by the intersecting demands of theory, practice, research and policy, within their own contexts of practice. Further, it examined how the curriculum responded to these demands through the lens of the student-, academic- and practising physiotherapists.

The broad themes that arose from the analysis in chapters 5, 6 and 7 focussed on the curriculum content, organisation and design of the curriculum, pedagogy, clinical education, and relationships in the curriculum. In this chapter two main issues will be discussed. These are *theory and practice*, and *relationships in the curriculum*. The main issues that will be discussed in the context of *theory and practice* are the **nature of the curriculum**, **selection of knowledge structures, organisation of knowledge** and **pedagogy** in the classroom and in the clinical education environment.

The issues that relate to *relationships in the curriculum* have emerged from the interactions among student physiotherapists, academic

physiotherapists, physiotherapy practitioners, patients, within the teaching and learning environment. Issues relating to **race, caring and empathy; relations of power; and, language and cultural diversity,** featured strongly as factors that influenced relationships in the curriculum.

Theory and Practice

This section focuses on the inter-relationship that exists in this curriculum amongst the constituents of theory, practice, policy and research. The discussion around the issue of 'physiotherapy research' is limited because the discussions that emerged during the production of data were focused more towards theory, practice and policy issues. However, in the discussions with physiotherapy academics, one participant claimed that physiotherapy research was underscored by a 'scientific' research tradition.
Following is a discussion on the nature of the curriculum.

a. Nature of the Curriculum

The physiotherapy undergraduate curriculum is advancing a view of a technically competent physiotherapy professional that is supported by a broad exposure to patient conditions within institutionalised settings. Physiotherapy practice is explained in relation to a scientific knowledge base. This physiotherapy curriculum may be described as technocratic with a narrow, product orientation (Cornbleth, 1990, Eisner, 2002). Further, it may be described as traditional curriculum (Wellard et al, 1999) that is underscored by the scientific and academic rationalisation of the medical model. The practitioner model (Higgs and Hunt, 1999) that this curriculum tends to support is based largely on the apprenticeship and health professional ideologies.

The following argument provides support to the preceding claims. The physiotherapy curriculum is subject-centred and volume intensive. Curriculum

development is viewed as a plan where the content is shifted or re-arranged. Amongst the physiotherapy academics themselves, there was no consensus on a guiding philosophy for this physiotherapy programme post apartheid. Whilst some of the academic physiotherapists articulated a need for curriculum shifts that corresponded to the goals of transformation, there were inadequate shifts in this direction by the academic physiotherapists or through the curriculum that resonated with this underlying ideology. The curriculum cannot be described as critical because it does not display sufficient sensitivity to the context in which it operates nor is it sensitive to the history of the discourse. For example, an analysis of the curriculum documents from the conception of the degree programme until 2003 highlighted a few technical changes to the content of the curriculum (see chapter 2). These changes were evident by an increase in the volume of the content and changes to the curriculum structure from year-long courses to a modular degree programme.

The nature of this curriculum is strongly aligned to the policy document for education and training of physiotherapy students that is stipulated by the Professional Board for Physiotherapy (HPCSA, 2002). This document pretends to present a 'value-free' neutral position on curriculum that appears de-contextualised from the context of practice. Its focus is on the mastery of physiotherapy skills and techniques in the classroom and the clinical education environment in relation to corresponding medical conditions. The selection of clinical education sites within this curriculum remained largely unchanged from the context of practice prior to the legislation of transforming healthcare, public sector and higher education policies. The inclusion of 'community physiotherapy' sites, in response to policy, continued to be largely institutionalised, and responded to a narrow view of community-based outreach that suggested a superficial adherence to policy (Motala et al, 2001). Whilst the curriculum appeared to respond to policy imperatives through its inclusion of "community physiotherapy" the technocratic nature of this curriculum did not extend this philosophy to the theoretical components that were required for transforming

practice. Community physiotherapy existed as a separate 'block' within the curriculum rather than as a philosophy that could have shaped an integrated curriculum that was relevant to the context.

The absence of contextual influences suggests that this physiotherapy curriculum is not sensitive to the history of physiotherapy, its role during the apartheid era and the transforming context in which it operates. The goals to right social injustices through a transforming health care system, public service delivery (for example, 'Batho Pele' – People first) and higher education sector (for example, the development of critical and enlightened citizens) have not been translated into explicit physiotherapy curriculum practices.

The absence of context is sanctioning a particular view of physiotherapy as being objective and 'scientific'. According to Wellard et al (1999) and Clouder (2000, 2005) the emphasis on developing skills and behaviour under-emphasises the development of attitudes, values and processes for reflective practice. This skills-focus of the curriculum may be the reason for the under-emphasis of knowledge that related to subjective and affective aspects which influenced interpersonal relationships during the clinical encounter and among student-physiotherapists, such as, caring, race, culture, social inequalities. In addition this curriculum is based on the medical model, which appears to operate within a value-free, apolitical, culturally and historically western context that does not legitimate subjective knowledge. However, Jaggar (1989) advances a view on western science that links knowledge with power, views knowledge as a weapon for domination and control, and therefore reflects the imperialism and racism of the societies that created it. This view on western 'science' is also supported by the writings of Foucault, 1980b and other post-modern theorists.

With a view on the mastery of technical skills, this conception of curriculum focused largely on the acquisition of skills whilst under-emphasising *learning* and development of creative and critical thinking and skills for reflection that could

advance individual and societal development. Further, by non-engagement in clinical education contexts that are rife with social inequalities and discrepancies, this curriculum could not adequately produce the shifts in values and commitments that are associated with righting social inequalities in the context of social responsibility. The physiotherapy curriculum is not an integrated, critical curriculum. Its focus is narrow because it tends to respond to narrow practice imperatives rather than positioning itself in the wider context of socio-political transformation.

b. Selection of Knowledge

Physiotherapy is a powerful discourse. The selection of knowledge components is aligned to the 'scientific' and academic rationalisation of the medical model, producing the physiotherapy discourse as a "regime of truth". Physiotherapy has an essential *process* nature as its body of knowledge because it considers the process of evaluating and treating a patient as its content (Eksteen, 2001). By its nature, physiotherapy professional craft knowledge can be measured and objectified. However, practising physiotherapists were being shaped by contextual factors in the practice setting that emphasised patient-centredness by focusing on patient's rights and ethics, and advancing a holistic approach to healthcare by displaying their priority to multidisciplinary and biopsychosocial perspectives. To construct physiotherapy assessment and treatment within a patient-centred model of care (social ecology model) means, amongst others, validating and admitting more of the patient's subjective world into the patient-physiotherapist encounter, and developing congruent relationships by, for example, the physiotherapist attending to his/her biases that relate to race, ethnicity, culture, gender, power (Falk Rafael, 2000). Practising physiotherapists also required competence in managerial and administrative contexts, and as first-contact practitioners. However, the knowledge and learning opportunities in the curriculum inadequately supported these requirements for practice.

The selection of singular knowledge components, their relation to each other, and the boundaries that insulate them from each other, creates the hierarchy of a discipline (Bernstein, 1996). The power of the discourse is evidenced in the curriculum, for example, by insulating the discourse from knowledge components that it does not value. Therefore knowledge components are prescribed in relation to the curriculum content. Student-physiotherapists have no freedom to include knowledge components that are meaningful for their individual development. Physiotherapy's alliance with the medical profession and its status as a 'scientific', helping profession affords it legitimacy and power through its selection of knowledge components. The history of the knowledge and origin of physiotherapy that underpins this image have not been deconstructed to uncover the subjugations, assumptions and values that the selection of knowledge structures support.

In this curriculum large amounts of time are apportioned to modules in anatomy, physiology, clinical sciences, physics and knowledge structures that focused the content of this physiotherapy curriculum towards a physical skills and condition-focused orientation. The privileging of these knowledge components negatively sanctioned knowledge that related to social, cultural and psychological aspects of knowing which student-physiotherapists experienced during interpersonal interactions across different contexts. Personal knowledge and knowledge that is required during professional practice interactions (as articulated by student, academic and practising physiotherapists) are not legitimised, for example, intuition, skills for interpersonal communication, skills for listening and caring, skills for interacting across contexts of diversity.

The knowledge selection in the physiotherapy curriculum does not support practice within biopsychosocial and multidisciplinary approaches because of its de-contextualised nature. Because of the absence of opportunities for student-physiotherapists to engage in multidisciplinary teams in the physiotherapy curriculum, instrumental, communicative, and transformative learning that is

generated in cross-professional partnerships will not be realised (Franz, 2005). Therefore physiotherapy curriculum lacks knowledge for holistic patient-centred intervention within a primary health care philosophy. Knowledge for practice within these constructs are developed implicitly or ignored. They do not appear in the formal physiotherapy curriculum but they are articulated as important by academic, student and practising physiotherapists.

The knowledge components of physiotherapy and the sites where physiotherapy is practiced, advances an image of physiotherapy as a medical profession or a glamorous profession. For example, physiotherapy practices are located largely in urban, resourced centers. Physiotherapy practice is appealing because it privileges particular medical conditions that fore-ground a particular type of practice, for example, sports injuries, orthopaedic conditions, respiratory conditions. These conditions and other medical conditions are treated in safe environments with skills and techniques that give physiotherapy its identity, for example manual therapy, electrotherapy and exercise therapy (see student physiotherapist's data).

By providing only selected opportunities to experience practice, the design of this physiotherapy curriculum had privileged and advanced only *one* view of what is valuable and acceptable practice, that is, experience derived from largely institutional-based care in the public sector. This is consistent with the hierarchical medical model of practice but it is inconsistent with *actual* practice in the current healthcare contexts. The curriculum design lacked sufficient commitment to community-based, rural-based and private practice experiences. This resulted in inadequate opportunities for learning and experiential knowledge that could have emerged, and the subsequent under-preparedness of student- and community physiotherapists for physiotherapy practice in these contexts, for example, the administration and management of physiotherapy departments, providing hands-on treatments in the absence of physiotherapy equipment, opportunities to engage discrepancies and diversity within social systems. This

could be attributed to the absence of guide-lines for primary healthcare or community intervention in the 'Minimum standards for the training of physiotherapy students' Document (HPCSA, Form 96, 2002, and Krause, 2002).

The absence in the image of the profession (see, student physiotherapist's data) is the role of physiotherapy in socio-economic development through the provision of physiotherapy services in under-served and under-resourced contexts. The image of physiotherapy did not advance the role of physiotherapists as socially responsive agents of change to right the social injustices that were created by the privilege of race, class, ethnicity, language, and gender. There is an absence in this undergraduate curriculum and the document that stipulates the 'Minimum standards for the training of physiotherapy students' (HPCSA, Form 96, 2002), of knowledge components that underpin sociocultural issues that underpin relationships in the physiotherapy curriculum and its practice. This raises questions of the physiotherapy profession's commitment to diversity, of advancing relations through the curriculum among different race and ethnic groups, of reproducing social hierarchies by not providing the space to deconstruct assumptions and ideologies that produce discrepancies, of maintaining vested interests. This absence could suggest that the physiotherapy profession has made insufficient shifts to right the view of the National Physiotherapy Committee (1998) that "the physiotherapy profession lacked, and may still lack a human rights culture".

The 'white-voice' controls physiotherapy in South Africa (Van Rensburg, 2004) and has remained largely unchallenged. Clouder (2000) resonates the view of White, female dominance in a different physiotherapy context and suggests how this highlights race, gender and class as dimensions of existence that are largely uncontested in terms of reflective practice. Seidman (2004) in theorizing "whiteness", states that Whites claim the benefits of White social privilege that relate to opportunity, choice, voice and respect. This is evident in the knowledge that the South African physiotherapy profession advances by supporting the

selection of certain knowledge structures that legitimate physiotherapy whilst neglecting others. Further, the selection of knowledge components in this curriculum that advances an apolitical view does not foreground relational skills as important for transformation. This could influence the interactions that develop across diverse constructs given the historical context of South Africa, especially if assumptions and prejudices that underscored the apartheid era remain unchallenged and unexamined. Knowledge for 'patient-centred' approaches is absent. Because of the apolitical, 'neutral' focus of the medical model that guides the development of this curriculum, the history of the profession and its exclusion of factors that related to race, ethnicity and class from professional accountability issues, should be examined. This suggests that this physiotherapy curriculum did not consider the righting of social injustices within its professional role.

c. Organization of knowledge

The physiotherapy curriculum is orientated towards a collection type curriculum where states of knowledge stand in isolation from each other (Bernstein, 2002) or a technocratic curriculum that decontextualizes curriculum both conceptually and operationally. The organization and structuring of the theoretical and clinical knowledge components in this curriculum are insulated and bordered from each other, and are organised sequentially in some instances.

An example of the borders that exist amongst knowledge segments is displayed by inclusion of the community physiotherapy module. Community physiotherapy is included as an 'add-on' module in this curriculum. The add-on community physiotherapy module has not created sufficient conflict or tension in the curriculum for space to function alongside the medical model, or disrupt the philosophy of the medical model because its inclusion was largely a 'technical' exercise. It is operating on the periphery because its inclusion meant a 'topping up' of the content and volume in the curriculum.

Community physiotherapy, which was the implementation strategy in response to primary health care, was not recognized as a change in philosophy for the health care system. Therefore, this philosophy was not adopted within the physiotherapy curriculum as an opportunity to change the philosophy that guides its theory and practice. Further, it did not become the responsibility of other physiotherapy academics within the curriculum because of the closed relationship of the curriculum. The practice of 'community physiotherapy' continued to be largely institutional-based, with the under-preparedness of student –physiotherapists in the social and psychological aspects of community outreach, mobile and rural clinics, home-based care, educating for health promotion and prevention, and working within interdisciplinary teams.

