CHAPTER ONE
INTRODUCTION

Higher education is a practice,[1] or a process of social activity, performed by individuals and/or social groups that create, reflect and sustain the relations of power between these individuals and groups of individuals (Street, 1995, 2004). Higher education also refers to education at a university to a degree level (Hawker, 2001), it is a form of literacy that is ideological in nature because it is a social practice that is not characterised by neutrality nor technicality. It is a social practice that is "always contested, both its meanings and its practices, hence particular versions of it are always 'ideological', they are rooted in a particular world-view and a desire for that view of literacy to dominate and to marginalize others" (Gee, 2001, p. 112). The ideological tensions in determining the nature and purpose of higher education are inextricably linked in practice or in the "real" world. Accordingly, what higher education is, and thus what universities are, and the reasons why higher education, and universities exist, are dynamically related to one another. The similarities between the nature and purpose of higher education include that they are both multifaceted practices that reflect historically-contested, ideological relations between individuals and social groups.

1.1. The Nature of Higher Education

In the early Twenty-First Century, the nature of higher education is characterised by the articulation of capitalistic and democratic ideologies with one another, and with the practice of higher education. These articulations have occurred in both international and South African contexts, although there are contextual variations in the forms that they have taken. The relationship between capitalist and democratic ideologies has manifested in the increased governmental control over higher education, the massification and the consequent large size of university classes, and the disjunction between school and university education. Each of these factors, and the relationships between the factors, is discussed in some detail in the sections that follow.

---

[1] [1] "From Latin *practicare* 'to perform, carry out'" (Hawker, 2001, p.1003). The opposite noun and verb forms are utilized in the United Kingdom ("c" for noun and "s" for verb) and United States (Hawker, 2001). The conventions of English practice in the United Kingdom have been followed by the present author.

1.1.1. *Higher Education in the Capitalistic State*

Since the early 1990s, institutions of higher education have increasingly been viewed, not as "the ivory tower[2]", but as enterprises that compete for both students and funding (Cele, 2005, p. 602). Universities are increasingly managed in a manner that produces a profit in the United Kingdom (Deem, 1998), Australia (Biggs, 2001b), the United States (Sander, Stevenson, King & Coats, 2000), Nigeria (Uzuka & Akinyokan, 2005) and in South Africa (Fourie, 2001; Paterson, 2005; Pienaar & Sieberhagen, 2005; Pityana, 2005; van Lill, 2005). This new species of university has more students, fewer resources, a technicist and reductive perception of both students and lecturers, and engages in debates around "standards" and "effectiveness" (Walker, 2002). The ideology of capitalism is characterised by the discourses of commercialism, marketisation, consumerism, corporatisation, the use of fewer resources to create better products and massification, in the so-called "McUniversity with standardised, bite-sized modules served by 'have a nice day' automatons to increasingly instrumental customers" (Parker & Jary, 1998 in Walker, 2002, p.4). Both the generative (research) and disseminative (teaching) functions of universities now occur in ways that are designed to create "value for money" and to provide a return on the investments made by governments in higher education (Deem, 1998, p. 48). Deem (1998) labels the way in which higher education is viewed and managed in the United Kingdom as "new managerialism" (p. 47), in which the structure of universities have been transformed into enterprises that are managed by senior executive teams, rather than educational institutions that are governed by academic leadership.

Since 1992, in the United Kingdom, universities are expected to have high standards in terms of both research and teaching and learning, and governmental watchdogs monitor these standards (Deem, 1998). This has resulted in declining resources for both teaching and learning and research enterprises, and increasing competition between universities for students and staff (Deem, 1998). Unlike the system in the United Kingdom, public higher education in the United States is not controlled federally, but on a state basis (Simmonds, 1989). Funding predominantly arises from

[2] "a state of privileged seclusion or separation from the harsh realities of life" (Hawker, 2001, p.693)

states, with state subsidies reducing and tuition costs increasing (Watt, Lancaster, Gilbert & Higerd, 2004). The notion of control (e.g. the assessment of the "quality" of the university) and funding, as in the case of the United Kingdom, are directly linked. There is a shared agenda between state agencies and universities regarding improving the quality of higher education, but little consensus as to what "quality" in higher education actually is, and how funds should be allocated on the basis of quality (Watt et al., 2004).

In contrast, the Australian higher education system is based on the British model (Mollis & Marginson, 2002), and consequently reflects a greater measure of governmental control than the system in the United States. Mollis and Marginson (2002, p. 311) label the agenda of the higher education system in Australia as

> neo-liberalist…modernization, which serves to define governmental control from responsibility for outcomes and quality to, responsibility for regulating the system framework, to encourage competition and market differentiation among institutions, to nurture private institutions, to increase fee charging and other private income at public institutions, to create corporate style universities with professional managers, to install performance assessment, and to shift the identity of the student from pedagological or democratic subject…to consumer subject (Zorilla, 1998, cited in Mollis & Marginson, 2002, p. 314).

Thus, capitalist ideology also articulates with higher education in Australia, where the federal government contributes more than half of the monetary resources required by universities and has regulated the system more stringently since the 1990s (Mollis & Marginson, 2002). This governmental control evolved in conjunction with "management efficiencies and marketisation" (Mollis & Marginson, 2002, p. 320). The increasing commercialisation of higher education may also be linked to how universities understand teaching and learning. An example of this is the widespread use of Biggs' Learning Process Questionnaire and Study Process Questionnaire, both which assess students' perceptions of teaching and learning (1987, 2001a), which are then used to inform decision-making regarding academic salaries (Bonetti, 1994).

The South African higher education system has also become increasing commercialised since the 1990s. Private universities have been established that

discuss issues of quality in terms of "a multi-customer focus… (with) market segmentation of its customer base…as important as in any other industry" (Saunders, 2005,p. 144). Public institutions have been restructured into teaching or research institutions, and historically-black and historically-white institutions have been merged, indicating a distinct move towards corporatisation (Blunt & Cunnigham, 2002; Jansen, Habib, Gibbon & Parekh, 2001; Kissack & Enslin, 2003; Mfusi, 2004; Park, 2003; Paterson, 2005; Waghid & le Grange, 2002;). Higher education is now subject to notions of "supply and demand" (van Lill, 2005, p. 969), service delivery (du Plessis, van Rensburg & van Staden, 2005) and business models are used to understand the problems that are faced (Paterson, 2005). Multiple stakeholders in higher education have been identified, including governmental authorities, the public sector and society in general (Wright, 2005). In addition, employers in the workplace demand that graduates have information-processing, research and problem-solving skills, as well as the abilities to work cooperatively and creatively (Jack, 1996). Students are perceived as customers, and their ratings of staff are related to salaries and tenure (Fourie, 2001). Academic staff are positioned as "human resources" (Mehl, 2002; Olivier, de Jager, Grootboom & Tokota, 2005). The emphasis of teaching and learning is on outcomes (in line with Outcomes Based Education), and those learning processes involved in a focus that is results-oriented and learner-centred (Bitzer, 2001).

Managerialism, or "private sector ideologies and values" (Weber, 2005, p. 944) characterizes the running of universities, and "management teams" have replaced academic leadership (Paterson, 2005, p. 114). Barney Pityana (2005), in his inaugural address as the Vice-Chancellor of the University of South Africa (Unisa), wrote an open letter to President Thabo Mbeki concerning higher education in South Africa. In it he engaged with the notions of Unisa's "brand image" and "service delivery", positioned throughput as "high wastage" (p. 415), and bemoaned the pressure that "university managers…feel…to do more with less" (p. 416). He also detailed the increasing demands that industry placed on universities and stated that the university workplace is no different from "any other workplace" (Pityana, 2005, p. 415). Pityana (2005) also identified the lack of prioritisation of government funding to higher education as a problem.

In the United Kingdom, Australia and South Africa the "quasi-market conditions" (Deem, 1998, p. 48) of increased competition between universities for reduced resources have implications for teaching staff. Academic staff is "under pressure to do more work with fewer resources" (Deem, 1998, p. 48). In capitalistic ideological practices, universities and lecturers are viewed as "service providers" (Sander et al., 2000, p. 309). In the United States, lecturers have comparatively more freedom in planning their teaching and learning activities, which is ascribed to "American individualism" (Simmonds, 1989, p. 304). This American individualism is also translated into competition around funding, and consequently, a more commercialised perception of higher education as a business enterprise. The focus of income generation at private universities in the United States appears to be centred on research and not teaching and learning.

There has been some resistance to the increasing articulation between capitalism and higher education. Portnoi (2003, in Cassim, 2005) has attempted to distinguish universities from the corporate world. Cassim (2005) argues that, because universities are more strictly controlled by legislation, constitute a unique place of work and have unique histories, they cannot be viewed as commercial enterprises. Prinsloo and Beukes (2005) cite examples of the growing level of moral degeneration in the corporate world (e.g. Enron, Worldcom, Leisurenet and Saambou) and question whether the increasing commercialisation of higher education is desirable. There is some debate internationally and locally as to how students should be positioned, either as "*primary customers*…who are increasingly aware of their customer rights" (Sander et al, 2000, p. 309), or as *consumers* of higher education (Naude & Ivy, 1999). However, despite attempts by universities to remain educational and not business institutions, it appears that the business model is deeply entrenched in the higher education system in South Africa.

In addition, both internationally and in South Africa, governments have restructured higher education in an attempt to make universities more effective and efficient (Weber, 2005). The global issue of the commercialisation of higher education is further complicated within the South African context. There have been several Governmental policy documents and legislation (e.g. the Higher Education Act 101 of 1997; the Higher Education Amendment Act 55 of 1999; the Higher Education

Amendment Act 54 of 2000) concerning higher education in South Africa since the change from the Apartheid state to one characterised by democracy and racial equality. These policy documents have primarily concerned the transformation of higher education in South Africa. This transformation has been conceptualised in terms of merging institutions, with a focus on both research excellence and quality. These have placed additional demands on institutions of higher education (van Wyk, 2005).

The South African Qualifications Authority (SAQA) Act 58 of 1995 put the National Qualifications Framework (NQF) in place in the South African educational context. This framework is founded on many ideas, for example, the facilitation of access, quality enhancement, redress, personal enhancement and social development (Kilfoil, 2003). Outcomes- Based Education (OBE) and thus what students are capable of doing has been highlighted as pivotal (Tisani, 2002). The implementation of this approach has generated much debate and discussion (e.g. Goode & Thomen, 2001; Jansen, 1999). The White Paper on Higher Education (WPHE) provides central features for higher education, namely increased participation by a more diverse student constituency and greater responsiveness to a broad spectrum of economic and social needs (Higher Education Act 101 of 1997). In South Africa, therefore, there is increasing regulation of higher education by the state. The South African government spent R1082 million on Further Education and Training between 2002 and 2003 (Chisholm, 2005). Governments (both internationally and in South Africa) have adopted the stance that, as the primary funder of higher education, they are entitled to dictate the purpose and nature of higher education (Weber, 2005).

The debate amongst academics concerning the implications of the government's new policies has been widespread and has focussed on diverse aspects of educational policy. These aspects include the national plan (Jansen, 2001; Ntshoe, 2002); higher education legislation (Bitzer, 2002; Fataar, 2003; Kilfoil, 2003); restructuring and transformation (Blunt & Cunnigham, 2002; Jansen et al., 2001; Kissack & Enslin, 2003; Mfusi, 2004; Park, 2003; Paterson, 2005; Waghid & le Grange, 2002); the outcomes-based approach (Friedrich-Nel, de Jager & Nel, 2005; Goode & Thomen, 2000; Killen & Hattingh, 2004); globalisation (Weber, 2005; Wessels, 2002); the recognition of prior learning (Kistan, 2002; Nair, 2003; Osman & Castle, 2002); and

quality assurance (Boyd & Fresen, 2004; Cronje, Jacobs & Murdoch, 2002; Pretorius, 2003; van Rooy, 2002;). Therefore, there appears to be fundamental tensions between the government, institutions, academic staff and students. One of these fundamental tensions is the implementation of the governmental policy of widening participation.

1.1.2. *The Democratisation of Higher Education*

The notion of participation has many meanings in relation to higher education. For the purposes of the study, multiple nuances of the idea will be explored. These include notions of taking part, becoming actively involved in or sharing in (Wenger, 1999). The word connotes the concepts of inclusion (eligibility, membership, and admission), a symbiotic relationship (interaction or a mutual relationship) and cooperation (working together, contributing) (Hawker, 2001, 2003). Bertram (2003, p. 71) argues that since the 1990s, universities have undergone a metamorphosis from "elite systems to open mass systems". Elite and open systems have distinct features that concern the structure of knowledge, the delivery mode and access. Firstly, in the elite system, a formal academic knowledge system that is discipline-based, is present. In contrast, the knowledge structure in the open system is characterised by a blend of academic and applied or tacit knowledge. Secondly, teaching in the elite system is contact and discipline-based, while multiple forms of delivery are instituted in the open system, including contact, distance and resource-based modes. Thirdly, access to higher education in the elite system is restricted to young students from the middle-class. In contrast, the mass system has more open access policies, with both young and older students, the working class and previously marginalized groups (e.g. women and "minority" racial groups) being included (Kraak, 1999). This metamorphosis has been labelled as the democratisation or massification of higher education (Kraak, 1999) and was driven by "egalitarian pressures to reduce the enormous social inequities by opening access to the working class and other marginalized communities" (Bertram, 2003, p. 71).

There has, however, been some resistance from universities to institute changes in their existing systems. Central to the resistance to governmental policies concerning massification, particularly in the United Kingdom and Australia, is how expansion is to be resourced (Sheppard & Gilbert, 1991) and the fact that staff numbers have not

been increased accordingly (Ramsden, 1992). Massification has been labelled as a "stack em cheap" policy (Gibbs, 1992, p. 26), which reflects the increasing commercialisation of higher education that raises questions concerning "how costs can be cut without sacrificing quality" (Sheppard & Gilbert, 1991, p. 229).

There are differences internationally in terms of how "marginalized communities" are constructed. The issue of massification in the United Kingdom primarily relates to increased participation by the working class (Bertram, 2003) and increasing the percentage of the population who receive a higher education to 25% (Deem, 1998). Questions have been raised concerning participation of females (Hind, Norman, Cooper, Gill, Hilton, Judd & Jones, 2003) and more diverse racial groups, including Asian (meaning Bangladeshi or Pakistani) and Afro-Caribbean students (Siraj-Blatchford, 1991). Between 35% and 50% of each generation in the United States participates in higher education (Simmonds, 1989). The number of students attending university increased between 1980 (300 000) and 1990 (450 000), but increased more dramatically over the following ten years (to 900 000 in 2003) (Hugo, 2005).

The movement towards massification in Australia arose after student numbers at universities had been declining between the mid 1970's (10.1% of the population) and the early 1980's (8.5 %) (Hayden & Carpenter, 1990). This decline in university participation was attributed to "labour market conditions", in line with the increasing commercialisation of higher education (Hayden & Carpenter, 1990, p. 175). The Commonwealth Government clearly stated in 1988 that participation in higher education by "young people…especially among groups that are less well-represented… (the children of poorer families, members of certain ethnic minorities, rural dwellers and Aboriginals)" needed to increase (Hayden & Carpenter, 1990, p. 176). Increased participation by females in higher education was also encouraged (Gow & Kember, 1990; Kahle, Parker, Rennie & Riley, 1993). However, this massification of the system also included the students who had enrolled in universities of technology (Yencken, Cole & Gillin, 2002). Unfortunately, rising student numbers were not accompanied by increased academic employment and the lecturer-student ratios in Australia increased between 1983 and 1999 (Mollis & Marginson, 2002).

Widening access or increasing rates of participation by marginalized or minority groups have a longer history in the United States. Minority groups are typically defined in gender and racial terms. Firstly, the feminist movement in the United States has been active in promoting equality for women in education (Dukes & Victoria, 1989; Scott-Jones, 2002; Simpson & Erickson, 1983). In the United States, in the 1970's, an "open entry" system was introduced in many urban colleges. This system was instituted in an attempt to reduce discrimination in higher education (Simmonds, 1989). The new system placed additional pressures on the lecturers at these institutions who were accustomed to "small, well-motivated classes", but were now engaging with "larger numbers of students across a wider range of ethnic minorities and achievement levels, which complicated their new tasks" (Simmonds, 1989, p. 295).

The question of racial diversity is more complex in the United States. After World War Two, African Americans began to participate in higher education as the result of the GI Bill (Willie & Cunnigen, 1981). Racial desegregation of the higher education system was sanctioned in 1954 by the Supreme Court's decision in Brown vs The Board of Education Topeka, Kansas. However, it was only in the 1960's and 1970's, with the rise of the civil rights movement, that the number of African American students attending universities rose (Nettles, Thoeny & Gosman, 1986). The issue of diversity in the United States rests on the assumption that non-minority or White students constitute more than 85% of the classes in state universities, with the notable exceptions of Alabama A&M University (16%) and Delaware State University (40%) (Conrad & Julian, 2006). The manner in which minorities groups have been defined has evolved over the course of time. Accordingly, descriptors used include "Black", until the 1980's (Feldman, 1985; Loo & Rolinson, 1986; Nettles et al., 1986; Vasquez & Weinstein, 1990; Woolfolk & Brooks, 1985; Willie & Cunnigen, 1981), with "African American", the currently widely accepted term (Williams, Garza, Hodge & Breaux, 1999; Pollard, 1993). Changing ideological practices in the United States also relates to other racial groupings including Mexican American (Vasquez & Weinstein, 1990; Williams et al., 1999), Chicano (Loo & Rolinson, 1986) and Hispanic (Williams et al., 1999; Pollard, 1993); Native American (Pollard, 1993; Vasquez & Weinstein, 1990); Asian American (Loo & Rolinson, 1986) and Asian (meaning Chinese, Vietnamese, Japanese etc – in contrast to how "Asian" is used in

the United Kingdom, see p18) (Pollard, 1993); Euro-American (Williams et al., 1999) and White (Pollard, 1993; Dukes & Victoria, 1989; Loo & Rolinson, 1986; Woolfolk & Brooks, 1985).