The problem may lie in the strong socialization of physiotherapy academics in the medical model and their lack of tools and discourse to escape out of that box to undo that socialization. Further, the persistence of the medical model could also be related to implicit perspectives of physiotherapy academics, and their own guiding philosophies that they are sensitive towards. They may have come to accept the hierarchy, discourse of power and control that frames the design of this curriculum within the medical model; the separation of knowledge structures, the isolation of faculty and other influences of context in the curriculum design, the teacher-dominated curriculum, and the relations of power between student- and academic physiotherapists. It could also mean that by straying from the Professional Board for Physiotherapy's philosophy and its policies that guide curriculum, this undergraduate curriculum may lose credibility and may not be legislated. Therefore, the philosophy of sharing and negotiating power that underscores the primary health care approach is under-emphasized in this curriculum.

In the medical model, sequential progress explains the acquisition of knowledge in terms of a sequence of steps. This curriculum structure is an example of how knowledge structures may be arranged to support this ideology. This is

evidenced in the design and structure of this curriculum where the bulk of the clinical education is experienced towards the end of the curriculum. This practice stems from the belief that students must acquire adequate biomedical and clinical knowledge before meaningful practice. According to Ladyshewsky et al (1999) the clinical context is important in developing the clinical reasoning skills of students. Therefore clinical experiences throughout a program provide rich contextual experiences for students to develop learning and engage in clinical reasoning. The absence of clinical education in the early years of the curriculum and the sequencing of learning that separated theory from practice, were criticised by student physiotherapists. Clouder (2005) has also indicated the importance of introducing a wide range of clinical experiences early in the program because students will therefore have maximum opportunity to develop their own personal framework for caring within which they will subsequently operate.

Poor sequencing of modules, and the closed relationship amongst knowledge components affected their integration. The organisation of knowledge segments lacked coherence. This disrupted *learning*, focusing more on mastering skills in the classroom, and subsequently delaying their reproduction on patients, which consequently resulted in surface learning approaches. Deep learning approaches, for example, reflection-in-practice that was desired by some student physiotherapists in the clinical education environment was under-emphasised. The organisation of knowledge through timetabling of knowledge components transmits the implicit power and control of the curriculum. The timetable operated as a form of 'governmentality' to train new habits of mind through acts of surveillance (Foucault, 1983b). The play of power is evident by the regulation of student-physiotherapists into tighter forms of control, for example, through a tight prescribed time-table, lack of space in the time-table for 'elective' courses that the student-physiotherapist may want to pursue for his/her own purposes, the effective prohibition of student-physiotherapists in university-wide student

activities through absence of free spaces in the time-table, and the absence of interaction with other students from within the faculty.

d. Pedagogy

There were two main issues that emerged that related to pedagogy. These are acquisition versus learning, and group-work. Following is a discussion on acquisition versus learning.

(i). Acquisition versus learning

In this physiotherapy curriculum, the focus on the development of technical competence within the classroom teaching and assessment practices, and during clinical education practice was responsible for shifting the focus away from a holistic, patient-centred approach of care, towards a product orientation of curriculum. The focus of the condition-specific nature of the clinical education blocks was on acquiring the expertise of physical treatments/techniques that are associated with the presenting conditions of that clinical block. This is reinforced in the focus on technical expertise at the end-of-block assessment. Therefore the teaching and learning practices were aligned largely to the acquisition of technical/ process skills rather than the development of broader competences for a changing context of practice.

The acquisition and mastery of physiotherapy technical skills was developed within a technocratic orientation of curriculum. According to Gee (1998),

> "teaching that leads to acquisition means to apprentice students in a master-apprentice relationship in a discourse wherein the teacher scaffolds the students' growing abilities to say, do, value, believe and so forth. Immersion in the practices of a discourse ensures that the learner takes on perspectives, adopts a world-view, accepts a set of core values, and masters an identity often without a great deal of critical and reflective awareness of these matters". (Gee, 1998)

As discussed in a previous chapter, Cornbleth (1990) suggested that a technocratic approach to curriculum and its construction foster reliance on experts and expert knowledge. Knowledge in the form of correct answers is pre-determined and there is no room for teacher or student personal knowledge, creativity or critique. This resonates with excerpts from student- and academic-physiotherapists' data, which indicated that critical thinking skills and reflection were not developed in response to the teaching and learning practices. In the clinical education environment, alternate points of view were ignored through the control of the clinical educator's clinical reasoning process.

Second, the learning environment is determined by the ideology of the academic physiotherapist and what he/she recognises as learning. The learning that actually takes place is in response to the pedagogical intentions of the setting (Wenger,1998) and it defines for each body what it can and cannot do as a general form of surveillance and control in modernity (Eadie, 2001). A deep approach to learning is supported by the level of the learning task itself, perceived interest and relevance, and a learning environment that provides an authentic context. The preferred learning sequence appears to be receiving information, preferably in interactive modes and short units of time (versus long passive lectures), then time to practice skills or discuss information, followed by actual, or closely simulated application in a clinical setting when possible (Sellheim, 2003).

Student- and community service physiotherapists were critical of the incoherence in the sequencing of the learning opportunities, that is, the dissociation between the theoretical knowledge and clinical application on patients. This, in addition to learning in a context that was not authentic (on normal people) produced a surface approach to learning. There were suggestions from student- and community-service physiotherapists for more active teaching and learning approaches.

The transfer of or application of learning in contexts different from the learning context cannot be assumed, for example, learning in the practice context on few selected patients compared to the large wards of patients in the *actual workplace* context. From the socio-cultural practice perspective, transfer of learning is likely to occur to the extent that similar practices exist in the two contexts, and is supported by similar contextual resources (Walker, 2001).

With regards to the approach to learning that curricula promote, Ladyshewsky et al (1999) suggests that conventional curricula which focus on factual knowledge and measuring content acquisition are likely to encourage surface approaches to learning. More experiential learning strategies which link domain knowledge to contextual factors, evaluate understanding and application, are more likely to facilitate deep approaches to learning. The design for learning in this curriculum did not facilitate deep approaches to learning because of the large volume of content, incoherence in sequencing, a theoretical approach to learning, the teacher-dominated teaching and learning practices, and learning that was de-contextualised from the actual context of use.

(ii). Group-work

Group-work was a commonly used teaching strategy in the physiotherapy curriculum. It was used during classroom teaching and in the clinical education environment. First, academic physiotherapists used group-work and discussion groups having a pre-determined aim at the outset, for example, with a focus on students to promote diversity and encourage participation from the quieter members of the class, or it was teacher-directed in that it directed the thinking of the students. Second, student physiotherapists described how they were put in groups to research a particular area of knowledge and were then expected to present this information to the class in a didactic manner. Their dissatisfaction with the process stemmed from insufficient sharing of knowledge by some

academic physiotherapists, which left student-physiotherapists feeling uncertain about their own knowledge.

Whilst group-work may be a commonly used active teaching strategy in this physiotherapy curriculum, the process of implementation is inconsistent with what should *actually* occur during group discussions within the framing of facilitating learning. The broader goal of adult education is to help adults realise their potential for becoming more liberated, socially responsible and autonomous learners – that is to make more informed choices by becoming more critically reflexive as "dialogic thinkers" in their engagement in a given social context (Foley, 2000). This has an effect of transformation on the individual through reflective discourses and critical thinking that permits more inclusive, discriminating, permeable, and integrative ways of knowing the world (Belenky, 2000).

In this curriculum, group-work continues to be teacher dominated and hierarchical and it is inconsistent with the broader goals of power-sharing, adult education and transformation learning. The consequences of engaging a didactic teaching process under the guise of critical pedagogy is that the goals of promoting the development of transformational, self-directed and, socially responsive adult learners will not be realised. The adherence to a teacher-controlled curriculum suggests that this curriculum is not responding to the expectations of a changed higher education landscape where students will be both independent and interdependent learners, self-motivated, self-directed, self-managed and self-confident (Higgs & Edwards, 2002).

In the context of physiotherapy education and training, Kolb's experiential learning theory (1984) provides an important link between theory and practice, and it emphasises the important role that this theory plays in the learning process. Kolb proposes a holistic, integrative perspective on learning that combines experience, perception, cognition and behaviour. Kolb's experiential learning theory claims that there are two structural dimensions of the learning

process, the prehension dimension and the transformation dimension. Knowledge is grasped through either concrete experience or abstract conceptualisation, and it has a transforming experience through either internal reflection (via intention) or active experimentation (via extension). However, experience without reflection, generalisation, hypothesis formation and testing does not result in learning (Boud & Pascoe, quoted in Zuber-Skerritt, 1992). The important characteristics of experiential learning is the involvement of each student as a holistic person, the correspondence of the learning activity to real world problems, and learner control over the learning process (Boud, 1989, quoted in Zuber-Skerritt, 1992). These conceptions shift learning from a product to a process conception of learning. Further, designs for learning should be conceptualised within social theories for learning and the adult principles of learning so that learning is transformative (Belenky et al, 2000, Mezirow, 2000, Gee, 1998, Wenger, 1998).

e. Social Implications of a Bordered Curriculum

There was broad discussion amongst academic staff members on the lack of caring for each other and the absence of cohesion. In addition, this 'separateness' was evidenced between the student and academic physiotherapists. This was also evidenced at a broader level with regard to the institutional management structures. The physiotherapy curriculum represents a closed curriculum where bodies of knowledge stand apart from each other, with little sharing in the teaching of modules amongst staff members. This could suggest that as boundaries are created around the areas of specialization that academic physiotherapists are responsible for, there is little or no boundary crossing to cohere around knowledge or amongst each other (Bernstein, 1996). This is extended into the relationships with student physiotherapists and the rest of the university community. This lack of cohesion and isolated ethos of the nature of work was interpreted as an absence of caring. With regard to the

interaction between student and academic physiotherapists, the differentiation that was created by the boundaries, was interpreted as power-relations.

In addition the bordered curriculum did not promote integration and interactions among student physiotherapists themselves, or among other student members of the faculty. The deficits that arose from this arrangement were experienced in primary health care settings were physiotherapists work as a member of a multidisciplinary team. Student and novice physiotherapists were inadequately equipped to work within a multidisciplinary team.

Relationships in the Curriculum

The constructs of **race, caring and empathy; relations of power; and language and cultural diversity** emerged as important aspects that influenced relationships in the physiotherapy curriculum. Student physiotherapists explained how caring was produced in their interaction with patients and in their relationship with the physiotherapy academics. Caring is not developed explicitly in the physiotherapy curriculum. It is ironic that caring is inadequately developed in a curriculum that focuses on the health care needs of patients, yet it was recognised by academics, as an important attribute that guides their teaching and learning encounters with student physiotherapists. In addition caring was produced through experiences of 'difference' when some student and community service physiotherapists encountered the disparities in socioeconomic status between patients and themselves in rural and under-resourced areas. Further, I will elaborate on how the underlying medical-model ideology of the curriculum may be contributing to the absence of caring.

a. Race, Caring and Empathy

Western epistemology has tended to view emotion with suspicion and hostility and the conclusions of western science are presumed objective because they

are uncontaminated by the 'subjective' values and emotions that might bias individual investigators (Jaggar, 1989). This physiotherapy curriculum is guided by that scientific rationality and does not recognise personal or subjective knowing, for example, intuition or caring as legitimate knowledge. Because of the absence of caring as an explicit construct in the physiotherapy curriculum, student physiotherapists do not recognise it as authorized knowledge that could be enhanced or developed (Clouder, 2005). Student physiotherapists were of the perception that caring was a characteristic of one's personality. However, the constructs of caring and empathy were identified as the cornerstones of a patient-centred curriculum.

The relationship between issues of race and caring remain a challenge in the curriculum amongst students, academics and patients. The curriculum is silent on discriminatory practices and discrepancies that arise from racial injustice (Biko, 2004). Under-emphasis of social constructs in the curriculum, such as race, caring, gender, empathy, ethnicity, have influenced the nature of interpersonal relationships that are constructed, especially across contexts of diversity. It has special significance in the South African context where difference is constructed especially around race, class, ethnicity, disability and gender (Reddy, 2004). For example, the difficulty in crossing racial boundaries was evident in the inequality of physiotherapy interventions that were administered by some student physiotherapists on patients who were from a race group different from themselves.

Another example that related to difficulty in crossing racial and ethnic boundaries was evident in the interactions among student-physiotherapists where tensions in the interactions were attributed to underlying racial and ethnic assumptions. These experiences and tensions were described as an absence of caring for people across different racial or ethnic groups. This assumption was re-assessed amongst student-physiotherapists during the final clinical education examination. Recognising the inter-dependence and value of one another whilst preparing for

the final year examination, a student-physiotherapist transcended the differences that plagued earlier relationships based on assumptions of race and ethnicity (see student-physiotherapists' data). This attitudinal shift was realised through experience with 'difference' within a group with a common imperative (success in the final examination) by demonstrating sensitivity to self, negotiation and sharing where the value of the individual and the collective was identified, former assumptions related to difference were transformed, mutual respect was fostered, and caring was realised (Falk Rafael, 2000, Parks Daloz, 2000). This resonates with Collins theory of an ethic of caring (2003), which described how people become more human and empowered only in the context of a community, and only when they become seekers of the types of connections, interactions, and meetings that lead to harmony.

Whilst this curriculum is focused on developing a skilled, competent physiotherapist, it is silent on how it supports a physiotherapist functioning within the sociocultural context of South Africa that is fraught with discrepancies. In spite of being a discipline within a historically disadvantaged higher education institution, this physiotherapy curriculum does not provide the space to deconstruct the issues that relate to race, class, ethnicity, privilege and social justice. This has implications for facilitating dialogue in community participation (King, 1998). The physiotherapy department admitted and created access for more Black students in its response to transformation, but it inadequately supported the space for engaging dialogue to uncover ideologies and assumptions related to race. The absence of knowledge in the curriculum on how to develop caring within the South African context and its potential for transcending difference, and knowledge that relates to the recognition of how disparities and inequities are created within the social system suggests that the curriculum does not recognise these issues as important and commitment towards an agenda for transformation of the individual and society. This could be due to the objectivity-subjectivity dualism that the medical model advances where subjective issues are silenced.

b. Relations of Power

Black student-physiotherapists have described their experiences of racism and discrimination at the hands of academic physiotherapists. The problem that arises between student and academic physiotherapists is that the power that is vested in the teacher and the professional in the medical or traditional model (Wellard, 1999) has become conflated with the power that has been associated with the privilege of race and professionalism in the South African context. There are two power differentials that are created in the interaction between the student- and academic-physiotherapists; one that is advanced by the power and status of being an academic and a health professional within the medical model, and the other that is supported by the race hierarchy and privilege that was created during apartheid (World Health Organisation, 1983, Reddy, 2004). Some student-, academic, and practicing physiotherapists have described how relations of power are constructed between student- and academic physiotherapists because of the power of the academic that is constructed through the master-apprenticeship and the teacher-dominated approaches in the teaching and learning environments.

The physiotherapy discourse is an example of discursive practice, which aims to produce 'docile bodies' and 'obedient souls' (Usher, 1994). In the relations between student- and academic physiotherapists, power is displayed within the teaching and learning environment where the nature of the environment determines who is authorized to speak, for example, lecture-based teaching sessions, silencing of alternate points of view in the clinical education environment by challenging personal knowledge for scientific justifications, student-physiotherapists do not have a 'voice' in their education and training, through acts of surveillance that normalise judgements and directs the action of student-physiotherapists.

Disciplinary power is exercised over student-physiotherapists through the scientific nature of knowledge that is prescribed for the physiotherapy discourse (Driver, 1994). In addition, the student-physiotherapists are constructed as *'powerful experts'* through the physiotherapy discourse that operates as a regime of truth (Foucault, 1980b; Usher, 1994). *Creating the powerful expert* is continued in the clinical practice areas. The areas of expert practice that this arrangement creates, is synonymous with the areas of specialization that occur in medicine where an expert body of knowledge is created through regulatory systems. The student physiotherapist becomes the powerful expert under the surveillance of the powerful clinical educator who ensures that the knowledge and competencies that are related to a particular area of specialization are achieved before moving onto the next area of specialization (Bernstein, 2002).

In addition, as the physiotherapy discourse is produced in clinical areas, the student-physiotherapist's identity is also shaped by what can be said, by whom, when and with what authority, because the discourse constitutes power relations (Eadie, 2001). The physiotherapy student becomes the main site for the exercise of disciplinary power as he/she becomes integrated into the physiotherapy social formation. The student-physiotherapist becomes the subject of power through forms of regulation and surveillance and as he/she becomes integrated into the discourse, the power relations become re-inscribed in the student-physiotherapist and patient interaction (Swain, 2004).

The student-physiotherapist becomes the vehicle through which power is exercised. Therefore power is re-inscribed through the tools of physiotherapy practice and through the relationship that develops between the student physiotherapist and the patient. The subject/object, private/public dichotomy and hierarchy is manifested through a means-end rationality of scientific knowing that subjugates caring, and personal ways of knowing. In the section that follows I will describe how issues of cultural and language diversity were experienced in the physiotherapy curriculum.

c. Language and Cultural Diversity

The language of a community is linked to its culture and cultural practices. It follows, therefore, that the lack of proficiency in an African language (for example, isiZulu) and issues relating to cultural diversity cited by student and practising physiotherapists, were issues that influenced interpersonal relations. Conversely, student-physiotherapists who could communicate in isiZulu felt more comfortable in their interactions with patients whose first language was isiZulu as it precluded the barrier that differences in language created. On the one hand, barriers to effective treatment were predicated on assumptions based on difference related to race where the student-physiotherapist may not have clarified his/her response towards people of different ethnic or racial backgrounds. On the other hand, barriers to effective treatment were brought to lie on insufficient knowledge to transcend barriers related to language. The constructs of race and language have been used as instruments of discrimination during apartheid (Boughey, 2004).

Recent literature suggests that health care professionals are grossly lacking in their ability to identify and address potential cultural barriers in their professional interactions (Black et al, 2002). The views of Leavitt quoted in Black et al (2002) that there is neglect in educating healthcare professionals on cross-cultural issues that relate to healthcare resonate with the findings in this curriculum. Issues relating to cultural sensitivity were not addressed in the curriculum content and structure, and were cited as barriers to effective interpersonal relations. Further, the National Physiotherapy Committee (1998) highlighted this omission in the education and training of physiotherapy students and recommendations were forwarded to include this knowledge into physiotherapy curricula.

The lack of attention to cultural sensitivity and interpersonal relations in the curriculum point to the deficits of a curriculum that is designed within a framing of the medical model in accordance with its position on subjective knowlegde.

However, within the South African context, this neglect of cultural knowing could also refer to the power and value of certain languages, and cultural practices and traditions whilst subjugating others. Historically, boundaries were created by the hierarchical ordering of languages that operated as a vehicle for discrimination amongst race and ethnic groups. Language and cultural practices were used to exclude by creating artificial boundaries (see, chapter 2).

An examination of student-physiotherapists' experiences of communicating with patients in an African language suggested that this interaction produced a shift of power that produced more collaborative relationships based on mutual respect. This was underscored by perceptions of valuing a subjugated language and allowing boundary crossing. This resonates with the claims of Gordon (2005) which suggests that by examining issues related to cultural diversity, the awareness of disparities that exist within social systems may be uncovered as one examines ones own cultural positioning and privilege in relation to others. The absence in this curriculum to issues relating to cultural practices and languages supports the framing of a curriculum in the medical model, and could also suggest that this curriculum is making ineffectual shifts towards an agenda for socio-political transformation and advocating for social justice.

Within a rural community context where the community physiotherapists were employed, and student-physiotherapists were located during their elective clinical placement, they experienced the disparities and his/her own position of privilege in relation to people in that environment. The issue of diversity moved beyond differences in race, language and cultural practices to diversity based on difference in socio-economic circumstances. Their experiences in an under-resourced and under-served environment allowed them to examine their positions of prejudices, power and privilege, which had the potential to develop empathy and a sense of inter-connectedness with the people in this environment. This transformation at an individual level by discovering ones sensitivity to self,

and developing the desire to transform the circumstances of others, produced the effects of social justice.

This supports the theories for transformation that are advanced by Powell (2002) and Meizerow (2000) who claim that skill in reflecting, social skills, experiential and attitudinal shifts are required for transformation. The development of cultural self-awareness requires the examination of one's own preconceived notions of privilege and power. This is supported by Johnson quoted in Gordon (2005) who states that

> "only through examination of each of our positions of privilege and power can we understand how systems of privilege and oppression work. And only with this understanding of our position and subsequent participation in systems of power and privilege can each individual form commitment to take the action necessary to promote change". (Johnson cited in Gordon, 2005)

The post-apartheid contexts of health care practice have resulted in student-physiotherapists requiring more than propositional and process knowledge for practice. In addition practitioners require knowledge that supports an examination of their prejudices or assumptions that could limit their interaction towards developing more harmonious and human interactions within the construct of caring (Collins, 2003 and Falk Rafael, 2000).

It is suggested by Stewart (2002) that undergraduate healthcare curricula should consider the following factors in the development of cultural competence, that is, awareness and acceptance of the wide range of cultural diversity (in developing systems of care), acquisition of knowledge of cultural differences and similarities and knowledge of client's culture, knowledge of one's own cultural values and identity, ability to communicate effectively across cultural groups, use of knowledge to adapt services and skills and, development of lifelong learning and reflection that includes examination of attitudes and values of cultural groups. This resonates with the claims of Black et al (2002) for developing cultural

competence. This is especially necessary to promote reconciliation amongst people of diverse race groups in South Africa.

However, an exploration of assumptions that underscore discriminatory practices related to language and cultural practices requires dialogue for transformation of those assumptions. Gordon (2005) has suggested that cultural competence is achieved through classroom activities that confront and explore personal values, belief systems and backgrounds. However, lecture-based instruction is not recommended since such an approach addresses cognitive learning without ensuring effective changes and may possibly foster stronger stereotyping. This view could be supported by Kolb's experiential model of learning and Meizerow's view on learning for transformation.

Conclusion

In this chapter, I have identified factors that support a medical model approach in the design of this physiotherapy undergraduate curriculum. The curriculum design reflects a technocratic approach that is decontextualised from the context of practice and it does not authorize or make explicit knowledge that is not 'scientific', for example, caring, skills for interpersonal communication, cultural sensitivity and language competence. Consequently a more humanistic approach to curriculum content and design that could reflect knowledge and skills for a more patient-centred approach to healthcare is impeded.

This curriculum content assumes an ahistorical approach (Apple, 2004), which is evident in its inconsequential shifts in relation to developments in policy. The bordering of knowledge structures from each other has produced implications for social relations within the curriculum. Interpersonal relations are not addressed explicitly within the curriculum, which suggests that the curriculum does not recognise this as important in a context that fragmented people on the basis of race and privilege. In this regard, the curriculum is silent on the disparities that

exist in the social system, operating within a technocratic, narrow conception of curriculum that is not responding to social cohesion or the agenda for transformation and social justice.

The identity of the physiotherapy practitioner that is shaped through this curriculum is anchored in relations of power, competence in physical physiotherapy skills and propositional knowledge that supports a medical model of practice. The gaps or inadequacies in the selection of knowledge and, the structure and design of the curriculum point to first, an absence of subjectivity and emotion in the knowledge conceptions, and second, ineffectual shifts in its relation to changes in policy, practice and context. In the current context, professional development and professional accountability are characterised by developing physiotherapy skills and techniques that respond to the imperatives of the practice setting. The curriculum, as an instrument for professional development has responded insufficiently to the changes in the socio-political context and consequently locates the identity of a physiotherapy practitioner within a largely condition-focused, skills-based approach to health care.

The challenge for physiotherapy professional development lies in developing both technical competence and interpersonal skills within a model of collaboration towards a moral and social justice end. This points to, amongst others, reshaping physiotherapy curricula that positively influence change in students' racial attitudes, their comfort with diversity and beliefs about cultural pluralism whilst simultaneously producing a critical, competent, and caring physiotherapy professional. Further, it would seem appropriate to construct a curriculum model that demonstrates mutual constitutive rather than oppositional relations between reason and emotion (Jaggar, 1989).

In the chapter that follows, I elaborate and extend the issues that were discussed in this chapter to develop **'A Caring-Transformative Physiotherapy Practitioner Model'**. Whilst similarities exist in foregrounding the relational

aspects in this proposed model and the interactional professional model proposed by Higgs and Hunt (1999), a Caring-Transformative Physiotherapy Practitioner model is advancing relations for social justice, humanity, and social and physical competences in a South African society that is marked by disparities and underscored by relations of power. Whilst this model is proposing a particular shift for physiotherapy professional development, the elements that constitute this model could be used to re-shape physiotherapy professional accountability and curriculum development for a transforming society.

Chapter 9
A Caring-Transformative Physiotherapy Practitioner Model

In this chapter, I develop a **Caring-Transformative Physiotherapy Practitioner Model** for professional development that responds to shifts in professional accountability within changing higher education, public service and health care contexts in South Africa. The policies that act as a guide for practice in these contexts are responding to imperatives for transformation by implementing strategies to eradicate inequalities and injustices that are based on race, gender, culture, and class differences. The notions of democracy, equality, individual and societal development, are valued in the agenda for transformation. However, these contexts were complicit with the discriminatory practices of apartheid. An overhauling of these ideologies requires shifts in individual and personal transformation, shifts that are attitudinal and experiential to effect change in perceptions.

Transformation in South Africa requires the development of a caring society and respect for human dignity. This is evident from the previous analysis chapters. This transformation requires deep convictions of caring that respond to 'caring for' people and 'caring about' people (Dalley, 1996, Noddings, 1986). The contribution of physiotherapy to the health care system has been largely physical competence. The wider conceptions of caring that include emotional and social constructs have been ignored. This conception is implicit in propositioning the medical model as value-neutral, objective and apolitical, the model that guides the theory and practice of physiotherapy. For example, physiotherapy practice within the physiotherapy curriculum is largely condition-focused. This influenced the academic physiotherapists' perception of where teaching and learning should take place and how. Further, the design of the curriculum with its focus on the

mastery of content and skills influenced the shaping of the pedagogy more towards a master-apprentice orientation with over-reliance on the power of the lecturer in the teaching and learning environment.