Pollard (1993) provides some clarity concerning the usage of these competing racial labels. The label "White" stands in contrast to so-called minority descriptors and refers directly to skin colour. The other descriptors avoid references to skin colour and are primarily geopolitical in nature (e.g. African American, Native American and Asian American) and indicate the continent of origin. The term "Hispanic" is an exception to the other minority descriptors and refers both to Latin America (geopolitical) and first language (Spanish-speaking in this instance). It is apparent that the particular interpretation of widening access to higher education to previously excluded groups is based on the particular sociohistorical circumstances in which it occurs. The negotiation of increased participation internationally is distinct from increased participation in South Africa. This distinction primarily rests on which racial group holds socio-political power and how much power previously excluded groups are able to appropriate.

In 1996 the South African National Council for Higher Education (NCHE) called for "the increased participation in higher education of hitherto neglected sections of society, thereby changing the higher education sector from one of elite to one of mass education" (Jack, 1996, pp. 67-68). Massification of higher education in the South African context is a more complex issue than it is internationally because the previously marginalized communities constitute the majority of the nation's population (Wessels, 2001). The higher education system in South Africa has undergone massive growth in the last ten years. The number of students attending universities in South Africa has increased dramatically from 1.3. million in 1993 to 13.2 million in 2005 (Labuschagne & Mashile, 2005). Black enrolment at universities currently exceeds that of Whites (Reddy, 2005). Although access to higher education is no longer racially based, the effects of past inequities are still present.

The Apartheid era was characterised by the minority of the population (the Whites) holding political power and the institutionalised discrimination against the majority of the population, namely, the disenfranchised Black, Coloured and Indian racial groups

(Leggett, 2005). The political, social and economic changes that have occurred in South Africa have resulted in significant changes to the educational system. In terms of education, the Apartheid legacy has ensured that there are fundamental inequalities between White and Black, urban and rural schools. The ideology of White supremacy of the Apartheid regime resulted in disparate government spending, access to and quality of education offered to the different races. The Black population had lower literacy levels and school completion rates, higher lecturer-pupil ratios, inadequate resources and poorly trained teachers (Chisholm, 2005).

The ANC government has attempted to redress these past inequities, and has called for the transformation of the entire system of education, including higher education. Despite government spending, the Minister of Education in 1999 acknowledged that there was "'rampant inequality' which continues to exist in the educational system seriously undermines it, and makes long-term and sustainable social development extremely difficult" (Castle et al., 1999, p. 2). The government has also adopted a more active role in the regulation of higher education. Changes in the political power structure are directly linked to the transformation of education (Weber, 2005). However, government formulating policy does not automatically imply the transformation of education systems (Bischoff & Nkoe, 2005).

Attention has been focussed on how cultural differences between students can be managed (Hutchings, 2005) and how equality of access and outcomes can be achieved (Cassim, 2005). The government's policy of massifying higher education has also been met with resistance from academic staff –

> 'mass education' in the South African context…is linked to the laudable aim of achieving equity and access to education for all, it seems (to me) to be used as an excuse to lower standards (including assessment standards) in order to ensure that as many students as possible graduate (Lumina, 2005, p. 489).

Widening access has also meant that selection criteria are lowered (du Plessis, Janse van Rensburg, & van Staden, 2005) and bridging programmes are required (Saunders, 2005). The relationship between the increasing commercialisation of higher education and how transformation can be achieved has also been discussed. Cele (2005, p. 609) argues that if universities are viewed as "commercial enterprises" and not as

institutions that seek to address the "social development needs" with "academic rigour and substance", then South African society will not be transformed. Cele (2005) believes that such transformation is only possible if "well-mentored and competently qualified graduates for the development of the economy" are produced (p. 609). Pityana (2005, p. 416) pithily summarises the problems facing higher education in South Africa today –

> Academic staff has to produce quality tuition at a time when lecture rooms have never been so full. We are told (by government) that we must undertake academic planning, a euphemism for capping, as the system cannot cope with uncontrolled growth. And yet, we have to balance that against the imperative of equity and access, to give more opportunities to deserving students and increase the pool of students from disadvantaged backgrounds….

There is, thus, an intersection between both capitalistic and democratic ideologies in which more students from diverse educational backgrounds are present in university classrooms. South African classes are, on average, substantially larger than university classes internationally (Allers & Vreken, 2005; Bligh, Lloyd-Jones & Smith, 2000; Butler & Collins, 2000; Downs, 2005; Fourie, 2001; Frescura, 2002; Hind et al., 2003; Kember & Wong, 2000; Koch & Kriel, 2005; Lake, 2001; Lumina, 2005; Nel & Dreyer, 2005; Noels, Clement & Pelletier, 1999; Samuell, Hughes & Lopate, 1999; Stein & Janks, 1996; Trigwell, Prosser & Waterhouse, 1997; van Lill, 2005; Walker & Wright, 1996; Weil, Oyelere, Yeoh & Firer, 2001; Williams et al., 1999). Many problems with large university classes have been identified and researchers seem to be emphatic about the consequences of large classes on teaching and learning practices. "(L)arge classes *inevitably* lead to *inferior* education" (Morrow, 1992, cited in Nyamapfene & Letseka, 1995, p. 65). Problems resulting from large class teaching include that students lack advice on how to improve, students lack opportunity for discussion, and the lecturer is unable to cope with the diversity of students (McGill & Beaty, 1992). In addition, lecturers receive lower ratings for classroom interaction in large classes (Kember & Wong, 2000) and experience more difficulties in classroom management (Brown & Renshaw, 2000; Elbers & Streefland, 2000; Pea, 1993; Walker & Wright, 1996). This pessimistic view represents a particular challenge to the present study where large, diverse classes (of approximately 300 students) were present.

Diversity in students, as a challenge to pedagogic practice (de Boer, Steyn & du Toit, 2001), is conceptualised in different ways. Diversity has been conceptualised in terms of gender and racial differences between students. Gender differences in class participation have been documented (Dukes & Victoria, 1989; Saunders, 2005; Weil et al., 2001). Race has also been a factor that has been investigated in studies of diversity, with Black students experiencing a sense of alienation in university classes (Loo & Rolinson, 1986; Pollard, 1993). However, the use of racial categories has been a contested debate in which such categories have been criticised as ignoring individual differences (Rogoff & Angellillo, 2002; Willie & Cunnigen, 1981). The dominant ontological account of teaching and learning in higher education, the academic socialization view, locates diversity as an internal perception of learning (Biggs, 1999; Bowden & Marton, 1999; Entwistle, Meyer & Tait, 1991; Prosser & Trigwell, 1999). Diversity is also operationalised using variables such as ability and motivation (Beard & Hartley, 1984), attitudes, values, dispositions (Steyn & Killen, 2000), problems in learning (Nyamapfene & Letseka, 1995), and field of study (Lourens & Smit, 2003). Gravett and Henning (1998) understand diversity in terms of the way students view the lecturer (see also Beishuizen, van Putten, Bouwmeester & Ascher, 2001) and believe that these notions often encompass strict notions of authority. They also, perhaps more importantly, uphold that there is necessarily student diversity in participation in lectures, a central form of the disseminative function of a contact university.

Interaction in large classes is thought to be limited (Thomen & Barnes, 2002) or assumed not to be possible (Jaques, 1991). When interaction does occur, particular gender and racial groups dominate classroom discussions. Accordingly, males (Kahle, et al., 1993, Mpofu et al, 1998; Scott-Jones, 2002), particularly White males (den Brok, Levy, Rodriguez & Wubbels, 2002; Pollard, 1993, Stein & Janks, 1996) have been found to be dominant. The primary explanation for this is the notion that the majority of university lecturers are White males and behaviourist models of modelling and identification are thought to be influential (den Brok et al., 2002; Feldman, 1985; Williams, et al., 1999).

The transformation of higher education in South Africa needs to be viewed within the context of education in general. The Department of Education's National Curriculum

Statement is an attempt to transform the schooling system in South Africa. The Director General of Education provided five reasons for the adoption of the outcomes-based system, two of which are relevant here. Firstly, Mseleku emphasises the South African state's policies of redress and transformation. Accordingly, "(b)ecause it is an approach that can help remove the discrimination of the past, and prepare our children to function better in the South Africa of the 21st century when they leave school" (Mseleku, 2004, p. 4). The government, in all sectors of society, and in education in particular, has consistently underlined its agenda of the transformation of the Apartheid state. Secondly, Mseleku argues that the OBE system concerns a higher level of readiness for higher education. Accordingly,

> (b)ecause OBE emphasises *how learners learn* as well as *what they learn*; as their *studying skills* improve during their school education, it means that they are better equipped to carry on studying at tertiary institutions and during their working lives (Mseleku, 2004, p. 4).

Mseleku's comments tacitly acknowledge that the schooling system in South Africa may not adequately prepare scholars for university study and, thus, there is a disjunction between school and university.

1.1.3. *The Disjunction Between School and University*

The differences between learning at school and university have been of concern to higher education staff for a number of years and the movement from school to university has been labelled "a major life transition" (Sennett, Finchilescu, Gibson & Strauss, 2003, p. 107). In the United Kingdom, incoming students are labelled as less "able" to cope with the demands of university (Ramsden, 1992, p. 15) and the first year of higher education is understood as distinct from the ensuing years (Sander et al., 2003). Students new to the university system often have unrealistic ideas about university study (Sander et al. 2000). In the United States, language problems and deficits in "basic skills" prevent students from engaging in "sustained autonomous study" (Thomas, Bol & Warkentin, 1991, p. 275). Students are also thought to lack adequate strategies for coping with the challenges of higher education (Saumell, et al., 2002). Thus, there is an acknowledgment that the teaching and learning in secondary school and higher education have different characteristics. In Hong Kong, these differences include an "interactive" approach at school and a "didactic" approach at

university (Gow & Kember, 1990). Butler and Collins (2000), in Australia, have understood the difference as relating to the type of writing required from students in which "academic writing is different in style, complexity and structure from school writing" (p. 1).

The first year of university is conceptualised as a point of transition between the secondary and higher levels of education in South Africa (Alexander, 2004; Beylefeld & Jama, 2002; Bitzer, 2005; Fraser, van Ede, Hislop-Esterhuysen & Owen, 2004; Hebert & Worthy, 2001; Huysamen, 2001; Lourens & Smit, 2003; Mumba, Rollnick & White, 2002; Sedumedi, 2002; Tait, van Eeden & Tait, 2002; Thomen & Barnes, 2005). Pityana (2005, p. 417) presents the situation in South Africa emphatically – "the schooling system…churns out more and more students who are not intellectually ready for the rigours of higher education".

Intellectual readiness for higher education has been understood in many ways in South Africa and is related to the particular sociohistorical circumstances in the country. The authoritarian nature of the schooling system in Apartheid South Africa may have contributed to students' failure to adapt to the university system (Grayson, 1996). Bitzer (2005) has proposed that entrance assessment needs to include students' aptitude, knowledge, expectations, personality characteristics and perceptions of the academic enterprise. Koch and Kriel (2005) regard the students' language skills and socialization into the academic discipline as important. Students need to possess effective strategies and skills for reading and the ability to solve a problem through the application of knowledge (Koch & Kriel, 2005), also known as cognitive skills (du Plessis et al., 2005). Resources, coupled with self-confidence (Downs, 2005) and values and attitudes (Wood & Lithauer, 2005) are also believed to be important. The discussion of the disjunction between school and university has its origins in the racial differences in the schooling system of the Apartheid era.

The term "underpreparedness" for university education emerged in the 1980's to describe students from "poor socio-economic backgrounds, (who) used English as an additional language, and had been educated in township or rural schools" (de Groot & Dison, 1996; Niven, 2005, p. 777). The concept emphasises that secondary school learning experiences do not equip students to cope with tertiary education (Claxton,

1990; Dunstan & Frescura, 2000). Diversity in preparedness is believed to be a particular challenge in the context of South Africa in which Apartheid-era education policies resulted in large disparities between the qualities of education given to different race groups (de Groot & Dison, 1996; Dison & Pinto, 1995; Dison & Rule, 1996). A widely accepted response to underpreparedness in the South African context is scaffolding (Dison, Granville, Delmont & Button, 2000; Granville, 2002; Gravett & Henning, 1998; Hardman & Ng'ambi, 2003) which attempts to incorporate notions of both challenge and support of students. It is questionable whether these interpretations of challenge and support, while they do have value, consider all students in a given learning context. Forms of mediation need to target every student and not only the ones who are identified as "problematic".

1.2. The Situation at the University of the Witwatersrand

The University of the Witwatersrand (Wits) is not immune to the shifting political and educational landscape in South Africa. The university is expected to explicitly engage with the issues of redress, equity and transformation of education (Preliminary Report of the Working Group on Retention and Throughput, 2003). In addition, Wits is faced with the challenges of the rationalization of disciplines, cost-cutting (Motlala, 1997), reduced resources, reductions in state subsidies, increasing student debt, retrenchment of staff the closure of academic support programmes, the downgrading of courses and the outsourcing of support services (Motala, Vally & Modiba, 1999). The issues of equity and redress are further complicated by the problem that economically disadvantaged students are experiencing higher education as increasingly inaccessible because of increases in fees and difficulties in both obtaining and repaying student loans (Motala et al., 1999). Government and its agencies (e.g. the Higher Education Quality Commission) are also placing increased pressure on institutions to demonstrate that the government is receiving a return on its investments in higher education (Preliminary Report of the Working Group on Retention and Throughput, 2003). This capitalistic ideology has forced Wits to consider its financial burden caused by prolonged student completion rates, student dropout and failure.

A Working Group (ibid), in reaction to state policy, conducted an analysis of the retention and throughput rates of the students in the University from 1992 to 1997. In

the undergraduate programmes, statistically significant differences were found between the different races and genders. In the four-year degrees (Nursing, Physiotherapy, Occupational Therapy) in the Faculty of Health Sciences a statistically significant increase in the average number of years to graduate was found. There was a statistically significant decrease in the overall graduation rates of Black (African and Coloured) and male students. Medicine (a six-year degree) also demonstrated gender and racial differences, where there was a statistically significant decrease in the overall, female and Black percentage of students who graduated.

The response to these findings by the Faculty of Health Sciences was to conduct Academic Development classes (one additional, skills-based tutorial per week), small-group tutoring and lecturer and tutor projects for all students in the Faculty. High attendance rates in the Academic Development classes demonstrated the demand for such interventions to the point that the classes were becoming too large to manage with the university's available resources. In addition, funding was obtained to offer workshops on exam preparation for courses, of which Psychology was one. However, these interventions had limited success at improving student performance and overall throughput rates (Preliminary Report of the Working Group on Retention and Throughput, 2003).

The Faculty of Health Sciences had also recently shifted its focus from a more traditionally based curriculum to one that was described as patient-centred, community-oriented and problem-based (Walker & Wright, 1996). The lecturers in these programmes were faced with increased student diversity, increased pressure to improve throughput rates and a new focus on skills, rather than transmission of content, in their curricula.

Between 2000 and 2003, the Psychology for the Health Sciences course at Wits was one of four elective options for Medical, Nursing, Occupational Therapy, Physiotherapy and Pharmacy students. Psychology for the Health Sciences was not a modular course, but was presented in four sub-courses, of seven weeks duration each. "Human Development", the subcourse that is the focus of this dissertation, was the third sub-course in the presentation of the course. Students attended this sub-course after approximately fourteen weeks of university education. During this time,

scheduled, but non-compulsory, contact between the lecturer and the group of three hundred students was fifty-six lectures, of forty-five minutes each. In addition, student attendance was compulsory for twelve tutorials, also of forty-five minutes each, but in groups of twenty to twenty-five students. Honours and Masters students in the Department of Psychology conducted these tutorials. The literacy practices that relate to the assessment of students during the first fourteen weeks of teaching and learning included, firstly, a test requiring short paragraph reproduction of knowledge of the history of Psychology, Behaviourism and Social Psychology and the application of that knowledge to lecturer-generated problems. Secondly, in the Neuropsychology sub-course, students were required to write a 1000-word essay in which the skills of comparison and contrast were required. Lastly, a literacy practice that requires minimal student writing, ninety multiple-choice questions about the material presented in the first two subcourses, constituted the examination. The Psychological theories discussed in "Human Development" included those that explicate the issues of development throughout the lifespan, personality and psychological disorders. This study represents an attempt by one lecturer, in a specific academic field, through the use of multiple teaching strategies, to negotiate this new landscape of higher education with four successive cohorts of first year students.