Because of the preservation of the ideology of the medical model in the physiotherapy curriculum, clinical education was characterized by an absence or under-emphasis of a biopsychosocial or a multidisciplinary approach to health care (Dennill, 1998). To admit subjective or non-'scientific' knowledge into the curriculum or to share expertise across disciplines could have the effect of dissipating the power of the medical model and the physiotherapy profession. Consequently, the selection of clinical sites within the framing of the medical model ideology was largely related to hospital-based practice where the development of clinical skills was focused more on individual patient interaction, ignoring the development of skills that were required by physiotherapists for treating wards of patients or large volumes of patients within busy out-patient settings. The selection excluded practice at sites that were under-developed or under-resourced. During apartheid this practice was complicit with the policies of the day with the physiotherapy profession unquestioningly participating in discriminatory practices within the higher education and health care environments.

However, a dominant feature amongst the constituencies of the physiotherapy profession is their focus on skills for *practice*. The broader role of physiotherapy within the context of socio-economic development and its response to social inequalities and social injustices is under-emphasized or absent. Whilst the physiotherapy profession may argue that it is responding to these imperatives through the introduction of compulsory community service, I will argue that physiotherapy continues to be oriented within a 'service provision' framing focusing on treating patients through the application of physical skills in response to a medical condition. The underlying ideology that guides the profession and the physiotherapy curriculum remains removed from the issues that generate

socio-economic disparities and relations of power; issues that arise from a history of racial, class and gender injustice. The profession protects itself behind a veneer of 'scientific' and academic rationalism. However, the history of this ideology also points to racist and discriminatory origins (Jaggar, 1989).

In pursing this 'powerful' ideology, this physiotherapy curriculum selectively excludes itself from an examination of issues that create social and economic disparities, from issues that discriminate amongst people and creates an artificial membrane that divides. Its narrow focus on promoting the identity of the profession through skills that are specific to a particular genre of physiotherapy ignores the development of relationships across disparate contexts that could promote physiotherapy as a profession that cares about issues of social justice, inequalities and human rights. Physiotherapy positions itself as a powerful profession through relations of hierarchy and 'scientific' rationality, and the production of powerful expert practitioners. It follows then, that within the context of physiotherapy professionalism, the absence of broader issues of caring and humanism continues to be evident.

The focus on 'scientific' objectivity is trapping the profession within a framing of technical competence that is limiting. It is resisting hybrid knowledge and creativity. For example, the curriculum does not select contexts of practice that could have the dual effect of enhancing physiotherapy specific skills whilst attending to transformational knowledge for the individual towards developing empathy and social skills, or contexts that compare and contrast cultural vitality. Transformation of physiotherapy in the South African context requires engagement in experiences across a range of contexts that cross boundaries to stimulate an examination of individual and collective prejudices, and taken-for-granted assumptions that divide people and dismiss caring across groups of race, class and ethnicity. Physiotherapy requires a re-positioning of professional accountability that is structured around wider codes of responsibility for people and society. For physiotherapy, this could mean a broadening of the view of

practice from a discourse supported by contemporary ethics, which created the perception that it supported the universalized norms for professional behaviour, while ignoring the disparities in the larger social and political context (Baldwin-Ragaven et al, 1999). Further, this requires a clarification of one's own values and an awareness of conflicting loyalties. Shifts in physiotherapy practice into the wider sphere of humanity require attendance to attitudinal, personal and relational perspectives and a genuine commitment to valuing and recognizing the inter-connectedness of people across contexts.

A caring-transformative physiotherapy practitioner model is advancing a view of what it could mean to be an agent of transformation within the South African context. The caring-transformative physiotherapy practitioner model is re-casting the physiotherapy professional who was developed within a positivist, medical model ideology focused on developing skilled physical competences, to a physiotherapy professional who is responding to broader issues of professional accountability within a critical-feminist framing. Previous health care models locally and internationally have positioned scientific reasoning, competency, problem solving, reflective practice, and social ecology as factors that guide the patient-health care professional interaction. Whilst these factors are important for a particular conception of professional development, the relational element of 'caring' for transformation was not explicit.

A caring-transformative physiotherapy practitioner model for the South African context is located within multiple framings of caring that shifts the practitioner's view of health care from a narrow perception of individual patient care to becoming an instrument of change in disparate communities within a more humanistic framing of health care. 'Multiple Framings of Caring' are advanced from the analysis of data produced in the study. It makes explicit elements of caring that were experienced as collegiality and valuing, listening, empathy and nurturing, expert, inter-actional knowing and biopsychosocial intervention,

community, and cultural and language competence and human-interconnectedness.

Multiple Framings of Caring

The relations that existed in the curriculum between components of knowledge and practice, between pedagogy and practice, and in the relationships that developed amongst student-, academic and practicing physiotherapists have highlighted how conceptions of caring could be made explicit.

Caring as Collegiality and Valuing was experienced during the student physiotherapist-patient interaction by the student-physiotherapist making the patient feel comfortable and at ease during the interaction. Relations of power influence collegiality and the value that is ascribed to the experiences of others. Caring as collegiality and valuing was achieved in the practice setting by student-physiotherapists displaying warmth, kindness and sensitivity towards the patient thereby decreasing the power-relation that could develop in a 'helping' relationship between the 'lay-person' and the professional. The intention was to produce a congruent relationship, irrespective of the age, religion, or any other characteristics displayed by the patient.

Student and academic physiotherapists described how boundaries created by relations of power between each other, decreased the space for collaboration and dialogue on personal and professional levels between these constituencies. Some student physiotherapists experienced relations of power and lack of collaboration in the clinical education environment during their interactions with practicing physiotherapists. These encounters with 'hierarchy' were perceived as a lack of caring for student physiotherapists by academic and practicing physiotherapists.

Student-physiotherapists recognised the value that each held when they were involved in engaging dialogue towards a common task, for example, preparing for the final examination. Taken-for-granted assumptions that related to race were examined in the context of mutual engagement. Student-physiotherapists discovered the value that this communication produced in terms of knowledge and developing mutual respect through boundary crossing.

Caring as listening, empathy and nurturing requires a shift towards sharing of power that exists in hierarchical relationships. This shifts caring from 'caring for' through tasks for tending another person to 'caring about' to do with feelings for another person. For example, relations of power between student- and academic-physiotherapists created hierarchical interactions that neither prevented the display of empathy towards students nor were they listened to. Student-physiotherapists claimed that empathy was produced during their encounters with patients when student-physiotherapists examined, for example, their positions of privilege in relation to the circumstances of the patient, and when they 'put themselves in the shoes of the patient'.

Empathy was especially produced in student-physiotherapists through the experience of the patient's actual social circumstance during visits to the patient's home. The caring was generated in the action of designing a relevant home programme that was structured to the individual circumstances of the patient. Suggestions were offered for inclusion of interpersonal skills that focus on the skill of listening to improve caring within the patient-practitioner interaction. Listening is the catalyst to action.

Caring as nurturing and parenting was used by some physiotherapy academics as a guiding ideology for pedagogy. In some instances, within this construct of caring the role of the physiotherapy academic and parent became conflated, and relations of power developed because academic physiotherapists neglected the view of constructing relationships with student-physiotherapists as adult learners.

Caring as Expert was produced when student-physiotherapists articulated that he/she would deliver the 'best treatment' for the patient and when the community service physiotherapist articulated that she recognized many dysfunctions that could be improved by using physiotherapy skills, and set about to right dysfunctions and empower patients through self-help regimes. This required a shift from one's own interests to the one cared for. This resonates with the views of Collins (2003) and Noddings (1986) who claim that caring requires the capacity for empathy and a displacement from one-self to the one cared for. Caring as physical competence is recognized within a positivist, medical model because the medical model is based on measurable outcomes. Caring within this model has become interpreted as a quantifiable physical competence rather than a social competence.

Caring as inter-actional knowing and biopsychosocial intervention requires a shift of the curriculum from an objective, apolitical ideology towards a model of social ecology. Physiotherapy theory and practice is supported by 'scientific' knowledge that tends to exclude other knowledge constructs as legitimate knowledge for physiotherapy. However, in the practice context the physiotherapy practitioner requires the inter-action of many ways of knowing to respond effectively, with a more humanistic approach within the patient-practitioner encounter. This requires the interaction of the scientific knowledge bases together with knowledge that supports socio-economic, psychosocial, interpersonal and transformational ways of knowing.

Student-physiotherapists experienced deficits in caring as holistic practitioners because they lacked appropriate skills for counseling or psychological intervention, and communicative knowing within multidisciplinary teams. This is attributed by the deficits that arise from a medical model of care. In addition student-physiotherapists could develop skills for critical and creative thinking, and skills for reflection. A more holistic approach to health care could develop the framework for primary health care that integrate the concepts of health

promotion, disease prevention, cure and rehabilitation to social development. Student-physiotherapists expressed their desire to engage in socio-economic development following their experiences of social injustices and inequalities in under-resourced and under-developed environments.

Caring as community requires a shift from relations of hierarchy to relations that are integrated and permeable across contexts. Hierarchical relations exist within the community of physiotherapy practitioners. These prevents boundary crossing which influences or creates 'othering', for example, in the practice context and in the academic context. The concept of community which is supported by interactions that are harmonious, could begin within the community of physiotherapy practitioners, for example, between academic and practicing physiotherapists for physiotherapy professional development, or in the relations between academic and student-physiotherapists where the knowledge perspective of each is respected and shared. This could have the effect of shifting student-physiotherapists from passive and obedient learners lacking in confidence, to empowering, critical and creative practitioners.

Caring as community could be experienced in the relations between student-physiotherapists and other members of the multidisciplinary team through sharing of knowledge and expertise in the context of achieving common goals for patients or society. In addition, caring as community could be experienced through contexts of practice that display social disparities, for example, in rural and under-resourced areas where practitioners are provided with opportunities to examine their positions of privilege, difference and power, and explore how racial identities and biases are created through the social system. This may have the potential to develop social action and advocate social injustice by physiotherapy practitioners.

Caring as cultural and language competence, and human-interconnectedness. Student and practicing physiotherapists expressed how

their caring was limited by insufficient knowledge on the cultural practices of patients and communities that were different from their own. Differences in language and race also presented a barrier to the development of inter-personal relationships. Community physiotherapists expressed how this absence of knowledge influenced their relationship with patients in deep rural areas, where ignorance of cultural norms and traditions by community physiotherapists was interpreted as being disrespectful towards the practices of the community.
Caring as human-interconnectedness requires an examination of assumptions and biases in relation to race, gender, class, culture, language and power. The experience of working towards a common goal negated racial differences through the value and respect they gained for each other in the context of sharing. Another experience that reversed the racial hierarchy was in the relation between empathy and patient care. In this encounter, the patient was respected as an individual irrespective of racial difference. Developing respect and interconnections with people across difference requires critical self-awareness of the biases that generate difference to engage personal, attitudinal, institutional, and communal transformation.

Multiple Framings of Caring suggests that for caring to have transformative potential, the relationship requires elements of collegiality, congruency, social, emotional and physical competences, empowerment and empathy. The limitations to caring have been recognized in the deficits of the curriculum to produce a wider view of professional knowledge for holistic practice, that is, knowledge that supports a biopsychosocial and multidisciplinary perspective, knowledge to develop interpersonal skills across constructs of diversity, knowledge for confronting racial attitudes and for the development of multicultural attitudes and cultural pluralism through cultural awareness and sensitivity, knowledge that increases ones sensitivity to positions of power and privilege, and knowledge to challenge and disrupt disparities, inequality and oppression in the social system to advocate for social change.

Caring produces transformation

For physiotherapy in the South African context, caring has been identified as the link between transformation and professional development. Student and community physiotherapists confronted oppression, poverty, and social circumstances that disrupted their positions of privilege whilst engaged in community outreach. The privilege of the dominant and the oppression of the marginalized become personally meaningful as they explored their own life experiences in comparison to their patients (Gordon, 2005). This encouraged the physiotherapists to 'make a difference' (see, student and community service physiotherapists' data). Reflecting on these experiences produced responses of transformation and social justice to the disparities that exist within social systems.

The motivation to 'make a difference' and the empathy that was produced by student and community physiotherapists transcended the social barriers that were created by difference in race, ethnicity, class. The transformation of the patient and the physiotherapy practitioner may have been symbiotic, experiential and attitudinal through relations of collaboration. Attitudinal and individual transformation of the physiotherapy practitioner may have been achieved by producing empathy towards the patient's dysfunctional physical, social or economic status. The introspection could have had the effect of transcending and confronting his/her own prejudices and assumptions that create social barriers, for example, through race, poverty, ethnicity, culture, power and privilege. Interacting with difference produced sensitivity of the individual to oneself by confronting his/her biases and recognizing the inter-connectedness and inter-dependence of humanity.

Within a broader perspective, these attitudinal and experiential shifts have the potential to compete amongst or collaborate with other factors to influence transformation at a societal level. In this regard, by experiencing social situations

that were different from their positions of privilege, and by reflecting on and recognizing that the difference was caused by the 'system' rather than the race, gender, ethnicity of the *people*, student and community physiotherapists transcended the barriers created by race and difference. By exhibiting the qualities of caring and empathy, they responded to the needs of the patient and the community, whilst simultaneously advancing social justice. These experiences resonate with the claims of Powell (2002), Meizerow (2000), Belenky (2000) and Parks Daloz (2000) on transformation.