1.3. The Purpose of Higher Education

Historically, the central tasks of the university were the propagation of science (in the broadest sense of the term) and "the transmission of high-level knowledge and the empowerment of students to obtain that knowledge" (Ullyatt, 2004, p. 109). In terms of the purpose of the university, a dialectical, or conflictual, relationship can be evidenced in the tensions between the "research" practices, or increasing understanding of problems in the real world, and "teaching" practices, or enabling students to learn (Bowden & Marton, 1999). In the last twenty years, there have also been increasing demands from governments and the workplace that impact on both the generative and disseminative functions of the university (Cele, 2005). In the democratic South African state that has a capitalist economic structure these demands include the government's appeal for the investigation of, and solution to, the challenges facing the country (generative), and, from governments and industry, that graduates possess both a sound knowledge base and practical skills (disseminative).

The ideological practice of capitalism permeates the generative and disseminative functions of higher education in how competence in each one is rewarded within the structures of universities (Bowden & Marton, 1999). The current study is a generative attempt to more fully understand the disseminative or teaching and learning function in higher education. The disseminative function under investigation relates specifically to first year students in the Health Sciences who registered for an elective course in Psychology.

There has been much disagreement about the skills university graduates should possess. Because there have been increasing demands from governments that impact on the disseminative function of the university (Cele, 2005), it is essential to discuss governmental policy. In 1997, the South African Ministry of Education, listed "several related purposes" of higher education in Education White Paper 3 – A Programme for Higher Education Transformation (Republic of South Africa Government Gazette, No. 18207, p.7). These four interrelated purposes include (1) the "self-fulfilment" of students; (2) producing graduates who have "the ever-changing high-level competencies and expertise necessary for the growth and prosperity of a modern economy" and (3) the "reflective capacity and willingness to review and renew prevailing ideas, policies and practices based on a commitment to the common good"; and (4)"the pursuit of academic scholarship and intellectual inquiry" (Government Gazette, No. 18207, p.7-8) The document makes no explicit reference to the development of critical thought, but, arguably, high-level competencies, reflective capacity and academic scholarship are similar to an "intellectually disciplined process of actively and skilfully conceptualising, applying, analysing, synthesising and for evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action" (Paul, 1993, p. 22).

There is both ontological (i.e. how critical thinking should be defined) and epistemological (i.e. how critical thinking can be measured) debate concerning the development of critical thinking. These ontological and epistemological differences may exist because the notion of critical thinking (in any form) is difficult to assess and "(e)ach writer seems to have an individual conception of 'good' (i.e. 'critical') thinking" (Moseley et al., 2005, p. 21). However, there appears to be agreement that

graduates need to display critical thinking (Felder & Brent, 2004; Hofer & Pintrich, 1997) and there have been diverse attempts to understand this form of thinking in universities (Anderson & Krathwohl, 2001; Baron, 1985, in Moseley et al., 2005; Belenky, et al., 1986, cited in Moseley et al., 2005; Biggs, 1999; Bloom, Engelhart, Furst, Hill & Krathwohl, 1956; Ennis, 1998, in Moseley et al., 2005; Halpern, 1984, cited in Moseley et al., 2005; King & Kitchener, 1994, in Moseley et al., 2005; Paul, 1993; Perry, 1970; Presseisen, 2001, cited in Moseley et al., 2005; Stahl & Murphy, 1981, in Moseley et al., 2005).

The notion of the development of critical thinkers, and the notion of critical thought itself, is widely contested amongst academics (Kuhn, 1999). There have been both cultural and genetic explanations for the development of critical thought and multiple models have been presented that attempt to account for this form of development (Kuhn, 1999). Firstly, frameworks regarding productive thinking include intellectual and ethical development (Perry, 1970), epistemological reflection (Baxter Magolda, 1987), frames of understanding (Perkins & Simmons, 1988), argumentative reasoning (Kuhn, 1999), the nature of critical thinking (Paul, 1993), critical thinking skills and dispositions (Halpern, 1984, cited in Moseley et al., 2005). More importantly, models that are frameworks for instructional design include a taxonomy of educational objectives (Bloom et al., 1956; Marzarno, 1998), a revision of Bloom et al.'s taxonomy (Anderson & Krathwohl, 2001), a framework of thinking skills (Quellmartz & Hoskyn, 1988); and the SOLO taxonomy (Biggs, 1999). Moseley et al. (2005) also list mediated learning through instrumental enrichment (Feuerstein, 1957), types of learning and learning capability (Gagne, 1965), hierarchically-ordered categories of thinking (Ausubel & Robinson, 1969), thinking and feeling processes (Williams, 1970), framework for instructional objectives (Hannah & Michaelis, 1977), a cognitive taxonomic system (Stahl & Murphy, 1981,), instructional transaction theory (Merril, 1992), essential, complex and metacognitive thinking skills (Presseisen, 1991).

There does, however, appear to be some agreement amongst academics that critical thinking centres on the use of "rigorous and appropriate criteria for the formulation of judgements" (Moseley et al., 2005, p. 20). This is the "strong sense" of critical thinking, in which the complexity present in learning situations is understood and

student action relies upon some defendable choice between alternative frames of reference (Paul, 1993). The development of the student's understanding is based upon a "dialectical experience" or dialogue with the lecturer about when and how skills should be employed (Moseley et al., 2005, p. 22). In this formulation, critical thinking is constrained by the conventions of academic disciplines and accords an active role to students who develop ways of viewing the world that guide their actions. These ways of viewing the world involve the development of a specific set of skills, namely, application, analysis, synthesis and evaluation, which function to guide both student belief and student action (Paul, 1993). This definition appears to be a summary of Bloom et al.'s (1956) taxonomy of educational objectives, which emerged from the practice of Psychology.

Bloom et al.'s taxonomy of intellectual abilities and skills was the first attempt to understand critical thinking, had educational practice as its starting point and was designed to be a helpful tool for teachers (Moseley et al., 2005). Bloom and his co-workers attempted to classify "…the changes in individuals as a result of educational experience…the intended behaviour of students – the ways in which individuals are to act, think, or feel as the result of participating in some unit of instruction" (Bloom et al., 1956, p. 12). They were not intending to classify "the instructional methods used by teachers, the ways in which teachers relate to students, or the different kinds of instructional materials they use" (Bloom et al., 1956, p. 12). Thus, the focus of the work is the student and changes that occur in students as a result of a learning situation. The central problem with this focus, to the exclusion of an examination of teaching methods, is the separation of the teaching and learning.

Four principles were present in the development of the taxonomy. Firstly, the "major distinctions" between the categories "should reflect…the distinctions teachers make among student behaviours" (Bloom et al., 1956, p. 13). It is apparent that that Bloom and his colleagues at the American Psychological Association (APA) implicitly viewed teaching and learning as two related concepts. Secondly, the taxonomy must be "logically developed and internally consistent" (Bloom et al., 1956, p. 14). Internal consistency is thought to be a characteristic of good theories. Therefore, the developers were attempting to ensure that their theoretical propositions conformed to the acceptable standards of ideas in the academic field of Psychology. Thirdly, the

taxonomy must be "consistent with our present understanding of psychological phenomena" (Bloom et al., 1956, p. 14). The current understanding to which they refer is the state of understanding in 1956. Therefore, there should be changes in the taxonomy as understanding in Psychology has developed. However, subsequent development of the taxonomy has not made significant changes to the original structure and generally reflects the integration of the affective and cognitive domains of the taxonomy. Finally, the taxonomy must be "a purely descriptive scheme in which every type of educational goal can be represented in a relatively neutral fashion" (Bloom et al., 1956, p. 14).

Bloom et al.'s (1956, p.6) taxonomy is "an educational-logical-psychological classification system". Bloom and his colleagues were emphatic that "(t)he terms in this order express the emphasis placed on the different principles by which the taxonomy (was) developed" (Bloom et al., 1956, p.6). Priority is given to educational objectives, i.e. emphasis is placed on the distinctions in the planning of curricular and teaching and learning situations. Bloom and his colleagues viewed the central contribution of the taxonomy as improving "communication among educators" (Bloom et al., 1956, p. 6). They, therefore, located themselves within the ideological practice of education. While they did acknowledge that the framework "is not completely neutral" (Bloom et al., 1956, p. 15), the developers of the taxonomy also believed that they could avoid making value judgments and that the taxonomy could be a neutral tool for classifying educational objectives (Bloom et al., 1956). An assumption of neutrality is unrealistic and ignores the notion that educating individuals is, in itself, an ideological practice. This implies that education involves the domination of certain ways of thinking and practices and the marginalization of others (Street, 2004). In the current study there no illusions of neutrality and it is argued that teaching and learning in higher education is an ideological practice in which critical thinking is a particular form of cultural thinking.

The system of classification of cognitive tasks was hierarchical and cumulative in that "each classification within it demands skills and abilities which are lower in the classification order" (Bloom et al., 1956, p. 120). The lowest and largest category in the taxonomy is knowledge. This category includes multiple forms of knowledge, namely knowledge of specifics (terminology and specific facts), the ways and means

of dealing with specifics (conventions, classifications and categories, criteria, methodology), universals and abstractions in a discipline (principles and generalisations, theories and structures) (Bloom et al., 1956). Secondly, the lowest level of cognitive ability and skill, or understanding, is comprehension, in which the student progresses from the recall of facts and is able to make meaning from what is being taught. Comprehension involves translation, i.e. accurate paraphrasing of information; interpretation, i.e. reordering and rearrangement of information; and extrapolation, i.e. the determination of consequences and implications of information (Bloom et al., 1956). The least amount of information is provided for Bloom et al.'s third level in the hierarchy, namely application (Moseley et al., 2005). Application is the "use of abstractions in particular and concrete situations" (Bloom et al., 1956, p. 205). These abstractions may be in the form of generalised methods, procedural rules, technical principles and general ideas (Bloom et al., 1956). Fourthly, analysis is the division of information into its constituent parts, which includes an understanding of the relationship between ideas and information. Three forms of analysis are provided. These forms include analysis of elements, i.e. recognising assumptions that are unstated and distinguishing hypothesis from facts; analysis of relationships, i.e. the ability to monitor the consistency of hypotheses with the theoretical assumptions and comprehending the relationships between concepts; and analysis of organisational principles, i.e. recognition of the patterns and form in text and the techniques used to determine the persuasiveness of evidence (Bloom et al., 1956). Fifthly, synthesis is the integration of constituent elements into a cohesive and structured whole. Three types of synthesis include the production of a unique communication (requiring skill in the organisation of ideas), production of a plan or proposed set of operations (proposing and testing hypotheses), and derivation of a set of abstract relations to classify information (formulating hypotheses founded on analysis of the elements involved, to modify these hypotheses when new factors are discovered and to make generalisations) (Bloom et al., 1956). Finally, evaluation is the judgment made about the value of information and methods for a stated purpose. Evaluation includes an understanding of the standards or criteria of judgment. Two forms of judgment are included, namely, judgments in terms of internal evidence and judgments in terms of external criteria. Judgments in terms of internal evidence involve the ability to identify logical fallacies in arguments and the ability to assess the general probability of accuracy of information. Judgments in terms of external criteria are made with

reference to specific criteria and include the comparison of central theories, generalizations and facts and the ability to compare information with the highest known standards in the discipline (Bloom et al., 1956).

Taxonomies are primarily used in Biology, and the word "taxonomy" symbolises the branch of science concerned with classification. As a scheme of classification, there are contradictions in the presentation of the taxonomy. On the one hand, Bloom and his colleagues attempt to argue that the taxonomy is a neutral scheme. On the other hand, they acknowledge that they are engaging in ideological practices. Accordingly, "…the major task in setting up any kind of taxonomy is that of selecting appropriate symbols, giving them precise and usable definitions, and securing the consensus of the group which is to use them" (Bloom et al., 1956, p. 11). Bloom and his co-workers used the terms "taxonomy" and "classification" "more or less interchangeably" (Bloom et al., 1956, p. 17). In addition, they prescribed certain characteristics of their taxonomy of educational objectives. Firstly, the taxonomy has "structural rules which exceed in complexity the rules of a classification system" (Bloom et al., 1956, p. 17). Secondly, the taxonomy is constructed in such a way that "the order of the terms must correspond to some "real" order among the phenomena representing the terms" (Bloom et al., 1956, p. 17). Thirdly, the taxonomy "must be validated by demonstrating its consistency with the theoretical views in research findings" (Bloom et al., 1956, p. 17). Fourthly, the taxonomy must "order phenomena in ways which will reveal some of their essential properties as well as the interrelationship among them" (Bloom et al., 1956, p. 17). Finally, the taxonomy contains "six major classes" in a "hierarchical order", i.e. "from simple to complex" (Bloom et al., 1956, p. 18).

The taxonomy is a coherent framework, in which clear definitions of task complexity are provided. However, distinctions between the higher-order categories are not consistently clear, particularly in the categories of analysis and evaluation (Moseley et al., 2005). The system is both explicit and ideological in terms of the values of education. These values include "transferable learning, creative talent, freedom of thought and expression, self-regulation, intellectual honesty and wisdom" (Moseley et al., 2005,p. 53). These values are thought to encourage critical thinking through the categories of analysis, synthesis and evaluation (Paul, 1993). Broad categories

included in the taxonomy are information gathering, productive thinking and building understanding. These categories are compatible with diverse theoretical bases, highlight the importance of history and context in understanding, and are based on a constructivist ontological position (Moseley et al., 2005).

Problems that have been identified in Bloom et al.'s framework include the argument that objectives cannot be distinguished from indicators and educational goals cannot be as precisely specified as the taxonomy implies (Furst, 1981). There is support for the assumptions that cognitive processes are cumulative and hierarchical (Seddon, 1978; Smith, 1968) and the development of Bloom et al.'s taxonomy has not altered the basic framework of the cognitive domain, with the exception of the omission of application (Halpern, 1984, cited in Moseley et al., 2005). The primary theory regarding the cognitive domain has also been ontologically extended to include metacognitive systems and the flow of information has been substituted with the complexity of information (Marzarno, 1998). Development of the primary theory has also included the provision of examples of educational objectives (Hannah & Michaelis, 1977, cited in Moseley et al., 2005), hierarchical tasks words and teaching and learning activities (Quellmartz & Hoskyn, 1988). The terminology in the taxonomy has been revised to include the notion that students should be able to do something (verb), i.e. perform an action, with a specific knowledge base (noun) (Anderson & Krathwohl, 2001). Accordingly Bloom et al.'s (1956) "knowledge of" is "remember", "comprehension" is "understand", "application" is "apply", "analysis" is "analyse", "synthesise" is "evaluate" and "evaluate" is "create" (Anderson & Krathwohl, 2001, p. 43). However, Anderson and Krathwohl (2001) do not utilise the concept of critical thinking and their definition of understanding involves application only.

It is important to remember that this construction of critical thinking refers to a graduate of higher education, and not a first year student. The challenge in higher education is to understand how the development of critical thought occurs in students, and the effective ways that students develop these skills.

1.4. The Disseminative Function of South African Universities

The ideological practices of capitalism and democracy have articulated with higher education in ways that influence the everyday activities of both academic staff and students. In terms of the disseminative focus of the study, massification and the consequent large class size, and the disjunction between school and university may have the most important implications in the teaching and learning activities of lecturers and students. Accordingly, massification results in more diverse student educational histories. Large class size results in didactic lecturer and student relationship and transfer modes of teaching and learning. The disjunction between school and university implies a great deal of novelty of tasks for students, including sustained autonomous study that develops critical thinking skills. For lecturers there is the increased challenge of providing (potentially new) tools that will enable the student to perform the new task

Universities are therefore faced with increasing pressure to produce graduates that will meet the demands of the workplace and have the qualities that the state demands. Universities now have an expanding marketplace and consumers who increasingly demand value for money. Therefore, given the above issues, it is important to consider how South African universities can continue to produce critical thinkers who can negotiate the many challenges facing our country. It therefore becomes necessary to engage in discussions about teaching and learning within the broader societal context of South Africa. The current study investigated teaching and learning in higher education in South Africa through an analysis of the ideological practices of one lecturer in the academic field of Psychology and four successive cohorts of first year Health Sciences students who had elected to complete a year-long Psychology course.

The ideological practices that were analysed had two fundamental characteristics, namely ideological tasks and tools and social interaction. Students were positioned, not as customers, but as individuals who were required to learn a specific set of knowledge and skills. These knowledge and skills related to a distinct set of discipline-specific approaches and theories. The lecturer attempted to develop tasks and tools that a larger, more diverse student constituency would be able to use. Tasks

and tools needed to, therefore, both challenge and support the student constituency. The lecturer had to contend with the multiple ways that students choose to participate in large classes and adopt strategies that included a large number of students who had heterogeneous attitudes to and confidence in their own participation in large classes. The disjunction between school and university is also of central importance in teaching in the first year of university. Students are accustomed to smaller classes at school than those they encounter in the university setting. During the period in which data was collected (2000 – 2003), complete racial integration of schools had not yet been achieved, and so many students encountered members of different racial groups for the first time at university. The students in the study also had to adjust from a transmission mode of teaching in schools, to adopting a more active role in their own learning at university.