A Caring-Transformative Physiotherapy Practitioner Model

The professional development paradigm for physiotherapy that was described in an earlier chapter suggested that the development of a profession could be based on an examination of the inter-relationship between the constituents of policy, theory, practice and research within that profession. In the South African context this requires recognition of the social, political and economic factors that influence health care, together with the goals that are articulated in the higher education, health care and public service policies. The development of a curriculum along similar lines could inform the development of a profession.

A Caring-Transformative Physiotherapy Practitioner Model is constructed within a critical feminist framing of curriculum. This conception of curriculum shifts physiotherapy from a focus on task oriented practical competences to include practical competence and, emotional and social competences within a broadened perspective of professional accountability. Within this conception curriculum theory is developed, first in relation to the structural and socio-political contexts that influence the physiotherapy profession, second, from merging competing and complimentary ideologies that could guide physiotherapy theory and practice, for example, medical model, social ecology and primary health care models.

Within this framing of curriculum the relational construction amongst the stakeholders is collaborative, caring, and advanced by engaging dialogue that is characterized by valuing and incorporating competing perspectives based on supporting justifications for those perspectives. These values could be developed within the roles and functions that the caring-transformative physiotherapy practitioner may assume in the current health care contexts as a situational leader or manager, as a culturally-sensitive, competent and autonomous reflective practitioner, as an interdependent member of the multidisciplinary team and community of physiotherapy professionals, as a facilitator or collaborator during interactions with the patient, caregivers or within the community; as an empowering agent on issues relating to health promotion, disease prevention and rehabilitation, as a counselor on issues relating to psychological and social aspects, as a researcher of practice for professional development, as an advocate for social justice through recognition and disruption of the disparities in the social system that are associated with race, gender, class, poverty, culture and language, and as a transformative agent at individual, societal and institutional levels.

The proposed model of a Caring-Transformative Physiotherapy Practitioner could be produced within a broad, integrated critical conception of curriculum. Within this conception, the curriculum may be sensitive to influences from structural and socio-cultural contexts and it could provide spaces to recognize the value of competing ideologies (for example, the medical model and the primary health care model) that influence curriculum design, theory, practice and research. The structural context that could influence the design of the curriculum may be produced by collaboration of the goals and intentions that relate to professional accountability. This context may be shaped by national policy documents for transforming health care, public service, and higher education systems, by the values that the HEQC, the academic institution and the Professional Board for Physiotherapy recognize, and by the perceptions of the community of physiotherapy practitioners, the context of workplace practice within the larger

socio-economic context. Sensitivity to these influences suggests that the design of the curriculum within a critical-feminist framing could provide spaces to include the voices of student physiotherapists, physiotherapy practitioners, and other stakeholders, towards an intended outcome of the physiotherapy curriculum that is more collective, relevant and inclusive.

Social cohesion and collaboration are important elements for nation building and for the proposed caring-transformative physiotherapy professional model. These elements may be developed through a curriculum that integrates knowledge components and has social implications by dismantling the isolation, status and power that is attached to certain knowledge components in their singular form. An integrated curriculum creates a breadth of opportunities and experiences by deconstructing boundaries among knowledge constructs and the 'ownership' that becomes attached to singular knowledge components. This could provide spaces for social interaction, collaboration and cohesion and the potential to realize the value of dialogue, and the inter-dependence and inter-relatedness of knowledge and all human beings.

Spaces could be created to value the interdependence of acquisition of physical and social skills and learning, personal, propositional, and professional craft knowledge, process knowledge that advances critical and dialogic thinking, interpersonal relationships and reflective thinking. In addition the hierarchical relationship between the student-, practicing, and academic-physiotherapist may have to be re-constructed to value and accommodate the knowledge and experience that the student-physiotherapist brings to the interaction. This shift could construct and create new knowledge by student-physiotherapists bringing their knowledge into dialogue with other ways of knowing out of which comes the potential for new knowledge that has meaning for the student-physiotherapist.

The nature of knowledge and experiences of student-physiotherapists is influenced by the clinical education contexts that are selected within the

curriculum. A broader conception of knowledge could include knowledge for the clinical education contexts, in addition to more humanistic knowledge conceptions and knowledge that will contribute to individual and societal development. The selection of clinical education sites that could influence the model of the caring-transformative physiotherapy practitioner may be based on the notion of creating opportunities to engage the different meanings or images of physiotherapy that appealed to student-physiotherapists prior to their entrance into the physiotherapy programme. In addition, these opportunities could simultaneously include other opportunities for practice that are influenced by the values of the discipline, and the components of the structural and socio-cultural contexts that resonate with transforming practice. Collectively this could influence the selection of clinical education sites that is consistent with *actual* practice.

By recognizing the role of physiotherapy in various contexts of practice and providing opportunities for student-physiotherapists to experience the practice in these varied contexts, the curriculum may be acknowledging plurality and difference, and consequently may create spaces for student-physiotherapists to identify with the contexts and nature of practice that has most meaning for them. In this regard, the curriculum design that underscores the model for a caring-transformative physiotherapy practitoner could provide opportunities for individual learning needs and development whilst simultaneously exposing student-physiotherapists to the wide scope of physiotherapy practice that could provide the transformative potential for socio-economic and community development.

Curriculum theory and practice could be supported by conceptions of curriculum that value integration, voice, and sharing. In the context of physiotherapy, this supports pedagogy that focuses both on acquisition and learning. The focus on learning could be transformational by adopting the principles of the adult theory of learning. Group discussions have the potential to produce transformation at conceptual, experiential, attitudinal and personal levels. This requires a shift from the teacher-dominated pedagogy practices that function to discipline students by

internalizing the values and ideologies of disciplinary routines. A re-orientation of teaching and learning practices, based on interdependence, dialogue and sharing, could provide the space for physiotherapy academics and student-physiotherapists to make explicit the personal and professional craft knowledge that guide their practice. In addition, group discussions create the possibility for members to respect critique, and for the development of individual critical and analytical skills. Group discussions have the potential to influence inter-personal relations, for example, by engaging critical conversations that examine the assumptions and prejudices that result in practices of social injustice and social inequalities.

Valuing voice and interdependence may extend into the relationship that is constructed between the student-physiotherapist and the patient. The relationship shifts from one constructed along hierarchical lines to one that is collaborative, based on negotiation and sharing. More of the patient's world is admitted into the interaction where both subjective and objective ways of knowing are valued. The caring-transformative physiotherapy practitioner goes into the clinical setting valuing the patient's knowledge. The elements that comprised the theory of caring will underpin the actions of the physiotherapy practitioner.

The Caring-Transformative Physiotherapy Practitioner will be competent in producing skills that relate to professional craft knowledge, empathy and caring, social skills and skills to support interpersonal relationships, skills that support cultural competence and cultural sensitivity, skills for reflective critical thinking to support autonomous and interdependent practice, and professional development, and skills to uncover and take social action against disparities that arise from power, privilege and race. However, it should be acknowledged that there may be difficulties with the implementation of the Caring-Transformative Physiotherapy Practitioner Model within current curricular change processes.

These could be due to the threats produced by the econometric framing of higher education, globalization and the influence of the private health care sector.

Conclusion

The role of physiotherapy education in South Africa has changed from providing a service to responding to the transformation of a society that is underpinned by increasing access and empowerment, developing critical and creative individuals, and promoting humanity, democracy and social justice. The role of the physiotherapy professional is shifting towards a transformative agent engaged in social and community development. By practicing within changed policy constructs that advocate democracy and a changed more inclusive and holistic philosophy for health care, the physiotherapy professional will necessarily be influenced by the goals of a transforming health care system, its practice, theory and the nature of research that is advanced at institutional and communal levels. However, the challenge lies in transforming personal and attitudinal perceptions of the physiotherapy professional from a perception of providing a service, to incorporating the ends for social justice. The challenge facing higher education in general and physiotherapy education specifically is how to positively influence change in students' racial attitudes, their comfort with diversity and beliefs about cultural pluralism whilst simultaneously producing a competent, caring physiotherapy professional.

The Caring-Transformative Physiotherapy Practitioner Model is a response to factors that constitute professional accountability within a transforming context. Post-apartheid South Africa is celebrating democracy, plurality, and choice replacing a history of fragmentation, control and privilege on the basis of race. The change that is experienced within this post-apartheid era possesses the potential to disrupt the comfortable niche that was occupied by the health care professions. Broadened access to social systems has resulted in diversity of clientele that creates a need to understand how to shift education and practice in

order to interact effectively with the new profile of patients. In a context that is advocating social justice, the education of professionals in general, has a moral purpose to support structures for social action and transformation. The struggle to educate practitioners about issues that relate to social justice progresses slowly because the concept requires an internal learning process. The humanistic ideology that underpins the proposed Caring Transformative Physiotherapy Practitioner Model could be relevant to the development of professionals in any field.

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Appendix A

Ethical Clearance

University of
Durban-Westville

PRIVATE BAG X54001 DURBAN
4000 SOUTH AFRICA
TELEGRAMS: 'UDWEST'
TELEX: 6-23228 SA
FAX: (031) 204-4383
☎ (031) 204-4111

RESEARCH ADMINISTRATION

ALL CORRESPONDENCE TO BE ADDRESSED
TO: THE HEAD – RESEARCH ADMINISTRATION

20 OCTOBER 2003

MRS. S. S. RAMKLASS
EDUCATIONAL STUDIES

Dear Mrs. Ramklass

ETHICAL CLEARANCE – NUMBER:03266A

wish to confirm that ethical clearance has been granted for the following project:

The physiotherapy undergraduate curriculum: A case for professional development"

Thank you

Yours faithfully

.....

MS. PHUMELELE XIMBA
(for) HEAD: RESEARCH ADMINISTRATION

PS: The following general condition is applicable to all projects that have been granted ethical clearance:

THE RELEVANT AUTHORITIES SHOULD BE CONTACTED IN ORDER TO OBTAIN THE NECESSARY APPROVAL SHOULD THE RESEARCH INVOLVE UTILIZATION OF SPACE AND/OR FACILITIES AT OTHER INSTITUTIONS/ORGANISATIONS. WHERE QUESTIONNAIRES ARE USED IN THE PROJECT, THE RESEARCHER SHOULD ENSURE THAT THE QUESTIONNAIRE INCLUDES A SECTION AT THE END WHICH SHOULD BE COMPLETED BY THE PARTICIPANT (PRIOR TO THE COMPLETION OF THE QUESTIONNAIRE) INDICATING THAT HE/SHE WAS INFORMED OF THE NATURE AND PURPOSE OF THE PROJECT AND THAT THE INFORMATION GIVEN WILL BE KEPT CONFIDENTIAL.

cc Director
cc. Supervisor

Appendix B

Informed Consent

Informed Consent Form

The purpose of the study is to explore how practising physiotherapists and physiotherapists-in-training explain how changing policy demands are reflected in the undergraduate physiotherapy curriculum and in the workplace.

What does the study involve
In this study, the characteristics of the community of practice defined by the school will be compared to that in the workplace, and it will explore how learning in one community interacts with learning in the other. It will also investigate how the formal outcomes of the school programme relate to the outcomes that practitioners say they want, and outcomes that practitioners seem to use as part of their day-to-day practice in the range of institutions in which they work. Further, it will chart the trajectory of the student to novice physiotherapist, and it will explore how the processes of curriculum development are instituted by the physiotherapy academic, in the context of competing demands.

How will the data be collected from the curriculum developers
A semi-structured in depth interview will be conducted with each academic/curriculum designer involved in the development of the B. Physiotherapy programme. The focus will be on the processes of curriculum design and implementation, in the context of competing demands. The interviews will be audio-taped.

What are the benefits of this study
The study will inform the physiotherapy undergraduate curriculum on its strengths and gaps that may be realised through this exploration. It may also determine how the communities of physiotherapy practice can work together with greater congruence towards a common goal.
There are **no risks or discomforts** involved.

The study will be conducted at the **Department of Physiotherapy, University of Durban-Westville** during the **2003-2004 academic year.**

Who will receive the results of this study
The results of this study will be presented in the form of a thesis. Your name and details will be regarded as **strictly confidential.** Any information from this study that is presented or published will be grouped with information from other subjects so that you cannot be identified.

Can I withdraw from this study
Your participation in this study is voluntary and you are free to withdraw consent and to discontinue participation at any time without prejudice to you. The researcher is willing to answer any inquiries that you may have concerning the data collection strategy.

Your signature indicates that you have read the above information; that you have no queries regarding the study and that you freely volunteer to participate in the study.
Participant's signature: **Date:**

Appendix C

Physiotherapy Curriculum
for
2003 Academic Year

Appendix D

HPCSA – Minimum Standards for the Training of Physiotherapy Students

HEALTH PROFESSIONS COUNCIL OF SOUTH AFRICA

PROFESSIONAL BOARD FOR PHYSIOTHERAPY, PODIATRY AND BOIKINETICS

MINIMUM STANDARDS FOR THE TRAINING OF PHYSIOTHERAPY STUDENTS

1 GENERAL

1.1 Length and type of course

A four year B.Sc. (Physiotherapy) degree which will be equated with an honours degree.

1.2 Training institution

It is recommended that, wherever possible, the degree should be offered by a university with an established Faculty of Medicine.

1.3 Major subjects

These may vary according to the requirements of the individual universities but should be sufficient to ensure acceptance into a masters degree programme upon completion of the B.Sc. (Physiotherapy).

Compulsory major subject

Physiotherapy (alternate Rehabilitation)
Minimum duration of 3 years.