Higher education appears to be characterised by conflict or dialectical tensions between the generation and the dissemination of knowledge and the social groups that are involved in the practice of higher education. There are conflicts, or relations of opposition between the demands of school and the demands of university; between the ways that diverse stakeholders (including governments and the workplace, but more importantly lecturers and students) define an adequate product of higher education. There is also diversity in the abilities of a large pool of students. The focus of the study was on lecturers and students in congruence in an investigation into the disseminative function of a capitalistic, democratic higher education system. The critical thinking skills that are developed in higher education involve the demands made by lecturers and the ability of the students to meet those demands.

CHAPTER TWO
REVIEW OF THE LITERATURE

2.1. Introduction

There are two central schools of thought concerning the teaching and learning, or disseminative, functions of higher education. These are the academic socialization and the academic literacies perspectives. Both traditions are located within a constructionist ontological stance. However, each perspective adopts a distinct epistemological approach (Gee, 2001; Ramsden, 1992). Research in academic socialization has a longer history in higher education and is a quantitative perspective (Biggs, 1987, 2001a). In contrast, the academic literacies approach is firmly located within a qualitative method of investigation (Street, 2004). In the sections that follow, each ontological and epistemology approach to teaching and learning is explicated in detail.

2.2. The Academic Socialization View

The dominant perspective in teaching and learning research (both internationally and in South Africa) has been the "approaches to teaching and learning" or academic socialization theory. The widespread adoption of the academic socialization view has resulted in the complexities of sociohistorical contexts being ignored, has been linked to arguments against increasing participation, and the theory has been used to argue that standards in higher education are being lowered (Haggis, 2003). Work on this model has occurred in the United Kingdom (Entwistle & Entwistle, 1991; Ramsden, 1979, 1992), in Australia and Hong Kong (Biggs, 2001b; Gow & Kember, 1990; Trigwell & Prosser, 1991; Trigwell, Prosser & Waterhouse, 1999) and in South Africa (Entwistle, Meyer & Tait, 1991; Meyer, 1991; Meyer & Muller, 1990; Pickworth, 2001).

Although debate has occurred concerning the differences between the British and Australian groups of theorists, the theories that they propose have striking similarities. The approaches to teaching and learning perspective is based on the constructivist view of knowledge generation of Marton and Saljo (1976). Marton and Saljo's (1976) conceptualisation separates the individual's conceptualisation of the learning process, the approach adopted towards learning, and the perception of the learning environment. The approaches to learning theory incorporates this three-factor account

of teaching and learning (Biggs, 1987). Firstly, presage factors encompass a certain degree of prior *knowledge* and certain forms of *abilities* (Biggs, 1987). Secondly, process factors include the actual learning or studying completed by the student, which concern *motive* and *strategy*. Thirdly, product factors concern the outcomes of learning (Biggs, 1987). Both theories incorporate the Martin and Saljo's (1976) separation of the learning process, which relates to both the lecturer's constructions of teaching, and the students' constructions of learning (Ramsden, 1992). Thus, from the outset, there is a clear division between lecturers and students, and a separation of teaching and learning.

Students are thought to adopt three primary ways of approaching university study that involve a combination of both motive and strategy (Biggs, 1987). Firstly, the *surface* motive is "instrumental: main purpose is to meet requirements minimally: a balance between working too hard and failing", and the surface strategy "is reproductive: limit target behaviour to bare essentials and reproduce through rote learning" (Biggs, 1987, p. 11). This manner of learning is also conceptualised as a reproducing orientation (Dart & Clark, 1991; Entwistle, Meyer & Tait, 1991; Main, 1980; Meyer & Muller, 1990; Wessels, 2001). Students are thought to adopt a surface approach if they perceive that course assessment encourages memorization and reproduction of facts (Trigwell, Prosser & Waterhouse, 1999). Therefore, the theory does include the role of the lecturer in fostering undesirable forms of learning. However, the lecturer is still positioned more positively than the students. A surface approach is a passive approach to learning (Entwistle & Entwistle, 1991) in which regulation of learning is external (Wessels, 2001). Students may be able to recall a series of facts from the textbook, but the guiding principles of academic disciplines are not fully understood (Entwistle & Entwistle, 1991). This distinction between facts and guiding principles is similar to Bloom et al.'s knowledge of specifics and knowledge of abstractions and generalizations (Bloom et al., 1956). The schooling system, both internationally and in South Africa, is thought to encourage this surface approach (Claxton, 1990; de Groot and Dison, 1996; Dison and Pinto, 1995; Dison and Rule, 1996; Dunstan & Frescura, 2000; Entwistle & Entwistle, 1991).

Secondly, a *deep* motive is "intrinsic: (students) study to actualise interest and competence in particular academic subjects". A deep strategy is "meaningful: read widely, interrelate with previous relevant knowledge" (Biggs, 1987, p. 11). Arguably, this could be a description of the role of the lecturer. Academics, one would hope, have an intrinsic interest in their particular academic subjects and are familiar with the current state of knowledge in their specific areas of interest. Unlike the surface approach, students with a deep motive are described in the most positive theoretical terms utilised in the theory. A deep approach is an active approach to learning (Entwistle & Entwistle, 1991; Meyer & Muller, 1990; Trigwell et al, 2001) and students are able to regulate their own learning (Dart & Clark, 1991). The construction of personal meaning by students is thought to be central to this approach (Sheppard & Gilbert, 1991; Wessels, 2001). Students adopt a deep approach if they clearly understand the goals of learning (Trigwell et al, 2001). Teaching is perceived to be of a high quality (Meyer & Muller, 1990; Trigwell et al, 2001), in which students have choices in terms of what is to be learned (Entwistle & Entwistle, 1991; Meyer & Muller, 1990; Trigwell et al, 2001).

Thirdly, the *achieving* motive "is based on competition and ego-enhancement: obtain highest grades, whether or not the material is interesting", while the achieving strategy "is based on organizing one's own time and working space: behave as a 'model student'" (Biggs, 1987,p. 11). Students who adopt an achieving approach are described in both positive and negative ways. While these students are not especially interested in the academic subject, they are motivated by the need for achievement (Sheppard & Gilbert, 1991) or an intention to excel (Dart & Clarke, 1991). Consequently, they adopt active strategies for learning. The strategic student organizes both time and knowledge in order to achieve the most with the least amount of effort (Entwistle, Meyer & Tait, 1991). The use of the descriptor "model students" with regard to students who adopt an achieving approach (Biggs, 1987,p. 11; Gow & Kember, 1990, p. 309) is somewhat confusing. One questions whether the deep approach student also deserves the descriptor "model student". After all, the student who adopts a deep approach is an interested active learner, who reads widely and integrates information. It seems somewhat ontologically contradictory that the term "model student" is reserved for the student who is not particularly interested in a subject, but has good organization skills and is an active learner who wants to

succeed. In addition, the two different motivations (achievement and interest) do not appear to make a difference to the outcomes of learning, defined as marks obtained in the course. There is, thus, a lack of conceptual clarity regarding the distinction between theoretical terms. The theoretical confusion is compounded by a lack of sociohistorical description, which would, surely, inform the lecturer's understanding of a "model student".

Thus, the categorisation of students by the dominant international groups of researchers is strikingly similar and there appears to be little ontological disagreement about the nature of student learning in higher education. Students can easily be categorised, and this categorisation is somewhat disparaging in the instance of the surface and strategic approaches. In this "academic socialization view" (Street, 2004, p. 14), lecturers are most concerned with producing clones of themselves (Haggis, 2003). Accordingly, students should be "adequately" or "sufficiently" motivated to learn; aware of, and perform the necessary learning behaviours; and adapt easily to the culture of learning in higher education (Street, 2004). The explanation for the failure of the student to adopt a deep approach lies predominantly within the individual student (Lea & Street, 1998).

The relationship between teaching and the student's approach to learning is also problematic. Biggs (1999) argues that the constructive alignment of teaching outcomes and assessment methods will facilitate a deep approach to learning. However, when lecturers adopted teaching strategies that were thought to foster a deep approach to learning, the opposite effects were found in that more students adopted a surface approach (Haggis, 2003). The uncritical adoption of the theory has occurred "despite research results continually showing that changing approaches is extremely difficult" (p. 92) and "it is almost impossible to 'induce' a deep approach if it is not already there" (Haggis, 2003, p. 94). This contradiction in the practical application of the theory results in a disjunction between the stated goals of higher education and its "theories in use" (Haggis, 2003, p. 92). However, the disjunction has been largely overlooked and the firm belief still persists that teaching and assessment practices will change both the perceptions and approaches of students at whom they are targeted.

Although this theory was generated from interviews and samples of classes in Australia and the United Kingdom, its application is quantitative in nature. The early empirical testing of the theory related to the reading of academic texts only, but subsequent development has been characterised by an over-extension of the primary theory and related to virtually all aspects of the academic enterprise in higher education (Haggis, 2003). When the theory is applied to diverse contexts and the fundamental assumptions of the theory were found not be upheld (Gow & Kember, 1990), the response has merely been to alter the definition of the central terms of the theory (Haggis, 2003). The epistemological debate concerning the differing viewpoints has focussed on the development of two quantitative questionnaires that assess student perceptions, namely, the Approaches to Studying Inventory (Ramsden and Entwistle from the United Kingdom) or the Study Behaviour Questionnaire (Biggs from Australia). Meyer's (1990, 1991) work in South Africa has centred on factor analyses of Biggs' (1987) test items, rather than how the primary theoretical basis relates to the material teaching and learning conditions that have a specific sociohistorical location.

A reductionistic score on a psychometric test is utilised in order to understand the relationship between the primary ontological expositions (motive and strategy resulting in an approach to a learning task). This raises the question about what two scores on two separate tests can tell us about the real, material circumstances of teaching and learning. The categorization of students does not account for both the discourse and literacy circumstances present in the representation and production of meaning (Gee, 1999; Lea & Street, 1998). The strategies that students adopt in their learning are inextricably linked to epistemological and ontological frameworks that are discipline-specific, and thus, "academic" skills mean different things in different learning contexts (Street, 2004). Thus, no cohesive construction of the student's understanding of the specific learning situation is presented. Indeed, there is little analysis of the actual tasks presented to the students and the means by which students are expected to complete these tasks. In addition, no account of the lecturer's constructions of the tasks themselves, and how the task should be completed, is presented. Thus, both specific teaching and learning practices and relations of power between the lecturer and students are ignored in this theory, which has decreasing

value in mass university systems (Street, 2004) because it does not investigate the real issues that face students in today's universities (Haggis, 2003).

2.3. The Academic Literacies Model

In contrast to the approaches to learning perspective is the academic literacies perspective of the British theorists, Street (2004), Gee (2001) and Ivanovic (1998). Because the approaches to learning theorists conceptualise academia as a single culture, discourse and literacy practices of academic disciplines are ignored (Street, 2004). The term "literacy" is understood as "the communicative repertoire that have traditionally been described as reading and writing" (Street, 2004, p. 12). In the academic literacies theory, this traditional conceptualisation is extended to "ideological literacy" (Street, 2004, p. 17), which is understood as

> …neither neutral nor technical, but is a social practice that is "always contested, both its meanings and its practices, hence particular versions of it are always 'ideological', they are rooted in a particular world-view and a desire for that view of literacy to dominate and to marginalize others" (Gee, 2001, p. 112). *Sociocultural* factors are primarily important in the notion of ideological literacy and investigations attempt to understand the discourse and resultant identities that emerge in discipline-specific contexts.

The academic literacies model attempts to provide an account of the sociocultural context of teaching and learning and values less individualistic ways of understanding teaching and learning at universities (Barton & Hamilton, 1998). Learning in higher education is considered to be a distinctly new way of organising knowledge for students (Lea & Street, 1998). The epistemological focus is on social practices, which are conceptualised as "the activities and participation and interactional frameworks through which students form social relationships, enact and recognise specific socially-situated identities, and create and transform knowledge in a given 'domain'" (Gee, 1999, p. 89). Social practices need to be understood as communities of practice, in which individuals form into groups, not on the basis of a shared gender, racial, or cultural framework, but in terms of a common enterprise (Gee, 2001; Wenger, 1999), for example becoming familiar with Psychological theory and terms.

The ways that Social Anthropologists have defined differences between people include the notions of "primitive" and "modern" culture, " 'potentialities' of literacy and 'restricted' literacy" (Goody, 1968, 1977, cited in Street, 2004, p.3) and "ritualised' literacy" (Clammer, 1976, in Street, 2004, p.4). In the context of higher education, the notion of university literacy may be appropriate. Attendance of university is no longer restricted in South Africa in terms of race. However, universities have additional entrance requirements, e.g. a Matric exemption[3] or a high number of Matric points in the instance of all the Health Sciences degrees with the exception of Nursing. In addition, the university system in South Africa is still restricted by economic status, which is the current historical form of marginalization. Thus an individual can attend university if they can find a way to pay university fees, e.g. family or a bank loan. There has also been a reduction in the number of government bursaries for previously disadvantaged students. The term "university literacy" is ritualised in that reading and writing follows a distinct pattern of actions or behaviour, e.g. reading widely and writing the academic argument.

Street (2004) distinguishes between the ontological terms "literacy events" and "literacy practices". The debate relates to methodological and empirical considerations (epistemology) and the question is how to conceptualise literacy practices rather merely observe literacy events, thus how the "limits of the local" may be avoided (Street, 2004). Brandt and Clinton (2002, p.1)

> wonder if the new paradigm sometimes veers too far in a reactive direction, exaggerating the power of local contexts to set or reveal the forms and meanings that literacy takes. Literacy practices are not typically invented by their practitioners. Nor are they independently chosen or sustained by them. Literacy in use more often than not serves multiple interests, incorporating individual agents and their locales into larger enterprises that play out away from the immediate scene.

The academic literacies theory has been adopted in most of the South African universities. In terms of postgraduate study, guidelines for the supervision of research

[3] The matric exemption was based on the student's performance in the school-leaving exams and signified that entrance to higher education was possible. This system of ranking students exiting the school system, is been altered for students entering the university in 2009.

projects problematise academic writing skills (Holtzhausen, 2005) and relate problems in postgraduate writing skills to language (Charlesworth, Grossman, Hadingham, Janks, Mycock & Scholes, 2006; Holtzhausen, 2005). The genre approach in academic literacy development has been utilised in Honours courses in Education (Thomson, 2005). Masters research projects in Psychology have encompassed a socially distributed knowledge system that included supervisors and other students (le Grange & Newmark, 2002). Problems with writing have been identified as one of the contributing factors in low throughput rates for Masters and Doctoral courses (Rochford, 2003). Postgraduate mentoring programmes that focus on academic or "research writing" have been developed in distance education (Naidoo & Tshivhase, 2003). Also, in distance education, higher and lower ranking academic staff's understanding of the roles of the student and supervisor has been investigated (Lessing & Schulze, 2002). In terms of undergraduate teaching and learning, academic competencies, including literacy and numeracy skills, are assessed in admission tests (Koch & Foxcroft, 2003). The notion of "multiple literacies" encompasses the role of technology in teaching and learning in higher education (Hugo, 2003, p.46). Literacy practices, which are contextual and transformative, have been related to the ethos of multiculturalism (Narsee, 2001). The importance of the notion that academic writing occurs in a "socio-political context" has also been highlighted (Thomson, 2005, p. 23).

In academic literacies theory, an individual's identity does not exist independently, but merges with other facets of social practice, specifically social relations (Ivanovic, 1998). Social relations are constructed as power relations and, thus, identity is constructed through the machinations of hierarchy and status (Ivanovic, 1998). The focus on sociocultural conditions has a long history that emerges from the work of the Neo-Vygotskians Wertsch (1987), Cole (2005a), Bruner (1987), Lave (1993) and Wenger (1999). It is thus necessary to examine firstly, the ontological and epistemological claims made by Vygotsky, and secondly, the Neo-Vygotskian interpretation of these claims.

2.4. The Vygotskian Theory of Teaching and Learning

An ontological and epistemological stance to teaching and learning that incorporates the dialectical nature of the development of critical thought is required to address the challenges in higher education, which are themselves epitomised by conflict. One such perspective of teaching and learning is the work of L.S. Vygotsky, a Russian theorist and methodologist, upon which the academic literacies model has its foundations.

The central value of Vygotsky's ideas is both the method that he used to investigate psychological problems and the conflictual nature of his concept of development. Vygotsky, writing in post-Revolutionary Russia, could easily, and perhaps incorrectly, be located within a Communist interpretation of Marx (Bruner, 1987; Glick, 1997; Ratner, 1998; Rieber & Carton, 1987, 1993; Rieber & Wollock, 1997; Robbins, 1999). It is Vygotsky's own location within history that has sparked much ideologically expedient debate concerning Vygotsky as a psychologist or Vygotsky as a methodologist (e.g. Davydov & Radzikhovskii, 1985). Because it is in Vygotsky the methodologist that Marx's ideas are the most apparent, most Western Vygotskian theorists have focussed almost completely on the interpretation of Vygotsky the psychologist, e.g. Wertsch (1985,1987) (Elhammoumi, 2002).