2. FIRST-YEAR SYLLABUS

2.1 Compulsory basic sciences*

2.1.1 Physics - minimum hours 130
2.1.2 Chemistry - minimum hours 130

2.2 Additional subjects

Two of the following subjects

2.2.1 Zoology/biology
2.2.2 Botany/biology
2.2.3 Psycology
2.2.4 Sociology
2.2.5 Physiotherapy

3. SECOND-YEAR SYLLABUS

3.1 Anatomy - minimal hours 250

3.2 Physiology* - minimal hours 250

3.3 Behavioral sciences*

One of the following subjects (unless the equivalent is included in the first year of third-year syllabi)

3.3.1 Psychology
3.3.2 Sociology
3.3.3 A specially designed course in human relations
3.3.1/2 - minimum hours 180

3.4 Physiotherapy*

- minimum hours - see below

4. THIRD-YEAR SYLLABUS

4.1 45 Hours of pharmacology training in either the third of fourth year.

4.2 Applied pre-clinical sciences/clinical sciences

These will vary according to the course content at the individual universities but should include the following.

4.1.1 Basic pathology
4.1.2 Internal Medicine (including neurology and dermatology)
4.1.3 Surgery (including orthopaedics)
4.1.4 Obstetrics and gynaecology
- minimum total hours 170

Specialized aspects of clinical sciences and applied pre-clinical sciences may be postponed until fourth-year syllabus.

4.3 Physiotherapy**

- minimum hours - see below

4.4 Clinical practice

Supervised clinical practice in teaching hospitals and approved allied institutions.
- minimum practical hours 400

5. FOURTH-YEAR SYLLABUS

5.1 Physiotherapy*

- minimum hours - see below

5.2 Clinical practice

Supervised clinical practice in teaching hospitals and approved allied institutions, including in specialized units.
- minimum practical hours 600

6. ADDITIONAL

The following should be included in the third-year and/or fourth-year syllabi.

The detailed minimal syllabus for the major subject Physiotherapy appears at the end of this section. If Physiotherapy is included as a first-year subject the recommended minimum hours in second, third and fourth years may be reduced accordingly.

6.1 Lectures on specialized aspects of applied pre-clinical sciences and clinical sciences

6.2 Attendance at clinical demonstrations

6.3 Attendance at specialist clinics, ward rounds, etc.

6.4 Introduction to research procedures

6.5 Individual study leaming to the presentation of a project on an approved subject.

DETAILED MINIMAL SYLLABUS FOR THE MAJOR SUBJECT PHYSIOTHERAPY

Minimal total hours over the four-year course - 1000

ELECTROTHERAPY

Physics and electromechanics only as required for an understanding of the techniques and effects
Theory of heating and cooling

1.1.3 Theory of direct current, infra-red and ultra-violet irradiation, shortwaves diathermy, microwave diathermy and ultra-sound

1.1.4 Dangers and precautions involved in electrical treatment

Care of apparatus

1.2 Practical application

Faradic-type current

1.2.1.1 Individual stimulation - muscles of upper and lower limbs
1.2.1.1 Group stimulation - foot muscle, quadriceps, pelvic floor
1.2.1.3 Under pressure - arm and leg
1.2.1.4 Nerve conduction tests

1.2.2 Interrupted direct current

1.2.2.1 Stimulation of muscles of upper and lower limbs; facial muscles
1.2.2.2 Intensity-duration tests

1.2.3 Infra-red irradiation

Lumbar and cervical spine, shoulder, knees, wounds

Ultra-violet irradiation

1.2.4.1 Skin-testing - Alpine sun, Theraktin, Kromayer
1.2.4.2 General irradiation
1.2.4.3 Local irradiation

Shortwave diathermy

Techniques utilizing electrostatic and magnetic field for specific structures of the body.

PROGRAMME: PHYSIOTHERAPY

Uniqueness of Physiotherapy programmes

- The University of Durban-Westville has the only Physiotherapy training facility service in the Province of Kwa-Zulu Natal and the Eastern Cape.
- The selection of entry grade students is not based solely on academic achievement but criteria include aptitude and interpersonal skills
- The modularized programme is user friendly to accommodate a range of learners with diverse backgrounds, interest and abilities.
- Academic development programmes have been put in place to help students to succeed. The qualification has both national relevance and international reciprocity.
- As the only training facility for Physiotherapy, we have unlimited access to clinical training facilities for general, specialized, and community practice.
- The Department has a well-equipped fully computerized research laboratory allowing for basic and clinical research in neuromuscular and cardiopulmonary fields.

BACHELOR OF PHYSIOTHERAPY (BPHYSO)

Level One

Semester One

Code	Module	cps	Notes
PHT101T	Functional Anatomy	8	
PHT101S	Kinesiology for Physiotherapy	16	
LES101S	Introductory Biology	16	
PHY171S	Physics for Life Sciences 1	16	
PSA101S	Understanding the Individual	16	
UDW100S	English Language Development	16	(this course is only done if the student fails the English Placement Test)

Semester Two

PSA102S	The Individual in context	16	
PHY172S	Physics for Life Sciences 2	16	
FHS116S	Community Studies	16	
PHT102S	Massage and Manipulation	16	
PHT104T	Physiotherapy Selected Competency Skills	8	
UDW130S	Changing Society: Culture, Ideas and values	16	

Total Credit Points for Level 1 = 160

Level Two

Semester One

Code	Module	cps	
ANA101S	Introduction to Anatomy And Neuroanatomy	16	
HPH211S	Integration and Communication	16	
ANA109S	Anatomy of Upper And Lower Limbs	16	
PHT201S	Kinesiology for Physiotherapy	16	Pre-Requisite: PHY171S, PHT101S
PHT203S	Massage and Manipulation	16	Pre-Requisite: PHT101T, PHT102S

Semester Two

PHT212T	Electrotherapy For Physiotherapy	8	Pre-Requisite: PHY172S, PHT101T
PHT211T	Selected Competency Skills	8	Pre-Requisite: PHT104T, PHT102S Pre-Requisite: PHT101S
PHT207T	Kinesiology for Physiotherapy	8	Pre-Requisite: HPH211S, PHT101T
PHT208T	Community Rehabilitation & Development Physiotherapy	8	Pre-Requisite: FHS116S, PHT102S
HPH222S	Homeostatic Mechanisms in Human Body		
ANA102S	Anatomy of Head, Neck and Back	16	
ANA104S	Trunk and Embryology	16	

Total Credit Points for Level 2 = 160

Level Three

Semester One

Code	Module	cps	
PHT311S	Applied Pre Clinical Sciences (Applied Physiology + Applied Anatomy)	16	Pre-Requisite: ANA101S, ANA102S Pre-Requisite: ANA104S, ANA109S Pre-Requisite: HPH211S, HPH222S
FHS301T	Clinical Sciences (Medicine, Microbiology, Paediatrics, Neurology)	8	Pre-Requisite: ANA101S, ANA102S Pre-Requisite: ANA104S, ANA109S Pre-Requisite: HPH211S, HPH222S
FHS303T	Clinical Sciences (Medicine, General Surgery, Obstetrics + Gynaecology)	8	Pre-Requisite: ANA101S, ANA102S Pre-Requisite: ANA104S, ANA109S Pre-Requisite: HPH211S, HPH222S
PHT321T	Electrotherapy for Physiotherapy	8	Pre-Requisite: PHT212T
PHT325T	Physiotherapy in Orthopedics and Sport	8	Pre-Requisite: PHT209S, PHT207T Pre-Requisite: PHT201S
PHT329T	Kinesiology for Physiotherapy	8	Pre-Requisite: PHT207T, PHT201S Pre-Requisite: ANA101S, ANA102S Pre-Requisite: ANA104S, ANA109S
PHT343Y	Physiotherapy Clinical Practice (Cardiopulmonary + Orthopaedic Conditions)	32	Pre-Requisite: PHT209S, PHT201S Pre-Requisite: PHT207T
PHT361T	Research Design	8	
PHT345Y	Physiotherapy Clinical Practice (Neurological conditions + Community Pysiotherapy)	32	Pre-Requisite: PHT209T, PHT207T Pre-Requisite: PHT201S

Semester Two

PHT326T	Principles of Physiotherapy Practice in Neurology, Rheumatology Respiratory and Surgery	8	Pre-Requisite: PHT207T Pre-Requisite: PHT201S Pre-Requisite: PHT209S
FHS302T	Clinical Science (Orthopaedics)	8	Pre-Requisite: ANA102S Pre-Requisite: ANA109S, HPH222S Pre-Requisite: ANA101S, HPH211S
FHS304T	Clinical Science (Rheumatology Occupational Health Pharmacology, First Aid CPR)	8	Pre-Requisite: HPH211S, HPH222S Pre-Requisite: ANA109S, ANA102S Pre-Requisite: ANA101S
PHT322T	Physiotherapy in Orthopedics and Sport	8	EXPOSURE: PHT325T
PSD308S	Applied Psychology for Health Sciences	16	

Total Credit Points for Level 3 = 176

Level Four

Semester One

Code	Module	cps	Notes
PHT401S	Physiotherapy in Orthopedics, Community Rehabilitation & Development Neurological & Cardiopulmonary Conditions	16	Pre-Requisite: PHT301T, PHT305T Pre-Requisite: PHT303T, PHT304T Pre-Requisite: FHS302T, FHS301T
PHT409Y	Physiotherapy Clinical Practice (cardiopulmonary & orthopedic conditions)	32	Pre-Requisite: FHS304T, PHT309T Pre-Requisite: FHS302T, PHT345Y Pre-Requisite: PHT305T, PHT304T Pre-Requisite: FHS301T, FHS303T
PHT410Y	Physiotherapy Clinical Practice (neurological Conditions and Community Rehabilitation & Development	32	Pre-Requisite: PHT310Y, PHT303T Pre-Requisite: FHS303T, FHS304T Pre-Requisite: PHT305T, PHT304T, Pre-Requisite: FHS301T, FHS302T
PHT403T	Physiotherapy Professional Management and jurisprudence	8	
FHS401T	Clinical Science (Orthopaedics + Cardiothoracic Surgery)	8	Pre-Requisite: FHS301T, FHS302T Pre-Requisite: FHS303T, FHS304T
FHS402T	Clinical Science (Pharmacology, ENT Surgery, Dermatology)	8	Pre-Requisite: FHS301T, FHS303T Pre-Requisite: FHS304T
PHT404S	Physiotherapy Clinical Elective	16	Pre-Requisite: FHS301T, FHS303T Pre-Requisite: FHS304T, FHS302T Pre-Requisite: PHT345Y, PHT343Y
PHT405S	Physiotherapy Research	16	

Total Credit Points for Level 4 = 136
Total Credit Points for Qualification =

QUALIFICATION: BACHELOR OF PHYSIOTHERAPY

PHT101T: Functional Anatomy: 8cp, sem 1, cam 60%, 1 x 1h
Pre-requisite: Registration for B. Physio
Syllabus: Anatomical terminology. Musculo-skeletal basis of movement: identification of bones, joints, muscles, organs and nerves; Roles of muscles, types of muscle contraction. Surface anatomy. Gross structure of venous and lymphatic flow in upper and lower limbs.

PHT101S: Kinesiology for Physiotherapy: 16cp, sem 1, cam 50%, 1 x 2h, 1 x 0.5h (OSPE)
Pre-requisite: Registration for B. Physio
Syllabus: The physical principles of movement and their application. Axes and planes. Derived and fundamental starting positions. Wheelchair ergonomics and wheelchair activities. Kinetic handling, bed mobility and transfer methods. Gait re-education. Walking aids. The principles of treatment in water. Theory and practice of group work.

PHT102S: Massage and Manipulation: 16cp, sem 2, cam 70%, 0.5h (OSPE)
Pre-requisites: Registration for B. Physio
Syllabus: Massage: history, definition of massage, classification, general uses, contra-indications. Application of a general sequence of massage to the upper and lower limbs, back. Relaxed passive movements to upper and lower limbs and neck (theory and practice). Relaxation techniques (local and general).

PHY171S: 16cp sem1 cam 40% 1x2h (Physics for Life Sciences 1)
Vectors and scalars, kinematics in one dimension, particle dynamics, equilibrium of bodies, rotational motion, vibrations, elastic properties of materials, fluids, heat, work and energy, the ideal gas, thermodynamics, mechanical waves and sound.

PHY172S: 16cp sem2 cam 40% 1x2h (Physics for Life Sciences 2)
Electrostatics, direct current, nerve conduction, magnetic effects of charges and currents, alternating current, reflection and refraction, mirrors and thin lenses optical instruments, defects of human eye, wave nature of light, diffraction and interference, blackbody radiation, photoelectric effect, dual nature of light, introductory atomic and nuclear theory, radiation and its effects, nuclear reactions.

PSA101S: Understanding the Individual, 16cps, sem 1, cam 50%, 1x2h
The Nature of Psychology; Psychology as a Science; Behavioural Neuroscience; Sensation and Perception; Learning and Memory; Thinking and Language; Intelligence.

PSA102S: The Individual in Context, 16cps, sem 1, cam 50%, 1x2h
Human Development; Motivation and Emotion; Personality Theories; Psychological Disorders; Therapy; Psychology and Health; Social Behaviour

FHS116S: Community Studies/Community Based Health and development, 16cps
Syllabus: This interdisciplinary Faculty module, which integrates practice with theory, introduces primary health care, community based health care and health promotion as significant developmental concepts, processes and practices towards Health For All. Attitudes and skills are targeted to the same extent as knowledge, with a focus on the personal growth of learners. The module is grounded in the partnership model so necessary for transformation in health and the health system. Teaching teams therefore, each comprising a lecturer, a community member and a service provider, facilitate learning in multi-professionally mixed groups.

LES101S : Introductory Biology, 16cps, sem 1 (4,1,1), cam 50%, 1x2h
Ancillary Requirements: Faculty Rule S1.2b
This inter-disciplinary module serves to introduce students to important concepts that form the basis of biology. The module comprises four related themes which will be taught by staff from the Departments of Botany and Zoology. These topics include cytology, genetics, evolution and ecology. The cytology aspect of the course will cover cell structure from a functional perspective while the subsequent genetics topic will relate cell structure and function to gene theory, patterns of inheritance and mutations. Following on from these two cell biology topics, the module will move on to themes related to environmental biology. In the evolution component, students will embark on a study of evolutionary theory, evidence for evolution and the species concept and modes of evolution. Finally, the module will conclude with a study of ecology, commencing with an introduction to ecology and then moving onto the ecology of organisms, species populations, communities, ecosystems and biomes.

PHT104T: Physiotherapy Selected Competency Skills: 8cp, sem 2, cam 75%, 1 x 1h
Pre-requisites: Registration for B. Physio
Syllabus : Indications, contra-indications, precautions and therapeutic value of ice, hot packs, wax, moist packs, IRR, contrast baths. First aid, nursing skills, CPR, infection control. Bandaging and splinting. Orthotics and prosthetics.

PHT201S: Kinesiology for Physiotherapy :16cp, sem 1, cam 50%, 1x2h, 1x0.5h (Pract), 1x0.5h (OSPE)
Pre-requisite: PHY17S, PHT101S
Co-requisite: ANA101S
Syllabus: Joint motion; assessment techniques and methods of mobilisation. Muscle strength: testing and methods of strengthening. Progression of exercises.
Basic principles and uses of PNF; upper and lower limb, scapular, pelvic and trunk patterns, bilateral symmetrical and asymmetrical patterns.

PHT203S: Massage and Manipulation: 16cp, sem 1, cam 70%, 1x9.5 (OSPE)
Pre-requisite: PHT101T, PHT102S
Co-requisites: ANA101S, ANA109S
Syllabus: Specific sequence of massage for following: Bell's Palsy, bowel incompetence, stress/insomnia, adherent scar, haemaloma, indolent ulcer, chronic oedema of upper and lower limb, massage to neck and shoulders. Objectives, aims and uses of each of the above conditions. Transverse frictions.
Definition and description of general and localised breathing exercises. Postural drainage (theory and practical).

PHT212T: Electrotherapy for Physiotherapy: 8cp, sem 2, cam 50%, 1x1h, 1x0.5h (OSPE)
Pre-requisites: PHY172S, PHT101T
Syllabus: Ultrasound, faradic current, interrupted direct current, direct current, UVR, TENS.

PHT211T: Selected Competency Skills: 8cp, sem 2, cam 100%
Pre-requisites: PHT101S, PHT102S, PHT104T
Syllabus: Musculoskeletal assessment and treatment. Chest assessment and treatment. Progression of exercises. Classwork. Supervised clinical practice. Postural assessment.

PHT207T: Kinesiology for Physiotherapy: 8cp, sem 2, cam 50%, 1x1h, 1x0.5 (Prac)
Pre-requisites: HPH211S, PHT101T
Co-requisite : PHT208T
Syllabus: Introduction to child development. Motor development from first to fourth trimesters and in first year. Normal postural control mechanism. Practical facilitation related to the trimesters.

PHT208T: Community Physiotherapy: 8cp, sem 2, cam 60%, 1x1h
Pre-requisite: FHS116S, PHT102S
Syllabus: Terminology : Community health, rehabilitation, impairment, disability, handicap. Consumers of rehabilitation. Conditions requiring rehabilitation.

HPH211S: Integration and Communication, 16cps, cam 40%, 1x2h
A study of the anatomy and function of different type of muscle, nerve cells, spinal cord, brain, sympathetic and parasympathetic nervous system; A study of the function of the spe3cial senses; The structure of the heart and its function as a pump; The vascular system, blood composition and function of its components; Blood pressure control and hypertension; Cardiovascular homeostasis in health and disease.

HPH222S: Homeostatic mechanisms in the human body, 16cps, cam 40%, 1x2h
Structure and function of the components of respiratory, renal and gastrointestinal system; The role of the renal and respiratory system in the regulation of extracellular fluid composition and volume and in acid-base balance; Renal, respiratory and gastrointestinal adjustments in health and disease; Metabolism of carbohydrates, proteins and lipids; Thermoregulation by physical and physiological mechanisms; Structure of the endocrine glands, hormonal secretion and associated abnormalities; Structure of male and female reproductive organs; Hormonal control of sexual function.

ANA101S: Introduction to Anatomy & Neuroanatomy (Bphyso, Boccth & Bpharm)
Syllabus: Elementary Anatomy: identification of surface anatomy; classification of joints, muscle movements, nervous systems.

ANA108S: Upper & Lower Limbs (Bphyso & Boccth)
Syllabus: Osteology in head & neck; neurovascular structures of neck; cranial nerves; facial viscera; special sensory organs; osteology, arthrology & mycology of the back.

ANA104S: Trunk & Embryology (Bphyso & Boccth)
Syllabus: Elementary anatomy: identification of surface anatomy; classification of joints, muscle movements; nervous system.

ANA102S: Head, Neck & Back (Bphyso & Boccth)
Syllabus: The osteology, arthology, mycology, neurovascular structures & viscera of the trunk. The embryology of the various organ systems.

PHT311S: Applied Pre-Clinical Science (Applied Physio. & Applied Anatomy): 16cps, sem 1, cam 60%, 1X2h, 1X0.5h (oral), Cam: 3 theory tests, 5 assignments
Pre-requisites: ANA101S, ANA102S, ANA104S, ANA109S, HPH211S, HPH222S
Syllabus: Neural and chemical regulation of breathing. Mechanisms of breathing in adult and neonate. Gas laws. Pulmonary defence mechanisms. Sputum production and clearance. Inhalation therapy. Lung function testing. Static respiratory pressures. Effect of exercise on nervous system in normal and special populations. Effects of aging and obesity on the nervous, cardiac, metabolic and muscular systems. Basic concepts of the metabolic, neuro-muscular and cardiovascular systems that clarify techniques in Physiotherapy. Applied anatomy for Physiotherapy: deviations from normal posture, movement and function.

PHT321T: Electrotherapy for Physiotherapy: 8cp, sem 1, cam 50%, 1x1h, 1x0.5h (Practical) (CAM 1x theory test, 2 x orals, 1x OSPE)
Pre-requisite: PHT212T
Syllabus: Medium frequency currents, laser, shortwave diathermy, electrodiagnosis. Application of the modalities to appropriate conditions.

PHT325T: Physiotherapy in Orthopaedics and Sport: 8 cps, sem 1, cam 50%, 1X1h, 1X0.5h (practical), 1X theory test, 1X clinical practical test
Pre-requisites: PHT203S, PHT207T, PHT201S
Syllabus: Definition of Maitland concept, role of manipulation and mobilization, definition of relative terms and grades of movement. Aims of the subjective and objective examination. Planning of the objective examination and movement diagrams. Principles of treatment of peripheral joints of the upper limb. Diagnosis of soft tissue lesions (cyriax). Muscle imbalance, physiotherapy management of soft tissue injuries, fractures and dislocations of the upper limb (shoulder, elbow, wrist, hand). Selection and application of Maitland mobilization techniques to the above joints. Introduction to trigger point therapy and myofacial release.

PHT323T: Kinesiology for Pirysiotherapy: 8cp, sem 1, cam 60%, 1x2h, 1x0.5h (Practical) 1xtheory tests, 1x clinical practical test
Pre-requisites: PHT207T, PHT201S, ANA101S, ANA102S, ANA104S, ANA109S
Syllabus: Gait analysis, re-education of balance and co-ordination. Postural assessment and spinal mobility. Amps - specific Circulatory conditions - Vertigo, Buergers disease. Matwork and special techniques. PNF –2nd year (lascil)

PHT326T: Principles of Physiotherapy Practice in Neurology, Rheumatology, Respiratory and Surgical conditions: 6cp, sem 2, cam 50%, 2x1h (CAM: Average of tests & Assignments)
Pre-requisite: PHT207T, PHT201S, PHT203S
Syllabus: Principles of Physiotherapy assessment, treatment and rehabilitation for :

- Patients with disorders of the peripheral and central nervous systems, including peripheral nerve lesions, peripheral neuropathies, spinal lesions and disorders of the brain, both medical and surgical in both adults and children.
- Rheumatological conditions iii) Cardiopulmonary conditions.
- General surgery, including burns and amputations.
- Obstetrics and Gynaecology

FHS301T: Clinical Sciences (Pathology, Microbiology, Paediatrics, Neurology): 8cp, sem 1, cam 60%, 1x2h
Pre-requisites: (ANA101S, ANA102S, ANA104S, ANA109S,HPH211S, HPH222S)
Syllabus: Pathology, Microbiology, Paediatrics and Neurology.

FHS302T: Clinical Science (Orthopaedics): 8cp, sem 2, cam 60%, 1x2h
Pre-requisites: HPH211S, HPH222S, ANA101S, ANA102S, ANA104S, ANA109S
Syllabus: Orthopaedics in trauma, including soft tissue injuries.

FHS303T: Clinical Sciences (Medicine, General Surgery, Obstetrics and Gynaecology): 8cp, sem 1, cam 60%, 1x2h
Pre-requisites: (ANA101S, ANA102S, ANA104S, ANA109S, HPH211S, HPH222S)
Syllabus: Medical conditions, General surgery, Obstetrics and Gynaecology.

FHS304T: Clinical Science (Rheumatology, Occupational Health, Pharmacology, First Aid, CPR): 8cp, sem 2, cam 60%, 1x2h
Pre-requisites: HPH211S, HPH222S, ANA101S, ANA102S, ANA104S, ANA109S
Syllabus: Rheumatology, Occupational Health, Pharmacology, First Aid and CPR

PHT343Y: Physiotherapy Clinical Practice (Cardiopulmonary and Orthopaedic conditions): 32cp, sem 1 and 2, cam 100%.
Pre-requisites: PHT203S, PHT201S, PHT207T)
Syllabus: Supervised clinical practice in cardiopulmonary and orthopaedic conditions.

PHT361T: Research Design: 8cp, sem 1, cam 75%, 1x1h. CAM: 5 Assi. + 1 theory test
Syllabus: Terminology in research. Research problem identification. Measurement scales. Critical analysis of scientific literature. Types of research. Ethics in research. Writing a research proposal. Sampling. Validity and reliability. Instrumentation in research. Scientific communication.

PHT345Y: Physiotherapy Clinical Practice (Neurological conditions and Community Physiotherapy): 32cp, sem 1 and 2, cam 100%.
Pre-requisites: PHT206T, PHT207T, PHT201S
Syllabus: Supervised clinical practice in neurological conditions and community Physiotherapy. Community-based rehabilitation, social integration and community involvement. Community-based rehabilitation vs outreach programmes. Physiotherapy as a part of rehabilitation.

PHT322T: Physiotherapy in Orthopaedics and Sport: 8cp, sem 2, cam 50%, 1x1h, 2x.05h (Practical)
Pre-requisite: PTH325T (or exposure)
Syllabus: Subjective and objective examination of the lower limb. Planning of the objective examination, movement diagrams. Principles of treatment of peripheral joints of the lower limb. Diagnosis of soft tissue lesions (Cyriax). Muscle Imbalance, Physiotherapy management of soft tissue injuries, fractures and dislocations of the lower limb (hip, knee, ankle, foot). Selection and application of Maitland mobilisation techniques to the above joints. Introduction to trigger point therapy and myofascial release.

PSO306S: Applied Pre-Clinical Sciences (Psychology) : 16cp, sem 2, cam 50%, 1x3h.
Pre-requisites: PSA102S
Syllabus: Critical thinking about health research-introduction to biosocial model, illness vs disease. Cross cultural issues in health psychology, health promotion and the practice of health behaviours, mental illness, stress, coping and development of illness. Psychology of pain, psychological perspectives in chronic, terminal and disabling conditions (eg. Cancer, cardiac conditions, stroke, cerebral palsy, AIDS, Alzheimer's, etc.) Trauma, substance abuse, physical activities and health – interventions, primary and community. Issues and ethics in helping professions. Cross-cultural issues in counseling, effective helping. Interviewing and counseling techniques. Group counseling crisis intervention. Networking and team approach. Problem solving with individuals and families. Psychology of sport.

PHT401S: Physiotherapy in Orthopaedics and Sport, Neurology and Cardiopulmonary conditions: 16cp, sem 1, cam 50%, 2x2h,
Pre-requisites: PHT304T, PHT303T, PHT325T, FHS302T, FHS301T)
Syllabus: Principles of Physiotherapeutic management in joint replacement surgery of the hip, knee and shoulder. Subjective examination, objective examination of the cervical and lumbar spine. Physiotherapy management principles for cervical lumbar syndromes. Physiotherapy for post-surgical spines. Neurodynamics and introduction to mobilization of the nervous system. Physiotherapy for paediatric and adult intensive care. (neurological and cardiac ICU), cardiac and thoracic surgery, neurology and trauma. Assessment, management and rehabilitation to achieve functional outcomes in patients with brain disorders resulting in postural and movement dysfunctional, including patients with stroke, traumatic head injury, cerebral palsy and related conditions (as available and appropriate to physiotherapy practice).