To focus on one or the other aspect (i.e. methodology or psychology) is to not fully understand Vygotsky's ideas because, for Vygotsky (1987, 1993, 1997a, 1997b, 1998, 1999), epistemology and ontology were inextricably linked. Newman and Holzman (1993) have labelled the relationship between epistemology and ontology as Vygotsky's "tool-and-result" framework. Newman and Holman (1993, p. 11) highlight "Vygotsky's radical unwillingness to make a sharp distinction between the substantive content of psychology- what it is about- and its more formalistic (for some, meta-psychological) method- how it is done". Therefore, Vygotsky's "investigations are premised on the materiality of these mental processes; they are activities, simultaneously process and product, tool-and-result" (Newman & Holzman, 1993, p.63). The discussion that follows separates epistemological and ontological concepts in order to clearly present problems of interpretation, which has obscured the role of dialectical historical materialism, or the Marxist method, in

Vygotsky's writings. However, it should be remembered that, for Vygotsky, these concepts are directly related and, as such, reference to ontological terms will be incorporated into the discussion of epistemology and vice versa.

2.4.1. *Vygotsky's Epistemological Model*

"I want to find out how science has to be built, to approach the study of mind having learned the whole of *Marx's method*" (Vygotsky, 1978, p.8).

The role of Marxist thinking in Vygotskian work is controversial. The Marxist method to which Vygotsky refers (dialectical historical materialism) involves the analysis of the processes of development through the juxtaposition of material conditions in order to create a complete account of development. Forces that have a role in development are placed in opposition to one another. The notion of a unity is central to method because juxtaposed concepts cannot be viewed in isolation, but rather, it is the interplay of the juxtaposed concepts that provides the explanation (Newman & Holzman, 1993). Analytical units are established that are vital and irreducible parts of a whole. It is the relationship between the analytic units that explains the whole. For Marx, this relationship was characterised by conflict and opposition (Newman & Holzman, 1993).

The social- scientific crux of Marxist thought is known as historical materialism (Shaw, 1983) and represents Marx's attempt to present a "scientific vision of the evolution of man's social relations" (Shaw, 1978, p. 2). Marx's classic theory of society has human history[4] as its central subject (Tucker, 1978) and it is clear from his analysis of diverse societies at different points in time that Marx used the concept of "history" to demarcate "…the living, sensuous, continuous, indivisible totality of human existence, the complex yet describable process of development under definite conditions" (Newman & Holtzman, 1993, p. 13). These definite conditions were the tangible, concrete and real conditions of human existence and development (Lloyd, 1993). Marx's materialism (Cohen, 1978) was based on Feuerbach's humanistic transformation of Hegel's idealist conceptions (Tucker, 1978). Marx's analytic

[4] From 'historia' meaning narrative, from 'histor' meaning learned (Hawker, 2001,p. 607)

subject was, therefore, "a real state of affairs" (Newman & Holtzman, 1993, p. 13), in which there is a "complicated but describable social arrangement" that gives rise to development (Newman & Holtzman, 1993, p. 13). Examples of the real conditions of human development concerned artefacts, commodities, tools, concepts, conditions and relations, i.e. actual, empirically determinable processes (Giddens, 1995).

"(H)istorical materialism was itself dialectical in that human historical process showed a revolutionary pattern of development through opposition and conflict" (Tucker, 1983,p. xx). Both ontologically and epistemologically, historical materialism is characterised by the existence or action of opposing social forces (Popper, 1966). These social forces are dynamic in the sense that constant activity and change typify the process or system (Shaw, 1978). The dialectical nature of historical materialism is epitomized in the central explanatory principle that Marx used to account for the development of society (Shaw, 1978). The dialectical relationship between productive forces and relations of production underlies historical change/revolution/ development (Shaw, 1978) and particular social relations are correlated with a definite stage of development of the material productive forces (ontology) (Marx, 1857, in Tucker, 1978). The notion of a unity is central to method because juxtaposed concepts cannot be viewed in isolation, but rather, it is the interplay of the juxtaposed concepts (epistemology) that provides the explanation (ontology) (Newman & Holzman, 1993).

While Marx attempted to analyse society, Vygotsky's analyses relate to the human mind, centrally in terms of thinking and speech (Vygotsky, 1978). Ontologically, Vygotsky argued that thinking and speech "have been conceptualised as operating in parallel with no mutual interdependence" (Vygotsky, 1987, p. 48). Epistemologically, he reiterated his allegiance to the Marxist method, "(t)he methods we intend to apply to our investigation of the relationship between thinking and speech permit a synthetic analysis of the complex whole" (Vygotsky, 1987,p. 48). In *Mind in Society* (1978), Vygotsky explicitly stated that the method used to approach problems is simultaneously a prerequisite (a necessary condition) and a product (a result from an action or process).

The fundamental method of placing concepts alongside one another in order to create a unified of explanation characterises both Vygotsky's ontological and epistemological frameworks. Examples of Vygotsky's unified juxtapositions include methodology/ psychology (Vygotsky, 1997a, 1997b); thinking/speech (Vygotsky, 1987); mind/society (Vygotsky, 1978); internal/external; social plane/individual plane; interpsychological/intrapsychological (Vygotsky, 1929, 1987, 1993, 1997a, 1997b, 1998, 1999); learning/ development (Vygotsky, 1929, 1993, 1998); and scientific concepts/ everyday concepts (Vygotsky, 1998).

When Vygotsky was attempting to understand the nature of consciousness, he was doing so in an attempt to distinguish between animal and human behaviour in a different way to the Pavlovian (Behaviourist) understanding that dominated Russian thinking at the time (Vygotsky, 1987). Vygotsky considered conscious mental processes and functions to be volitional, in that they moved beyond the constraints of stimulus-response bonds (Vygotsky, 1929, 1987). However, Vygotsky (1987) was also opposed to the notion of consciousness or mental functioning being accounted for or explained by consciousness itself, his central criticism of the psychoanalytic approach. In so doing, Vygotsky was attempting to move away from a circular form of logic, to an interpretive method of thesis-antithesis-synthesis (Gindis, 1995) or dialectical historical materialism. Vygotsky's search for a Marxist scientific method resulted in an epistemological stance in which a rational and objective observer would be able to determine the path of the development of the mind. In this conceptualisation there was no epistemological space for a reflexive description and analysis of his ideological practices. Vygotsky's thinking was itself a product of particular sociohistorical circumstances.

2.4.2. *Vygotsky's Ontological Model*

The current interpretation did not focus on Vygotsky's most popular writings, namely *Thinking and Speech* and *The Development of the Higher Mental Functions*. Rather, the *Collected Works* (1987- 1999) have been read with a focus on Vygotsky's fundamental ontological concept of sociohistorical development. Vygotsky provided a plethora of interwoven ontological concepts that are a product of his allegiance to the Marxist method of dialectical historical materialism. The epistemological framework

that he used to investigate the development of mind (ontology) centres on the opposition of forces (dialectical) in a developmental process that is continuous (historical) and describes a real state of affairs (materialism). The concept of sociohistorical development is a "complex whole" that has been partitioned into a number of "units". Units are "products(s) of process(es) that possess all the basic characteristics of the whole" (Vygotsky, 1987, p. 46) and are "vital and irreducible part(s) of the whole" (Vygotsky, 1987, p. 46). Examples of these units include the social and the historical in the process of change; the natural and the cultural lines of development; the Zone of Proximal Development that encompassed the ideas of actual and potential development; tasks and tools; scientific and everyday concepts; and instruction and development.

Vygotsky defined development as

> …a complex dialectical process that is characterised by complex periodicity, disproportion in the development of separate functions, metamorphoses or qualitative transformation of certain forms into others, a complex merging of the process of evolution and involution, a complex crossing of external and internal factors, a complex process of overcoming difficulties and adapting (Vygotsky, 1997b, p. 99)[5].

Vygotsky provided a complex understanding of development in which history and culture (the social) were fundamental interacting components. He was emphatic about the importance of history in understanding development and explicitly stated, "…the historical study of behaviour is not an ancillary aspect of theoretical study, but rather forms its very base" (1978, pp 64-65). Vygotsky also consistently underlined the interconnectedness of development, history and culture and referred to "developmental history…the interconnected, dynamic, unified whole" (Vygotsky, 1993, p. 278)[6]. Thus, Vygotsky's genetic or instrumental method rests on the assumption that, in order to understand the development of any higher mental

[5] The current exposition of Vygotskian ontological principles has attempted to quote the original work where relevant. This is an attempt to clearly position the current researcher in terms of an interpretation of Vygotsky's ideas.
[6] See also Vygotsky (1997b, p. 221,229; 1999, p. 40)

function, the researcher would have to analyse the process at the start of formation (Vygotsky, 1997b)[7].

The aim of developmental processes was a more advanced state of mental functioning (Vygotsky, 1978). Consciousness, as a uniquely human function, emerges as a result of the interaction between internal mental functions and cultural tools (Vygotsky, 1978). Vygotsky believed that psychological development should be explained in terms of the differentiation and development of social systems of both interaction and action in which the individual participated, and subsequently to cultural tools to which the individual was exposed (Vygotsky, 1987). For Vygotsky, "(a)ll higher mental functions are the essence of internalised relations of social order, a basis for the social structure of the individual" (Vygotsky, 1997b, p. 106). The moving power of development is the external social world, but the individual plays an active role. Accordingly, "…every new form of cultural experience is not simply external, …but the organism, assimilating external influences, assimilates a whole series of forms of behaviour, and assimilates them depending on the degree of his mental development" (Vygotsky, 1997b, p. 223). The external, social world creates a state of conflict within the individual, which in turn, moves development forward depending on whether or not this conflict is resolved.

It is in the concept of development that Vygotsky's use of a dialectical historical materialist method can be evidenced. Adding to his plethora of ontological terms that were utilised to explicate the unified whole of sociohistorical development, Vygotsky divided development into two lines, namely, the natural line and the cultural line (Vygotsky, 1929). The natural line of development refers to "the processes of genetic organic growth and the maturation of the child" (Vygotsky, 1929, p. 415), while the cultural line included the "improvement of the psychological functions, the working out of new methods of reasoning, the mastering of the cultural methods of behaviour" (Vygotsky, 1929, p. 415). Vygotsky's understanding of development emphasises the juxtaposition of these two types of development in order to understand the series of

[7] This notion is illustrated by Vygotsky's focus on the development of speech and Luria's Uzbekistani studies which Vygotsky and his colleagues viewed as a unique opportunity to determine how the peasant population could be acculturated into the new communist way of life (Luria, 1976).

actions involved in the process of development (Vygotsky, 1929). It was both organic development and the "mastery of the use of tools" (Vygotsky, 1978, p. 21) that determined an individual's system of actions or activity. Vygotsky proposed an active role for individuals and it was the interaction between the "natural" and the "cultural" that resulted in development. Maturation constituted a "condition" of the development of consciousness, while social interaction, or the cultural line of development constituted the "moving power" (Vygotsky, 1929, p. 423).

Vygotsky gave analytic primacy to the cultural line of development, which he defined as "mastering methods of behaviour which are based on the use of signs as a means of accomplishing any particular psychological operation" (Vygotsky, 1929, p. 416). Therefore, the cultural line of development had as its foundation "… mediated activity, the use of external signs as a means of further development of behaviour" (Vygotsky, 1997b, p. 106). Activity is of central importance to the understanding of cultural development (Vygotsky, 1987) and may be defined as "ordinary day-to-day, hour-to-hour, human (historical) activity" (Newman & Holzman, 1993, p. 46). Newman and Holzman (1993) argue that because Vygotsky was locating himself within a Marxist framework, his notion of activity is one that is "revolutionary". The notion of revolution was "a particular action, a changing of the totality of circumstances (historical 'scenes') of human existence" (Newman & Holzman, 1993, p. 46). For Vygotsky (1987), this revolutionary activity occurred when a lower level of development or functioning was transformed or revolutionized into a higher form of development or psychological functioning.

Vygotsky used the concept of the sign as an organizing principle of behaviour and this is another ontological term that is directly related to his notion of sociohistorical development (Vygotsky, 1999). Vygotsky elucidated the role of the sign as being "…an auxiliary[8] means of a cultural method" (Vygotsky, 1929, p. 421). Signs are thus the methods by which we, firstly, create and, more importantly, share or induct new members into, a particular culture or way of thinking (Vygotsky, 1999). In *Thinking and Speech* (1987), Vygotsky discussed social interaction as the moving power of psychological development. It is the unit of social interaction that encompassed

[8] "providing supplementary or additional help and support", from the Latin 'auxilium' meaning 'help'" (Hawker, 2001,p.11)

Vygotskian thoughts about mediation - "… some form of *mediation is necessary for social interaction*…"[9] (Vygotsky, 1987, p. 48). Simply put, Vygotsky was attempting to discuss the relationship between his juxtaposed analytic units through the concept of mediation, which represent the means for any process of development. "Social interaction based on rational understanding, on the intentional transmission of experience and thought, requires some *system of means*" (Vygotsky, 1987, p. 48). For Vygotsky (1987), this system of means, namely signs or semiotic tools (e.g. language), was used to explain the development of higher mental functions. Higher mental functions "… are constructed on the basis of using stimuli-means (signs) and because of this, they have an indirect (mediated) character" (Vygotsky, 1999, p. 40). The cultural line of development was made possible through the use of symbolic systems.

Vygotsky used many terms to describe the social and the historical, including the concepts of the General Genetic Law of Cultural Development and the Zone of Proximal Development (ZPD). It is in these two ideas that the juxtaposition of external/ internal, interpsychological/ intrapsychological, intermental/ intramental and social plane/ individual plane create a unified system of analysis and understanding of development. His ontological concept of the General Genetic Law of Cultural Development epitomises the conflictual relationship between the social (external) and the historical (individual).

> Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane, and then on the psychological plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category. We may consider this position as a law in the full sense of the word, but it goes without saying that internalisation transforms the process itself and changes its structures and functions. Social relations among people genetically underlie all higher functions and their relationships (Vygotsky, 1987, p.163).

The epistemological notion of opposition was emphasised in Vygotsky's conceptualisation of development in which conflict between the social and the

[9] Italics appear as in the original

historical has a central role. Vygotsky (1997a) underlined the role of conflict in the development of higher mental functions,

> Introduced into the history of the child development at the same time is the concept of conflict, that is, contradiction or clash between the natural and the historical, the primitive and the cultural, the organic and the social. … the old form is forced out, is sometimes completely disrupted…(Vygotsky, 1997b, p. 221-222).

The notion of conflict in many different ways, for example, "a continuous contradiction between primitive and cultural forms" (Vygotsky, 1997b, p. 222), "crucial and spasmodic changes" (Vygotsky, 1997b, p. 99), a "struggle" (Vygotsky, 1997b, p. 221), a "…profound conflict in the transition" (Vygotsky, 1997b, p. 223), "a discontinuity" (Vygotsky, 1997b, p. 223), "… the break, the chasm" (Vygotsky, 1997b, p. 225), "…a radical change of direction in development and subsequent movement of the process to a completely new plane" (Vygotsky, 1999, p. 42), "a confrontation of developed cultural forms of behaviour which confront the child and primitive forms that characterize his own behaviour" (Vygotsky, 1997b, p. 99), and "… the new stage arising not out of unfolding potentials contained in preceding stages, but out of actual confrontation between the organism and the environment and an active adaptation to the environment" (Vygotsky, 1997b, p. 100).

The role of conflict between the social and individual planes is important in the metaphor of the Zone of Proximal Development (ZPD) or "zona blizhaishego razvitiya" (Wertsch & Stone, 1987, p. 164). The ZPD constitutes the arena in which the social and historical interact (Daniels, 1996) and was defined by Vygotsky (1978, p. 86) as the margin between an individual's "actual developmental level as determined by independent problem solving" (historical form of thinking) and the more advanced level of "potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (cultural form of thinking). In the ZPD, what was of fundamental importance was that the child was not capable of solving the task set by the adult independently, or using his/her current level of ability. Therefore, the explicit point made by Vygotsky is that tasks need to be crafted so that they are above the current ability of the child, thereby creating a state of conflict (Vygotsky, 1929; 1987; 1993; 1997a; 1997b; 1998; 1999).

This was the initial moving force of development. However, setting tasks above the current ability of the child was a necessary, but insufficient, condition of development. The problem-solving strategies or tools provided by the more experienced other was another condition of development. The adult, or more capable peers provided the strategies or tools that could be utilised to solve the new task. What was of central importance was that the tools that were slightly above the child's current level of ability (Vygotsky, 1929; 1987; 1993; 1997a; 1997b; 1998; 1999). Tools that were designed below the child's current level of ability had already been appropriated by the child. If tools were too far above the child's current ability would not be appropriated. Whether or not the child actually completed the new task was dependent on how successfully the child was able to appropriate the new tool that was necessary for the solution of the task. The level of tool appropriation was dependent on the child's current mental state (Vygotsky, 1929; 1987; 1993; 1997a; 1997b; 1998; 1999). Thus, Vygotsky's central explanation of development provides direct evidence for his use of the dialectical historical materialist method, since there are dialectical relationships between tasks and tools, between the child's current level of ability and tool appropriation and, thus, between the individual and social planes.

For Vygotsky (1987), signs (e.g. language and decision-making strategies) function as the semiotic system through which the external world was transformed into the internal. Signs and tools are two facets of the same phenomenon. Signs are formulated as being psychological in nature and as "alter(ing) the entire flow and structure of mental functions" (Vygotsky, 1981, p. 137). In contrast, tools are considered to be technical, altering the "process of natural adaptation by determining the form of labour operations" (Vygotsky, 1981, p. 137). The polemic use of tools, signs and instruments as interchangeable in the literature (Engestrom, 1996; Davydov, 1988; Lave, 1993; Wenger, 1999; Wertsch, 1987) is perhaps an acknowledgement that language, as a symbolic system, functions as a tool in learning. This interchangeability may also reflect the dominance of symbols in Western interpretations and problems with the Russian to English translation of Vygotsky's writings.

The use of the word "sign" appears to indicate the inward movement of objects in the social plane to the individual plane, while the use of the word "tool" indicates an

outward movement from the individual in reaction to the environment (Daniels, 2001). This issue of meaning is further complicated by the distinction that some theorists have made between psychological and technical tools (Daniels, 2001). It is possible that Vygotsky's (1987) central idea of the tool or sign serves to incorporate instruments that are designed for use by students in order to move them into a more advanced state of development or problem solving strategy that exist within the social plane.

In the current study, the word "tool" is used in order to explicitly denote an implement that may be anything that is used as a means of achieving an end. This interpretation is more aligned to the Russian (Karpov, 2006) rather than Western (Wertsch, 1987) interpretations of Vygotsky's work. The use of a tool, and its implicit characteristics, serves to introduce the student to new functions and processes connected with the use of the particular tool. Tools may potentially, but not necessarily, reduce the workload of the individual student through their influence on natural processes, i.e. by either abolishing or making these natural processes unnecessary (Vygotsky, 1987). Tools alter the characteristics and course of mental processes. These instruments of learning re-create and re-organise the entire structure of behaviour (Vygotsky, 1987).

It was in the concept of the tool functioning to re-organize behaviour that Vygotsky separated himself from Behaviourist theory. Vygotsky (1929) represents this re-organization of behaviour in the following manner (see Figure 1). The dotted line between the task and the response to the task represented the explanation provided by the Behaviourists, namely, a simple stimulus-response bond. What Vygotsky added to this was the cultural tool, which altered the way in which tasks were understood and how problem-solving occurred (as depicted by the solid lines). What is of central importance to Vygotsky's ideas is that the new cultural tool fundamentally alters the process of responding to tasks. Thus, his schematic representation is distinct from the stimulus-response bonds described by the Behaviourists. Vygotsky was attempting to describe how the use of cultural tools becomes automatic in an individual's

functioning. An example of this is how the use of language to communicate because an automatic function (Vygotsky, 1929; 1997b[10]).

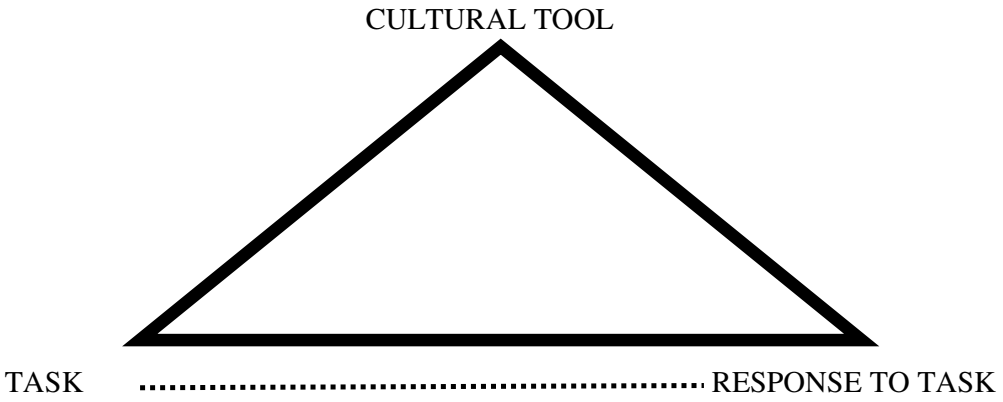

Figure 1. From "The Problem of the Cultural Development of the Child", by L.S. Vygotsky (1929), *Journal of Genetic Psychology*, *6*, p.420.

Vygotsky's understanding of tools is a further example of the epistemological juxtapositioning of two concepts (task and tool) in order to create unity (change or response to the task). The tool used by the individual could not be separated from the response to the task using that tool. If two individuals used two different tools in order to solve the same problem, then their responses to the same task would be qualitatively different (Vygotsky, 1987). Newman and Holzman (1993) have labelled this juxtaposition of the task, tool and response as the tool-and-result framework. Thus, for both Vygotsky (1987) and Newman and Holzman (1993), tools utilized and results achieved with these tools are inseparable.

The purpose of tools is the evolution of a lower mental function to a higher level. The mastery of any natural mental function is facilitated by the mastery and utilization of a tool (Vygotsky, 1987). The description of an individual's use of tools allowed Vygotsky to link the notion of cultural tools to development. Firstly, Vygotsky's (1929) initial stage of development is "primitive behaviour or natural psychology"

[10] It should be noted that Vygotsky's triangular formation is presented differently in the translations of 1929 and 1997b. The representation here reflects the 1929 article. In the 1997b article, the triangle is inverted so that the cultural tool is at the base. The 1929 formulation has been used because it better reflects the notion that the cultural tool advances thinking to a higher state.

(Vygotsky, 1929, p. 424) in which the child is not aware of, and does not make use of cultural tools. Secondly, in the stage of "naïve psychology" (Vygotsky, 1929, p. 425), the child makes use of the tool, but is unaware of how the tool functions. Thus, "(t)he child grasps very quickly the method which we suggested, but does not usually know by what means the (tool) helped him" (to perform the task) (Vygotsky, 1929, p.425). This stage marks the start of the process of tool use. Thirdly, in the stage of external sign and external operation, the child is able to use the tool and have an understanding of how the tool helps to complete the task. However, this understanding and use of the tool occurs on the external or social plane only. Thus, the child "solves the internal mental task on the basis of an external sign…e.g. counting on fingers" (Vygotsky, 1929, p.426). During the fourth, or rooting stage, the tool is both internal and external in nature and this stage is "characterised by the movement of the external operation to the internal plane, by the transformation of the external operation into an internal operation" (Vygotsky, 1929, p.426). Vygotsky argued that adult functioning would be a more developed state because the tool would operate on an internal level only (Vygotsky, 1929).

The concept of cultural tools firmly locates Vygotsky's work within a dialectical historical materialist framework and constitutes another ontological concept that assisted him to explicate the notion of sociohistorical development. Tools are used to explicate a concept or thought process. The primary tool used is dialogue in both teaching and learning and everyday situations. Dialogue (external) between the lecturer and student (guidance/instruction) and between students (collaboration) enables the student to reflect (internal) on the dialogue (Wertsch, 1985). Vygotsky (1978) defined this reflection (mental process) as the resolution of contradictions. This resolution occurs in the following manner, thesis (everyday concept) → antithesis (scientific knowledge) → synthesis (the ability to use scientific concepts in the solution of relevant contextual problems) (Bruner, 1987).

Vygotsky was tasked with the indoctrination of Communism during the Leninist era. Consequently, the purpose of education or instruction was not to create harmony within the individual, or to perpetuate existing historical forms of behaviour, but a mechanism of acculturating the individual into a particular form of thought, (Vygotsky, 1993). This form of thought was the Communist way of life and Vygotsky

was emphatic about the nature of education – "(t)he central idea is that education is viewed as a part of social life and as preparation for the child's participation in this life" (Vygotsky, 1993, p. 119). This ideological focus on education resulted in additional ontological terms that explicated the concept of sociohistorical development, namely on the role of instruction in human development. Central to his focus on instruction and development was the dialectic, and thus, the additional ontological terms of scientific and everyday concepts, a clear adoption of the Marxist method. Vygotsky's adoption of the Marxist method is reflected by his two central assumptions. Firstly, scientific concepts and everyday concepts are two distinct constructs and incorporated the relationship between the historical and the social in development. Accordingly, Vygotsky defined scientific/nonspontaneous concepts as "new concepts" that are taught to the child through direct instruction (i.e. the social). In contrast, and in terms of the historical, everyday or spontaneous concepts are the child's "own concepts, particularly those that have developed in the child prior to conscious instruction" (Vygotsky, 1987, p.172). Thus, scientific concepts exist in the external plane (social), while everyday concepts existed on the internal plane (historical). Secondly, it is the interplay between these two concepts that results in the development of a higher level of mental functioning. Accordingly, the external or social would only be appropriated based on the internal or the historical level of development of the individual. The dialectical relationship between scientific (external) and everyday (internal) concepts is analogous to the dialectic between instruction and development.

Vygotsky juxtaposed these concepts through the central differences between scientific and everyday concepts. Firstly, the child's experience was conceptualised as concerning the object that the concept represented and the pattern that the concept followed from origin to final formation (Vygotsky, 1987). Secondly, scientific concepts constituted higher forms of thought than everyday concepts (Vygotsky, 1987). Thirdly, "(t)hese concepts will differ both in the *paths that their development takes and in their mode of functioning*"[11] (Vygotsky, 1987, p.181). Fourthly, the basic characteristic of the scientific concept was *conscious awareness*, while an absence of conscious awareness characterised everyday concepts in that they had developed

[11] Italics appear as in the original

sufficiently to the point that they were automatic functions (Vygotsky, 1987). Fifthly, "the development of scientific concepts outstrips that of spontaneous concepts. In scientific concepts, we encounter higher levels of thinking than in everyday concepts" (Vygotsky, 1987, p. 214). In addition, the processes of development of scientific and everyday concepts were constructed as inverse processes (Vygotsky, 1987). The development of scientific concepts has a direct influence on the development of everyday concepts – "(e)veryday concepts are restructured under the influence of the child's mastery of scientific concepts" (Vygotsky, 1987,p. 217). The processes of the development of scientific concepts are "internally and profoundly connected with one another" (Vygotsky, 1987, p. 219).

The relationship between scientific and everyday concepts related to the relationship between instruction and development – "(s)pontaneous concepts create the potential for the emergence of nonspontaneous concepts in the process of instruction. *Instruction is the source of the development of this new type of concept*"[12] (Vygotsky, 1987, p. 194). Vygotsky defined instruction (the social) and development (the historical) as not entirely independent of each other, but also not as a single process, in line with his use of the Marxist method and his concept of sociohistorical development. Using the example of the differences in the development of oral and written speech, Vygotsky stated, "(i)nstruction depends on processes that have not yet matured, processes that have just entered the first phase of their development" (Vygotsky, 1987, p. 205). Vygotsky (1987) also concerned himself with the temporal relationship between instruction and development, and concluded "instruction always moves ahead of development… the processes never run in parallel" (Vygotsky, 1987, p. 206). The temporal primacy of instruction, for Vygotsky (1987) related to the conscious and volitional nature of instruction. Instruction and development could also differ in terms of both their internal logic and structure. Instruction is also constrained by development, thus, "(w)hat collaboration contributes to the child's performance is restricted to limits which are determined by the state of his development and his intellectual potential" (Vygotsky, 1987, p. 209).

[12] Italics appear as in the original

In his discussion of the dialectical relationship between instruction and development, Vygotsky makes it clear that while social interaction (instruction) is pivotal, the internal planes of students, or the historical are also important. Existing everyday concepts influence how the learning of scientific concepts occurs. An important component of everyday concepts was the notion of the interests of the child. In the literature on learning in higher education the role of interest is an important component and has been incorporated in terms of motives (Biggs, 1987, 2001; Ramsden, 1979). Vygotsky (1998, p. 35) was emphatic about the relationship between the interests of the child and learning, "the problem of interest in instruction is not whether or not children learn with interest; they never learn without interest". Vygotsky (1998, p. 23) was also clear about the nature of the child's interests, which are not merely acquired passively, but develop through interaction with the social world,

> the human adolescent is not only a biological and natural, but also a historical and social being and of the fact together with social maturation and a growing of the adolescent into the life of the community that surrounds him, his interests are not poured into him mechanically like a liquid into an empty vessel…in the process of internal development and reconstruction of personality, themselves reconstruct the very forms of the tendencies, carrying them to a higher level and converting them into human interests, and themselves become internal component factors in the personality

Vygotsky (1987) asserted that the movement from the social to the individual plane transforms the individual plane (Vygotsky, 1987). The individual has to attach some form of meaning to the social plane, in order for internalisation to occur (Vygotsky, 1987). Social activity, or acts in the social plane, generate consciousness, but meaning is formed in the individual plane (Kozulin, 1996). Although he did investigate consciousness (Vygotsky, 1997a), attention (Vygotsky, 1997b) and self-control (Vygotsky, 1997b), Vygotsky (1987) provides no evidence for the existence of internal mental structures, but rather examines internal psychological processes that are embedded in particular socio-historical circumstances (Daniels, 1996). Consequently, development of the individual occurs through the internalisation of external activity (Vygotsky, 1987). For Vygotsky, adult functioning is characterised by the internalisation of externally mediated activity. This focus on both the

individual and the social planes is, once again, in line with the Marxist method, in which two contrasting notions (social interaction and individual meaning-making) are juxtaposed in order to create a unified system that can account for the development of higher mental functions (Vygotsky, 1993).

2.4.3. *Vygotskian Ideas in Higher Education*

Vygotsky's investigative focus was on the education or instruction of school age children (Vygotsky, 1997b), with a focus on physically and mentally impairment (Vygotsky, 1993) and the adolescent (1998). He was also interested in the problems that occurred in the induction of the child into a particular culture, including the mentally and physically handicapped, blind and deaf-mute and how the challenge facing the cultural instructor was to creatively develop effective cultural tools (Vygotsky, 1993).

There is an abundance of evidence in Vygotsky's own writings that his epistemological foundation was Marx's dialectical historical materialist method. Vygotsky actively argued for the use of the method in psychological investigations (Vygotsky, 1997a; 1997b; 1999) and his discussion of age clearly reflects the historicism of Marx (Vygotsky, 1998). Although he did prioritise the cultural tool of language (Vygotsky, 1987; 1997b; 1999), Vygotsky used Marx's epistemological framework to understand the development of diverse cultural tasks and tools, including mathematics (Vygotsky, 1997b), mnemonic techniques (1997b; 1999) and socially-accepted forms of morality (Vygotsky, 1993).

The central tenet of Marx's method is that explanation is provided by the historical interplay between two opposing forces. The historical investigation of society (Marx) and the mind (Vygotsky) rested upon an analysis of development over a period of time. Real material circumstances provided the researcher with two opposing forces, and it was the task of the analyst or researcher to investigate the actual or real processes that occurred historically. Marx utilised the interplay between the forces of production and relations of power, while Vygotsky focussed on the interplay between the internal (thinking) and the external (speech).

Vygotsky defined development as the complex inter-relation between history and culture and the conflict that arises between history (what knowledge and skills students already have) and culture (critical thought in higher education). This understanding of development incorporates a complex understanding of the notion of the importance of the role of history in the students' current ability. Thus, the disjunction between school and university as distinct stages in the development of the student is a fundamental part of the individual's development. The importance of social factors is accounted for because universities are particular institutions in the social structure and the notion of critical thinking is defined within a particular set of social circumstances.

The importance of conflict to Vygotsky's model is evidenced in many of his theoretical concepts, including the natural and cultural lines of development, and the ZPD in which tasks and tools play a pivotal role. The present study incorporated conflict through the dialectic between tasks and tools, and the differing understandings of both tasks and tools by the lecturer and students. This change concerns the conflict that arises between what students have already demonstrated that they are capable of achieving (e.g. completing secondary school) and what they need to achieve (i.e. critical thinking) to be successful in higher education. The central theme of the dialectic pervades Vygotsky's ideas. On the one hand, is the conflict that is necessary for development to occur and that is purposefully generated in the student by the lecturer. On the other hand, there is the role of the lecturer as assisting the student to manage and resolve this conflict. It is the tension between the task and tools that is fundamental to the understanding of both teaching and learning. In terms of the dialectical relationship between tasks and tools, the lecturer has to design new tasks that are set above the actual level of development of the students. Thus, a state of conflict exists in the students if the task is new, and is above their current level of ability. In this way, instruction leads development, or teaching leads learning. The lecturer also has to provide tools or methods of completing the task. These methods allow the task to be solved in an indirect manner and change the processes of thinking in the students. There is thus conflict between the current or already acquired problem-solving strategies of students and the new strategies provided by the lecturer.

There is, therefore, a dialectical relationship between the adult and child (Vygotsky, 1929). In the context of higher education, a dialectical relationship exists between the lecturer and students. Vygotsky did not provide a detailed examination of the relationship between the understandings of the adult and child, except through notions of primitive and cultured man. He (1929, p. 416) positioned the adult as the "cultured man", who is responsible for acculturating the child. Similarly, higher education can be viewed as a particular form of culture that the lecturer disseminates (e.g. critical thought). Further, Vygotsky labelled the child as the "primitive" (Vygotsky, 1929, p. 416) in the culture. He used the term "primitive" to describe individuals in contemporary societies who utilised technological means that were not the most advanced available (Scribner, 1987). This politically inexpedient term represents the notion that the child (or student) is understood as the unacculturated, a novice in the culture, or inexperienced in the particular culture of higher education. Thus, students are placed into a state of conflict with the introduction of new cultural tasks and tools (or ways of thinking) in their learning histories. For Vygotsky, instruction must lead development and there is, therefore, conflict between what the student is currently capable of doing and the new cultural tasks.