PHT400Y: Physiotherapy Clinical Practice (Cardiopulmonary and Orthopaedic conditions): 32 cp, sem 1 and 2, cam 50%
Pre-requisites: FHS301T, FHS302T, FHS303T, FHS304T, PHT345Y, PHT325T, PHT308T,
Co-requisites: FHS401T, FHS403T, PHT401S)
Syllabus: Supervised clinical practice in cardiopulmonary and orthopaedic conditions.

PHT419Y: Physiotherapy Clinical Practice (Neurological conditions and Community Physiotherapy): 32 cp, sem 1 and 2, cam 50%
Pre-requisites: PHT304T, PHT303T, FHS301T, FHS302T, FHS304T, FHS303T, PHT325T, PHT345Y
Co-requisites: FHS401T, FHS403T
Syllabus: Supervised clinical practice in Neurological conditions and in a Community setting.

PHT403T: Physiotherapy Professional Management: 8cp, sem 2, cam 100%
Syllabus: Communication, ethics and human rights, public and private practice management.

PHT405S: Physiotherapy Research: 16cp, sem 1, Examination of thesis, cam 100%
Pre-requisite: PHT361T
Syllabus: Choice of topic after feasibility tests. Preparation of proposal following guidelines. Collect and analyse data. Prepare final written thesis. Oral presentation of findings.

PHT404S: Physiotherapy Clinical Elective: 16cp, sem 2, cam 100%
Pre-requisites: FHS301T, FHS303T, FHS302T, FHS304T, PTH345Y, PTH343Y
Co-requisites: FHS401T, FHS402T, PHT400Y, PHT419Y)
Syllabus: Supervised clinical practice in varied settings, such as hospital, special schools and community centres. The elective could be done within or outside the country.

FHS401T: Clinical Sciences (Orthopaedics & Cardiothoracic surgery) : 8cp, sem 1, cam 60%, 1x2h
Pre-requisite: FHS301T, FHS303T, FHS302T, FHS304T
Syllabus: Orthopaedics, Cardiothoracic Surgery

FHS402T: Clinical Science (Pharmacology, ENT, Surgery, Dermatology): 8cp, sem 2, cam 60%, 1x2h
Pre-requisite: (Mod. code: FHS301T)
Syllabus: Pharmacology, Dermatology, Plastics & Reconstructive Surgery, ENT Surgery

1.2.6 Microwave diathermy

Soft tissues

Ultrasound

1.2.7.1 In contact
1.2.7.2 Under water

Additional procedures

1.2.8.1 Wax
1.2.8.2 Hot packs
1.2.8.3 Ice

2. MASSAGE

2.1 Theory

2.1.1 History of massage
2.1.2 General aspects of massage
2.1.3 Relation - general and local
2.1.4 Techniques of massage - description, effects and modifications
2.1.5 Rationale
2.1.6 Uses of massage, including for sport

2.2 Practical application

Massage of various body parts

Specific treatments

2.2.2.1 Oedema massage of arm and leg
2.2.2.2 Massage for headache
2.2.2.3 Massage of a haematoma
2.2.2.4 Massage of a scar tissue
2.2.2.5 Massage for varicose veins
2.2.2.6 Massage in flaccid paralysis
2.2.2.7 Scalp and oil massage
2.2.2.8 Massage manipulations combined with postural drainage

2.2.3 Transverse frictions

Transverse frictions to tendons, muscles and ligaments

3. MOVEMENT

3.1 Theory

3.1.1 Terminology - description of normal movement
3.1.2 Analysis of movement in terms of mechanics, muscle kinematics and kinetics of joint and bones; stability and range of movement
Normal development of movement - neurological background for movement, analysis of postural reflex mechanisms; gross motor development of the normal child
3.1.4 Physiology of exercise and work
3.1.5 Principles of rehabilitation

3.2 Theory and practical application

Analysis of functional activities in developmental sequence

Re-education of functional activities in developmental sequence

3.3.3.1 Facilitation of automatic reactions

3.3.3.2 Facilitation by means of proprioceptive neuromuscular facilitation techniques

3.3.3.3 Self mat activities

3.3.3.4 Rehabilitation

Transfers and wheelchair management
Preparation for walking and re-education of gait
Use of splints, including basic technique of splintmaking
Preparation for work

Therapeutic movement for specific problems

3.2.3.1 Re-education and strengthening of muscle

Basic principles - classification of joints, normal and pathological limitation of joint-range, evaluation of range movement (including the use of movement diagrams), principles of maintaining and increasing range of movement.

Basic techniques - methods of maintaining joint range, methods of increasing joint range (applied to both contractile and non-contractile structures)

3.2.1.3 Re-education of posture

Causes of postural problems
Assessment of posture
Re-education methods

Re-education of balance

Causes of disturbance of balance
Re-education methods applied to different types of balance problems

3.2.3.5 Re-education of co-ordination

Causes of inco-ordination
Re-education methods

3.2.3.5 Re-education of breathing

Physiological and physical principles
Assessment of patterns of breathing and disturbances of respiratory functions
Techniques of teaching diaphragmatic and controlled breathing expectoration; exercise for thoracic mobility and improved physical fitness

Exercise in water

3.2.4 Group and class activities

3.2.4.1 General principles - use of group wards, advantages and disadvantages, organisation, precaution

3.2.4.2 Gymnasium classes

Classes for specific groups
Instructional classes for specific groups
Application of circuit training

3.2.4.3 Ward classes

General preparation; ward administration
Classes for specific groups

4. ADDITIONAL SUBJECTS

4.1 Surface anatomy

4.2 Bandaging

4.3 Nursing

4.3.1 Hospital routing and administration, categories of staff and correct lines of communication in the hierarchical system

4.3.2 Ward equipment and the care thereof

4.3.3 Reading of prescriptions and charts; setting up reports and keeping records

4.3.4 Elementary microbiology - the spread of micro-organisms, entry of micro-organisms to the body, asepsis and antisepsis

4.3.5 The prevention of pressure sores

4.3.6 The management of haemorrhage

Demonstration in the hospital

4.3.7.1 handling of special beds

4.3.7.2 changing of linen and making of beds

4.3.7.3 different positions used in bed

4.3.7.4 full bed-wash

4.3.7.5 the care of patients with catheters and drainage tubes; different types of catheters and drainage tubes

4.3.7.6 aseptic technique - the setting of a simple tray for the dressing of wounds; dressing of wounds

4.3.7.7 patient observation - temperature, pulse and respiration; blood pressure; intravenous drips; oxygen and inhalation therapy

A period of practical experience of nursing in the hospital should follow

4.4 Emergency procedures in disaster situations.

6 TREATMENT BY PHYSIOTHERAPY

Evaluation, analysis of general problems, principles of treatment, analysis of specific problems, treatment and rehabilitation of specific conditions, co-ordination with allied medical disciplines and documentation - in the following fields:

5.1 Neurological conditions

5.1.1 Cerebral motor disturbances

5.1.2 Spinal and peripheral lesions

5.1.3 Primary muscle diseases

5.2 Orthopaedic conditions

5.2.1 Traumatic orthopaedics

Cold orthopaedics

5.3 Conditions of the cardio-respiratory system

5.3.1 Medical cases

5.3.2 Surgical cases

5.3.3 The treatment of patients in intensive care units

5.4 Obstetrics and gynaecology

5.5 General surgery conditions

5.6 Dermatological conditions

5.7 Other conditions

The treatment of other conditions where physiotherapy may be necessary, including in the management of cancer, geriatric and terminal patients

5.8 Physiotherapy in the community

Principles of community care

Rehabilitation and resettlement

Introduction to physiotherapy in private practice

5.8.4 Ethics and legislation relating to physiotherapy

Appendix E

Guided Journal Reflection
for
Student-Physiotherapists

Guided reflection for Life History of Physio-in Training

Hello Physio-in-Training

Reflections....My Journey to Becoming a Physiotherapist

Congratulations! You are almost at the end of your journey of a physio-in-training. I would like to hear your voice through this guided reflection of your experience of the physiotherapy training programme over its span. Your reflections will serve as architects of new knowledge in the development of the physiotherapy profession.

- What were the first steps of your journey? What was the motivation for entering the profession? What were your influences? What was your understanding of the profession at the time?

- Preparation for the Journey: What were the road maps that guided you through the journey i.e. from first year to present? What were the roadblocks, the detours, the SOS along the roadside, the green lights, the yields, policing, etc.....How did u experience these? What should be improved? What should remain unchanged?

- You are about to embark on an elective, a real life work experience. How do u feel? Where are u now in this journey? What are your expectations? Do u feel adequately prepared for this work encounter? How have the past years served u to this point?

We will engage in interviews to ensure that the road travelled is well marked out.

Thank u for your co-operation.

Serela Ramklass Tele: 0826548936

Appendix F

Focus Group Interview Schedule
For
Student Physiotherapists

Data Collection Strategy : Focus group Interviews

Interview Schedule 1 – Focus on the state of preparedness for elective placement based on retrospective reflection on the physiotherapy curriculum

Proposed Questions

1 When you applied for a seat for the B. Physiotherapy degree, what was your initial perception of a physiotherapist? What motivated you towards this profession?

2 What were your thoughts about your role in this profession?

3. You're almost at the end of your training, how does your initial perception of the profession compare with what you now know of it?

4. How has the curriculum shaped your understanding of physiotherapy and your role as a physiotherapist?

5. What was your experience the curriculum from first through to 4th year?

6. What were some of the high and low points of the curriculum that you've experienced? How have these shaped you as a person?

7. What do you feel about the organisation and content of the curriculum wrt preparing you towards an independent practitioner?

8. How have these years at university, through your experience of the physiotherapy curriculum, enabled you with skills that you could use in everyday life?

9. As you are about to embark on your elective, an experience that will simulate a real life experience of a qualified physiotherapist, what are your reservations? How well has the curriculum prepared you for this experience?

10. What are the strengths of this curriculum; what are its weaknesses? How can we improve it?

Appendix G

Interview Schedule
for
Curriculum Developers

Interview Schedule for Curriculum Developers

1. What is the philosophy of teaching that underpins your practice?
2. What do you see as the goal of higher education?
3. What do you understand by transformative learning? What is the assumption underpinning this concept?
4. How are the criteria for quality in teaching and learning articulated in our programme/your modules? In a broader context, what do you see these criteria aligned to?
5. How do you align the learning outcomes to determine how to teach and assess a particular learning task?
6. How does the learning environment create a deepening of cognitive activity?
7. What kind of activities do you think we should provide for learners to test, extend and reflect their understanding?
8. How does your teaching and learning strategies, change the way students see and think about the world?
9. What are some of the motivational strategies that you use to encourage student learning?
10. To what extent are you satisfied with the institutional leadership in facilitating the achievement of this programme's goals?

Appendix H

Questionnaire

to

Community Physiotherapists

Dear Medical Superintendent / Hospital Manager

I would like to inform you a of a study that I am conducting on the physiotherapy undergraduate programme that is on offer at the University of Durban-Westville. The study will serve the purpose of curriculum review. The data will be gathered by dialoguing with various communities of physiotherapy practitioners. The information may serve towards the design of more relevant undergraduate physiotherapy curriculum in response to the country's policies on health and education.

The participants in the study will include the cohort of the University of Durban-Westville physiotherapy graduates of the 2002 academic year. These are the graduates who are currently in community physiotherapy posts at your hospital. The data will be elicited through a questionnaire which is attached for your perusal. Completed questionnaires will be returned to the researcher by fax.

Thank you for your co-operation.

Mrs Serela Ramklass
Lecturer: Department of Physiotherapy
University of Durban-Westville

Contact Details
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(w) 031-2044817
(c) 0826548936
Fax: 031-4657509
Email: serela@mweb.co.za

Hello Community Physiotherapist

Congratulations on completing a year in the life of a physiotherapist!

You are invited to contribute to a study that I am conducting on the physiotherapy undergraduate programme that is on offer at the University of Durban-Westville. The study will serve the purpose of curriculum review.
Your participation in this study will allow you to reflect on your experience of the physiotherapy undergraduate programme.

Information submitted will be confidential.

Feel free to include as much detail as you like.

Thank you for your co-operation.

Serela Ramklass
Lecturer: Department of Physiotherapy
University of Durban-Westville

Contact Details
Telephone (h) 031-2077492
(cell) 0826548936

Fax : 031-4657509

Email: serela@mweb.co.za

COMMUNITY PHYSIOTHERAPISTS

Name.....
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Work
Address.....
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Home
Address.....
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Tele(h).....(w).....(c).....
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1. Give a brief description of the community hospital at which you are employed. Include in your description details on the type of patients that you encounter.

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2. Give a brief description of your duties and responsibilities that are related to your practice of physiotherapy.

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3. What were your concerns when you were assigned to this community centre post-qualification?

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4. What were your expectations when you were assigned to this community centre post-qualification?

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5. How has the physiotherapy undergraduate programme prepared you to undertake your duties?

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6. List three aspects of the physiotherapy undergraduate programme that you would change or list aspects that you would add to the programme.

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7. List three helpful aspects of the physiotherapy undergraduate programme that prepared you for your duties.

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8. Describe one critical incident / event whilst at this community placement that has impacted most on your life.

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9. Any other comments?

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Thank you for your co-operation.

Please fax completed questionnaire to the number indicated.