The relationship between instruction and development relates to that which, in the context of university learning in South Africa, is referred to as "support" and "challenge" (de Groot & Dison, 1996). Accordingly,

> the only instruction that is useful in childhood is that which moves ahead of development, that which leads it. However, it is only possible to teach a child when he is able to learn. Instruction is only possible where there is potential for imitation. This means that instruction must be oriented to the lower threshold of the developmental cycle which has already occurred….It is equally important to determine the upper threshold of instruction. Productive instruction can only occur within the limits of these two thresholds. Only between these thresholds do we find the optimal period for instruction in a given subject (Vygotsky, 1987, p. 211).

Here, Vygotsky was referring to the range of potential within one individual. However, notions of challenge and support in South Africa refer to the range of abilities within a large and diverse student group. Therefore, teaching and learning in

South African universities represent a more demanding task than that which Vygotsky (1987) and Neo-Vygotskians (Heckhausen, 1999) envisaged.

Social factors are also the moving power of development and instruction is the mechanism through which dissemination occurs. However, the appropriation of cultural tools by the student is a fundamental part of the dialectic. The current study also deliberately chose to make use of the word "tool" and not "sign". The reasons for this were, firstly, to include the notion of an active role played by the student. Vygotsky was primarily concerned with actual changes that occurred in the child whether or not the child develops the cultural form of behaviour. Secondly, there is a deliberate intention to locate this interpretation of Vygotsky outside of the dominant linguistic interpretations, where the word "sign" has particularly contested meanings.

What Vygotsky was emphasising in his focus on both tasks and tools is that the methods by which lecturers attempt to develop students as critical thinkers, and how students understand tasks and utilise tools, are of fundamental importance. With his focus on the social plane, the ways of understanding and problem-solving that are required at the level of higher education must be clearly defined. Other theorists of teaching and learning in higher education (e.g. Biggs, Ramsden, Entwistle) do not place central importance on what tools students are given, and how students perceive these tools. Importance is placed instead on students and the classification of the student's approach to a particular task. In terms of the lecturer, if there is constructive alignment of outcomes and assessment, then teaching strategies will be successful (Biggs, 1987). The approach to learning model separates teaching and learning, i.e. they are investigated as separate units. These are complex units, and although there is a relationship between the two, this is conceptualised in a simplistic manner. For example Biggs' (1987) constructive alignment of teaching methods will facilitate a deep approach to learning; for Prosser and Trigwell (1999), who label their ideas as being "relational", there is a disjunction between the lecturer's situation and the students' situation. An in-depth discussion concerning the relationship between the use of actual tools, and how students understand these tools is not provided. The academic literacies model does analyse the different discourses of lecturers and students in terms of both textual and in social interaction. However, the focus is on identity and literacy practices broadly, and not specific tasks and tools. The focus of

the current study was how acculturation into higher education may occur using diverse methods and lecturers who have diverse ideas about how to assist students to be critical thinkers.

In order to investigate the development of critical thought in higher education, the opposing units of teaching and learning are proposed. Teaching is viewed as advancing the student's understanding to a higher level. Learning is conceptualised as changing one's own understanding to a higher level. Teaching (by a lecturer) and learning (by students) are interacting units that constitute a complex whole, namely the development of critical thought in students. There is, thus, an integrated relationship between teaching and learning, the lecturer and students. This dialectical relationship exists within particular sociohistorical material circumstances that include increased state control over higher education, the points of articulation between higher education and democratic ideologies, which are reflected in large student numbers and greater diversity amongst students, and capitalist ideologies, which are reflected in commercialist discourses of universities in which teaching is a service offered to the customer-student.

2.5. The Neo-Vygotskians

When Vygotsky was alive, his work (1924 – 1934) was published primarily in Russian, with an article outlining the central tenets of his theory of cultural development in English in the Journal of Genetic Psychology in 1929 (Vygotsky 1929, 1987, 1993, 1997a, 1997b, 1998, 1999). His most well known work, *Thinking and Speech*, was published in Russian in 1934, the year of Vygotsky's early death. There has been much debate concerning the relative importance of activity and semiotic systems in Vygotskian thinking. The Soviet theorists have generally adopted an activity-oriented approach in which Marxist thinking is clearly apparent. Western theorists have concentrated on the role of semiotic systems in the development of the individual. The Western neo-Vygotskians have typically de-emphasised the influence of Marx on Vygotsky's concepts. This anti-Marxist argument has been generated by discussions of the influence of Stalinism and on the nature of political expedience in Communist state/party control over knowledge generation. Thus, the central thrust of the Western anti-Soviet argument has been a lack of reflection by Soviet theorists

about their subjectivity or the influence of sociohistorical ideologies. However, if one believes that there is misdirection in the emphasis that is placed on concepts because of political ideology, then, surely, an exposition of the critics' sociohistorical location is required. Expositions of the relationships between sociohistorical ideologies and ontological and epistemological stances are largely absent in the work of Western theorists.

2.5.1. *The Soviet Neo-Vygotskians*

Historically, there has been debate concerning the relative roles of Luria and Leontiev[13] in the development and subsequent interpretation of Vygotsky's work. Both Leontiev and Luria, like Vygotsky, unapologetically adhered to the agenda of widespread indoctrination of the Communist way of life. Leontiev and the Kharkov School developed what came to be known as "activity theory" (Kozulin, 1996). Luria (1960, 1976, 1978) also examined the development of new cultural tools. His Uzbekistan investigations demonstrated the conflict that exists between the natural and cultural lines of development in the appropriation of a new cultural tool. However, the prominence of Luria's neuropsychological ideas in Western thought lead to his work on language development being noticed by Western linguistic theorists, who utilised the concept of the "sign" (Simon & Simon, 1963; Vocate, 1987). In contrast, the Soviet neo-Vygotskians, and the current study, primarily focussed on the concept of "tools". Consequent Soviet research based on Vygotsky's ideas investigated the use of external means (e.g. tools) in the facilitation of internal higher mental functions (Bogoiavlenski & Menchinskaia, 1959, 1960; Elkonin, 1963; Fleshner, 1958; Kalmykova, 1955; Kostiuk, 1956; Krutetski, 1961; Leontiev, 1959; Milerian, 1960; Natadze, 1957; Teplov, 1946; Zankov, 1957).

Karpov (2006, pp.20-21) summarised Vygotsky's concept of sociohistorical development in the following manner –

> In the course of interpersonal communication, an adult presents to the child a new psychological tool in the form of an external device and mediates the child's appropriation and mastery of this tool. As the child masters the tool, it

[13] See Vygotsky (1997a, p. 371) and Wertsch (1987, p. 3) for a discussion of the "troika" of Vygotsky, Luria and Leontiev.

> gets internalised and turns into an internal mediator of the child's mental processes. Simultaneously, the adult is less and less involved in mediating the child's mastery of this tool. As a result, the child transits from the use of the external psychological tool as mediated by the adult to the independent use of the internal psychological tool, which indicates the completion of the development of a new higher mental process.

Thus, Vygotsky's pivotal notion of the social was incorporated in the idea of a "new psychological tool", while history, or the child's current state of mental functioning, would determine the process of appropriation of the new tool. According to the Soviet neo-Vygotskians, Vygotsky principally distinguished between tool-mediated behaviour and instincts, and biologically programmed changes (Karpov, 2006). The inclusion of physical functioning was important to Vygotsky because he was attempting to provide a complete account of development (Karpov, 2006). It is, however, unclear in the Soviet interpretation why physiological maturation would only be an influencing factor on the child's motives, and not also on the child's mental processes. The Soviet neo-Vygotskians understood mental processes to be cognitive processes involved in memory, problem-solving and metacognition (Karpov, 2006).

The Soviet neo-Vygotskians have emphasized that the "social situation of development" is constituted by the "unique relation, specific to the given age, between the child and reality, mainly the social reality that surrounds him" (Vygotsky, 1998, in Karpov, 2006, p. 42). The "social reality" that surrounds the individual, unlike Vygotsky's work, is described and theorised in terms of cultural tools that are related to sociohistorical circumstances in which they occur, and are related to relations of power between individuals. Accordingly, "…(i)n the case of learning how to use tools invented by human culture, observers attending to a demonstrator's tool-use strategy is a must for successful learning of the strategy. Indeed, as opposed to the physical characteristics of objects, their social meanings are not "written" (Elkonin, 1989, p.48) on objects and therefore cannot be discovered in the course of independent explorations" (Karpov, 2006, p. 49). In general, the Soviet neo-Vygotskians believed that Vygotsky proposed a holistic view of development in which both instruction by "cultured adults" (the social) and the child's present

cognitive and affective state (the historical) interacted in order to move development forward.

2.5.2. *The Western Interpretation of Vygotsky*

The historical interpretation of Vygotsky's works in English is more complex because, interpretations, rather than translations[14] of Vygotsky's writings, first appeared. In 1962, Hanfmann and Vakar presented Vygotsky's (1934) *Thinking and Speech* as *Thought and Language*. An important neo-Vygotskian, Bruner, believed that he was "privileged to write an Introduction to the first translation of Vygotsky's classic" (Bruner, 1987, p.1). However, *Thought and Language* (1962) is criticised as having transformed, rather than faithfully translated, Vygotsky's central writings[15] (Rieber & Carton, 1987; Knox & Stevens, 1993; Simon & Simon, 1963; Van der Veer, 1997).

Little interest in Vygotsky's ideas was evidenced in the West until 1978 when *Mind in Society: the development of higher psychological processes* was published. Bruner, Scribner, John-Steiner, Cole and Souberman (1978, p.x) clearly stated that *Mind in Society* was "not a literal translation of Vygotsky", although they thought that his work could be useful in the areas of educational (John- Steiner and Souberman), developmental (Bruner and Scribner) and cognitive (Cole) Psychology. The Western Vygotskian interpretation had the purpose of more fully understanding the cultural tool of language, and perhaps, the ideological agenda of denouncing activity theory as a peculiarly Communist interpretation of Vygotsky's work (e.g. Scribner's (1985) discussion of Vygotsky's uses of history). These interpretations seem more aligned with the notion of "perestroika" or "restructuring" (Mikhail Gorbachev's economic and political reforms in the Soviet Union in the 1980's). Sociohistorically, *Mind in Society* emerged from the bastion of capitalism, the United States, during the Cold

[14] With the exception of Vygotsky (1929).

[15] "since *myschlenie* is a Russian present participle and *mysl* is a "thought" or "idea", and since Vygotsky describes a *thinking process* in his discussions, "thinking" seemed a better rendering of his intended meaning than "thought"" (Rieber & Carton, 1987, p.v).

War Era. Both Vygotsky and the Communists clearly regard Marx's dialectical historical materialist theory (epistemology) of economics (ontology) as the foundation of their ideas. Thus, questions can be raised about the willingness of Western interpreters to engage with Vygotsky's Marxist epistemology. However, *Mind in Society* was a seminal work, which sparked subsequent translations and exogenesis of Vygotsky's ideas (Glick, 1997).

The Linguistic theorist, Wertsch's, reading of *Mind in Society* (1978) led him to investigate the concept of activity in Soviet Psychology, focussing on Vygotsky's instrumental or genetic method (Vygotsky, 1997b) and children's learning in the ZPD (1984, with Rogoff). Wertsch's inauguration as the official translator of Vygotsky's ideas in the West occurred in 1985, with *Culture, communication and cognition: Vygotskian perspectives*[16] and *The social formation of mind: A Vygotskian approach*. None of the above books are literal translations of Vygotsky's writings. Direct Russian to English translations of a diverse array of Vygotsky's writing (including publications, manuscripts, notes for lectures) have only been published between 1987 and 1999 in *The Collected Works of L.S. Vygotsky*. Described as "an event" (Bruner, 1987, p. 2), the neo- Vygotskian community eagerly anticipated the publication of the *Collected Works* and they were not disappointed (Daniels, 2001). *Thinking and Speech* appeared in *Volume 1*, and Bruner, who was an eminent neo-Vygotskian, since the publication of *Mind in Society* (Daniels, 2001), wrote the Prologue to Vygotsky's work.

There is, however, evidence of points of agreement between Soviet and Western interpretations. For example, Bruner's (1987) notion of scaffolding is mirrored in Karpov's (2006) ideas about the reduced involvement of the adult in mediation. However, Bruner (1987) transformed Vygotsky's use of Marx's dialectical historical materialism in the analysis of higher mental functions into six "critical contrasts". Firstly, the external versus the internal experience in which mental processes move inwards (social to individual plane). Secondly, as these functions/ processes move inward, they interact and function with the processes that are already present (inter-dependent). Thirdly, interaction and inter-functionality serve the purpose of

[16] This book was reprinted in three successive years, contributing to the dissemination of Vygotsky's ideas to the previously-marginalized English-speaking communities.

characterising the mental processes as systematic, logical and goal-oriented (ordered). Fourthly, the dichotomy between the symbolic and the biological is important to Vygotsky (1987). Language (as a powerful system of tools) is used in the operation of other higher mental functions (Das, 1995). Thus, language facilitates the movement away from the constraints imposed by biology. Fifthly, Vygotsky (1987) engaged in the debate concerning notions of depth versus surface meaning-making. He believed that interpretation is required for mental functioning. Because of the mediatory role that language has in action, multiple interpretations of both language and action exist. An example of this is what occurs and what events may "mean". Depth to behaviour and its interpretation arises because of the existence of sub-texts. Finally, Vygotsky (1987) considered the historicity versus ahistoricity of language. Accordingly, language is a tool of the mind and a product of history. However, the systematic productivity of language enables its user to rise above, or even alter the course of, history (Bruner, 1987).

An examination of Bruner's (1987) critical contrasts reveals fundamental violations of the dialectical nature of historical materialism. Bruner's first and second contrasts detail social mediation by an active agent (external to internal) and the internalisation of this mediation (internal). However, neither contrast concerns the mutually formative interplay between the social and the individual planes. His third and fifth contrasts concern the valuing of the individual plane, and it is unclear how such value judgments relate to the social plane. The social plane is present in the form of tools in his fourth contrast and as a historical process in his sixth contrast. However, how tools and developmental process relate to the individual plane is not clearly explained. Bruner's (1987, p. 28) scaffolding approach to the ZPD is "governed by a rule of voluntary handover and willing receipt", thereby placing the fundamental role of conflict in Vygotsky's theory into question. Bruner (1987) does provide a personal, or individual, history of how he came to understand Vygotsky's ideas. However, no mention is made of his own sociohistorical location[17], and how this location may have affected his interpretation. In addition, these six critical contrasts are not central to most analyses of Vygotsky's ideas.

---

[17] Bruner (1987) details his work as a graduate student, mentioning the years 1936 and 1954. No mention is made of World War II, and its aftermath in which the Communists were labelled as the enemy in the Cold War era.

Central to most analyses of Vygotskian writings is the ZPD, and not the concept of sociohistorical development, which has been identified as Vygotsky's central ontological concept. There is diversity in the interpretation and operalization of this theoretical concept. The ZPD has been understood as assisting Vygotsky in explaining the manner in which social and participatory learning may occur (Daniels, 1996). The ZPD is, therefore, a theoretical (as distinct from practical) attempt to elucidate the driving force of development, which Vygotsky believed to be the contradictions between external needs and internal possibilities (Daniels, 2001). It is apparent that Vygotsky, the psychologist, and not the methodologist, has been the point from which the Western neo-Vygotskians have departed. Vygotsky's ideas have not been utilised as a dialectical historical materialist understanding of the formation of mind, but rather, as an argument for the inclusion of social factors in the formation of the individual (Wertsch, 1985).

The historical schism in the development of Vygotsky's ideas is the result of the manner in which the "social" and the "individual" have been demarcated and the way in which the relationship between the two has been conceptualised (Daniels, 2001). There does appear to be pervasive agreement that Vygotsky rejected any rigorous separation of the social and the individual. In this conception, the social and individual are "mutually formative elements in a single interacting system" (Daniels, 2001, p. 72). The interacting system may, on the surface, appear to be the application of Marxist method to the study of learning. However, the neo-Vygotskians have predominantly focussed on only one half of this mutually interacting system, namely, the individual. They do not explain the dynamic interaction between the social and the individual in real material circumstances and have primarily focussed on ontology as unrelated to epistemology (Newman & Holzman (1993).

2.5.3. *Wertsch's Substitution of "Historical" with "Cultural"*

Wertsch (2005) viewed Vygotsky as the founding father of the socio*cultural* approach because of the primary influence that sociocultural processes have in development (Penuel & Wertsch, 1995; Wertsch & Tulviste, 1992). It is apparent that for Vygotsky the "social" and the "cultural" were analogous - "everything cultural is social"

(Vygotsky, 1997b, p. 106). Thus, Wertsch is open to the accusation that he transformed Vygotsky's dialectical historical materialism (epistemology) and sociohistorical development (ontology) into the amorphous "cultural" theory (Cole, 2001, 2005a, 2005b; Cole & Wertsch, 1996; Wertsch, 2005). Wertsch himself has commented, "the danger in using *sociocultural* is that the historical dimension may get short shrift" (Wertsch, 1991, p. 16). What Wertsch has faithfully taken from Vygotsky's ideas is the notion that investigations should focus on the start of the historical process of development of a particular function. Hence his use of the Vygotskian (1997b) terms, the "instrumental" or "genetic" method. It appears that Wertsch only focussed on half of Vygotsky's ontological and epistemological approach. While he did investigate the start of the development (developmental stage), how this investigation occurs (i.e. dialectical historical materialism) appears to be ignored. Thus, the complex historical interaction of the natural and cultural lines of development that, in themselves, constitute development has also been overlooked. The spoken word and gesturing are the primary forms of mediation (i.e. no textual mediation). Within his notion of intersubjectivity between the situational definitions of the mother and child, the relationship between the mother and child dyad is not characterised by conflict (Wertsch, 1987). Wertsch also does not comprehensively explain how the task set for the child is located above the current level of ability.

According to Wertsch (1985, 1987), three themes characterise Vygotsky's work Firstly, individual functions were investigated through the utilization of the developmental or genetic method. An investigation of a single function is not possible unless its place in development as a whole is understood. Wertsch's use of the genetic method (a term that is used by Vygotsky) indicates his decision to ignore Marx's dialectic historical materialism. Wertsch (1999) argues that this genetic method dictates that higher mental functions, therefore, should be examined in terms of processes, rather than products. This constitutes a distinct shift away from the objects and outcomes of the activity approach. This is congruent with both Marx and Vygotsky's conceptualisations of development (albeit in a diluted form in which revolution is not pivotal). Secondly, Wertsch (1985) believed that the guiding assumption of the General Genetic Law of Cultural Development is that mental processes originate from social interaction. It is at this point that Wertsch violates the central principle of any dialectic, and indeed the General Genetic Law of Cultural

Development, which states that a higher level of mental processing is the result of the interplay between both the social and the individual planes. Accordingly, social interaction alone does not cause the development of mental process (a position that Wertsch proposes). His cause and effect relationship does not meet the requirements of any juxtapositioning. The third theme that Wertsch believed characterised Vygotsky's work is that human action is mediated by tools/signs (Penuel & Wertsch, 1995). Here Wertsch (1999) places emphasis on the individual plane and his ontological framework reflects his interest in Linguistics as the term "sign" is favoured over the term "tool" (Wertsch, 1991, 1993, 1998, 1999). For Wertsch, sign systems are resources in action rather than representational systems only. Signs transform the purposes of their users and mediate mental functions, a hierarchical relationship in which signs themselves dominate those who use them (Penuel & Wertsch, 1995). Wertsch (1981) highlighted Vygotsky's idea of mutually formative elements (the individual and social planes) in an interacting system in his conceptualisation of social practices in which students are provided with tools and thereby master and transform activity. What Wertsch does not make clear is that both tools and activity have no meaning unless they are defined in relation to one another. Wertsch does not provide a clear account of how Vygotsky's natural line and cultural line (with tools) may be distinguished.

Wertsch's (1987) framework is founded on two fundamental assumptions. Firstly, he (ibid) upholds an "irreducible" account of agency of students "acting-with-mediational means" or "operating-with-mediational-means" (Daniels, 2001, p.79). It is Wertsch's use of the preposition "with" that is problematic because it violates Vygotsky's notion that method (or tool) is both a prerequisite and a product. The way in which the act itself is defined necessarily includes the cultural tool. The word "with" indicates an instrument used to perform an action. However, it does not account for how an action itself is transformed by the tool that is utilised to complete a new cultural task. Therefore, Vygotsky's triangular conceptualisation of task-tool-response (see Section 2.4.2.) is not emphasised. Secondly, Wertsch's work includes the assumption of teleological action in which "actors achieve their goals through decisions among alternative courses of action, choosing means that have the promise

of being successful in the given situation, and applying them in a suitable manner" [18] (Wertsch, 1991, p.9). This second assumption is not without its problems as it contains several hidden assumptions, for example, any given student has clearly formulated goals, the student will know what will be successful in a given situation (this is particularly problematic in the current study because it concerns a transition stage from school to university), and students are able to identify factors inherent in success, and are capable of applying those factors/ tools in an appropriate manner.

Wertsch's epistemological interpretation places mediated action as the appropriate focus of empirical description and explanation (Penuel & Wertsch, 1995). However,

> his work is still bound to the perceptual, to what can be observed, what is dynamically undergoing change. The cultural, historical conditions under which this mother-child interaction takes place are not addressed. The very categories used to perceive, to understand, and to explain (the categories of the participants as well as the analyst) are also undergoing change, but are not themselves subject to inquiry (Newman & Holzman, 1993, p.89).

Despite the concern that using Wertsch's ideas raises, he is a post-Vygotskian theorist who cannot be ignored because of his influence on other neo-Vygotskian writers, including Cole (2005, 2001), Engestrom (1996 – whom Penuel and Wertsch liken to Leontiev, 1981), Kozulin (1996), Lave (1993) and Wenger (1999). The value of Wertsch's contribution (1991, 1993) lies in his presentation of a rationale for investigating single elements or components in a system in order to examine how alterations/ changes in a single element, or combination of elements, may affect the entire system (Daniels, 2001). It is perhaps then fair to state that while Wertsch (1985) did attempt to consider the social and individual as mutually formative, he is still shackled by his Capitalistic focus on the individual only and, therefore, does not utilise the fundamental method of dialectical historical materialism.

[18] This is a particularly problematic assumption because the focus of Wertsch's research has been the development of speech in early childhood. It is certainly questionable whether such young children are capable such goal-directed action.

2.5.4. *Understandings of Mediation and the Social Plane*

The notion of mediation is characterised by an historical schism in the interpretation of Vygotsky's work, namely, activity theory (Soviet) and the sociocultural approach (Western). This historical split between activity theory and semiotic means of mediation is a result of the different conceptualisations of the relationship between the social and individual planes (Daniels, 2001). These two distinct paths of neo-Vygotskian thought are consequently characterised by both philosophical and sociohistorical difference. What the two approaches have in common is that neither resorts to a deterministic position. Both positions recognise that, in terms of individual development, individuals actively shape the cultural forces that are central in their development (Kozulin, 1990). This may be conceptualised as a mediational model in which the social and individual planes are mutually formative.

The ZPD has been labelled as Vygotsky's most profound contribution to the understanding of learning. Paradoxically, this contribution has resulted in neo-Vygotskian substitution of one, complex concept in the place of many, equally complex phenomena (Van der Veer, 1991, 1997). The current study has argued that the ontological concept of sociohistorical development is Vygotsky's central concept and that the ZPD is a framework of inter-related terms that enabled him to explicate his primary ontological position. Examples of these equally complex phenomena in the study include cultural tasks, cultural tools, the current abilities of students and responses or actions performed by students. There have been numerous versions of the original conceptualisation of the ZPD, which differ in terms of how the social world is theorised, described, and operationalised (Karpov & Brandsford, 1995). There are, therefore, both ontological and epistemological differences in interpretations of the ZPD.

Firstly, the scaffolding approach highlights the distinction made between support (mediation) provided for the student's initial performance of the function and subsequent, unaided performance (Bruner, 1987). Mediation, or the social, therefore, occurs in "highly framed or formulated situations" (Bruner, 1987, p. 27). While it could be argued that this understanding involves the juxtapositioning of initial performance (the historical) and unaided performance after mediation (sociohistorical

development), the investigations are not clearly structured in this manner. Vygotsky did not clearly detail any forms of social assistance and only wrote general prescriptions concerning guidance and collaboration, assistance through leading questions/ demonstrations, and provision of the initial elements of the solutions to tasks (Moll, 1990). The scaffolding approach has a focus on assistance, thus "limit(ing) the complexity of the task to a level that the child can manage" and providing "a support system that helps learners get there" (Bruner, 1987, p.32). Therefore, while the ideas of the social and the historical are present in Bruner's interpretation, the notion of conflict as the central explanatory force in development is not emphasised.

Secondly, the cultural approach (Davydov, 1982, p. 5, in Hedegaard, 1996, p.168) defines the ZPD as the "distance between cultural knowledge provided by socio-historical context, made accessible through instruction, and everyday experience of individuals". Hedegaard (1985) labelled this as the distinction between understood knowledge as supplied by instruction (the social), and active knowledge as owned by the individual (the historical). This framework appears to incorporate the notion of conflict between scientific concepts developed by instruction and the everyday knowledge of individuals. However, the fact that everyday knowledge (internal, or the historical) was, at one point in the individual's development, cultural knowledge (external, or the social), is not clearly emphasised. The point that the individual's sociohistorical context shapes the formation of both scientific and everyday concepts is not fully explicated. This calls into question whether this conceptualisation views the development of the individual as a sociohistorical process.

Thirdly, Lave and Wenger (1991), who label themselves as having a "situated" or "cultural" approach, also focus on Vygotsky's separation of scientific and everyday concepts, in which the "mature" concept arises from the merger of the two. While this is a clear juxtaposition that creates unity, the situated approach violates Vygotsky's social/individual unity. The situated theorists propose that knowledge does not exist internally in the individual (the historical), but relationally between people (the social). Thus, while there is unity between the social and individual planes, there is no real distinction between the two.

Fourthly, the collectivist/ socio-cultural approach interprets the ZPD as the gap between the student's everyday actions (the historical) and the historically new form of social activity (mediation) that can be collectively generated (the social)(Wertsch, 1985, 1999). Wertsch (1995, 1999) attempts to circumvent the difficulty of definition by stating that the central issue is not where analysis should begin, either with cultural tools (the social) or the individual (the historical). Rather, the focus of study should be centred on the fundamental irreducible tension between these two analytically distinct, but inextricably connected, facets of any mediated action. Here Wertsch (1985) appears to be adopting the dialectical historical materialist method, however, his constructions of "social" and "individual" are not analytically distinct, as he has defined "individual" merely as "social" (Cole &Wertsch, 1996).

The above interpretations of Vygotsky's ZPD also highlight differences in the ways in which Vygotsky's concepts of mediated activity by tools has been developed by the neo-Vygotskians. Vygotsky's Soviet successor, Leontiev, in the 1930's, is labelled as a "revisionist" of Vygotsky's ideas (Kozulin, 1996, p. 99) because he emphasised "practical (material) actions" as the core of Vygotsky's ideas. Kozulin (1996), in a similarly disparaging vein, casts Leontiev's focus on activity as "a local affair of Soviet Psychology" (p. 99). Wertsch (1985), after the publication of *Mind in Society* (1978), provided the "breakthrough"[19] of Vygotsky into Western thought (Kozulin, 1996,p 100) with his books *Vygotsky and the social formation of mind* (1985) and *Culture, communication and cognition: Vygotskian perspectives* (1987).

The latter contained a chapter by Davydov and Radzikhovskii (1987) that outlined the activity-oriented approach. They make their opinion about Wertsch's interpretation of Vygotsky's work quite transparent in their chapter in Wertsch's book, making no reference to him whatsoever in their discussion of activity-oriented psychology. Davydov and Radzikhovskii's (1987) activity theory had joint activity/ practice as the unit of analysis and centred on the role of mediating artefacts in learning (Engestrom, 1996). Davydov and Radzikhovskii (1987) detailed an instruction strategy as ascending from the abstract to the concrete, in line with Vygotsky's scientific concepts/ everyday concepts juxtaposition. The goal of learning at school was to

[19] This notion of a breakthrough is somewhat confusing as Vygotsky's central ideas have been available in English since 1929 in the Journal of Genetic Psychology.

place knowledge out into the world by making it theoretically powerful and dynamic when the student is faced with theoretical problems (Engestrom, 1996). Thus, activity theorists locate psychological development and analysis as grounded in practical cultural activities (Daniels, 2001), seemingly in line with Vygotsky's emphasis. Activity theory defines an activity as students using the tools that they are given for a specific purpose. The effect of objects in the social plane on the motivation of subjects was viewed as central (Leontiev, 1981). This conceptualisation was not founded on an account of any social structures, which may act to organise and confine any act on the social plane (Penuel & Wertsch, 1991). Davydov (1988) did attempt to address this concern by adding rules, the community and the division of labour (i.e. lecturers control and students study) into his conceptualisation. However, these notions were considered in a narrow way, for example rules (classroom behavioural codes and assessment standards), community (classroom), and did not engage in issues concerning the impact of wider sociohistorical factors.

The Westerners, Lave (1988; 1993), Lave and Wenger (1991; 1996) and Wenger (1999), in their communities of practice approach or legitimate peripheral participation model, attempted to redefine elements of the model provided by Davydov (1988). This approach conceptualises the student as a legitimate participant (subject) and defines tools as the technologies of transparency and simulation stories, and the tools of the established practice. Davydov's (1985) "community" was defined as a "community of practice" within a school setting. Engestrom (1996) attempted to reconcile the disparate positions of Davydov, Lave and Wenger. His "learning by expanding" approach was based on studies with adolescents and positioned the school as a collective instrument (perhaps reflecting an attempt to incorporate the ideas of Wertsch).

These three interpretations share key ideas. Firstly, their research focus is on joint activity or practice. Secondly, the theorists clearly position themselves as followers of the cultural-historical school of Vygotsky, apparently because of their focus on activity. These theories of activity, however, differ in their interpretations of previous Neo-Vygotskian work. Davydov (1988) focussed on the translation and interpretation by Leontiev (1981), while Engestrom (1996), Lave (1993) and Wenger (1999) demonstrate the influence of the Western interpretation of Wertsch (1985). Thirdly,

all three perspectives claim to emphasise the role in learning of mediating artefacts, which are socially created (Engestrom, 1996). Their triangular conceptualisation places tools at the apex, with the community (which is narrowly defined) at the centre of the base. This triangular conceptualisation does not reflect the explanatory principle of the dialectic between two analytically distinct constructs in the traditions of Marx and Vygotsky. Their subject, learner and group (Davydov, 1988), the student as a legitimate participant (Lave, 1993; Wenger, 1999), and a team of students, lecturers, practitioners, local people (Engestrom, 1996), and object, namely understanding of content and context (Davydov, 1985; Engestrom, 1996) and the context of the practical reproduction of content (Engestrom, 1996; Lave, 1993; Wenger, 1999) are all positioned on the same level. All three approaches locate the outcome of learning action (theoretical concept and its relationship with the wider world (Davydov, 1985; Engestrom, 1996) and the mastery of the practice of dealing with theoretical content and related issues (Engestrom, 1996; Lave, 1993; Wenger, 1999) as positioned outside all other factors. This separation of outcome appears to be in violation of Vygotsky's (1987) fundamental focus on the social and individual planes as being mutually formative elements in an interacting system. In addition, this separation violates the fundamental tenet of dialectical historical materialism, in which the interplay or relationship is a pivotal aspect of the explanatory structure.

Lave (1993) and Wenger (1999) criticise Davydov (1985) for his narrow conceptualisation of the "social" and accuse him of providing no account of learning in the wider context of the structure of the social world. However, they merely define Davydov's (1985) components in an identical learning structure in a different way (semiotically) and there seems to be little evidence to suggest that they themselves have overcome their own criticisms of Davydov's work. Yet, they do highlight the important aspect of the student as a legitimate participant and the tool of transparency in the learning context. Engestrom's (1996) attempts to incorporate school as a collective instrument, and his cultural tool of criticism may be helpful to the current study because of the broadening of the idea of social context, particularly to the tertiary level of education. However, all three approaches to learning have a focus that is too narrow. All aspects of the social plane and the complex relationships between these aspects must be explained in order to label the approach as Vygotskian.

2.5.5. *Divisions in the Individual Plane*

The discussion of neo-Vygotskian thought to this point has focussed on the role of the social plane in the interpretation of the General Genetic Law of Cultural Development, the ZPD, mediation and tools. However, it is also important to understand how tool appropriation and the individual plane are understood by the neo-Vygotskians. Vygotsky (1981, in a book edited by Wertsch) asserted, "it goes without saying that the internalisation transforms the process itself and changes its structures and functions" (1981, p. 163). The individual has to attach some form of meaning to the social plane in order for internalisation to occur, or be an active constructor of knowledge (Karpov, 2006). Social activity or acts in the social plane generate consciousness, but meaning is formed in the individual plane (the historical) (Kozulin, 1996).

Vygotsky (1987) provides no evidence for the existence of internal mental structures, but rather examines internal psychological processes that are embedded in particular sociohistorical circumstances (Daniels, 1996). Consequently, development of the individual occurs through reflection on, and internalisation of, external activity (Vygotsky, 1987). The role of reflection in learning is one that is important to various discourses of teaching and learning, and much controversy has centred on how the notion of reflection should be interpreted (Roth, Lawless & Masciotra, 2001). For example, Mezirow (1998, p. 185) defines reflection as the "turning back on experience", which includes a "simple" awareness of objects and events in the social plane and an awareness of perceptions, thoughts, feelings, intentions and actions. A related concept, which may be helpful here, is that of metacognition. Metacognition has been understood as an awareness of one's own mental processes and products (Cole & Chan, 1994), reflecting on how one learns and uses problem solving strategies (Coats, 2002), and the ability to question one's own actions in order to assess their strategic benefits (Penny & Harley, 1995). The incorporation of awareness, problem-solving strategies and the questioning of one's actions is reconcilable with the notion that new tasks and tools need to create a state of conflict in the individual in order for development to occur.

Vygotskian principles have been located within a constructivist perspective of reflection in which, epistemologically, meaning making and socially useful literacy are placed at the centre of all teaching and learning practices (Ball, 2000). This proposition places the student as the central actor in personal meaning construction. The student reflects on lived experience in the social plane, and interprets and generalises from this experience in order to construct mental structures or knowledge (Bitzer, 2001). Explanations of reflection in this dialogue include investigations into how students perceive experience in the social plane, the interpretation of categories of experience as concepts, and the adaptation and transformation of conceptual structures (Fenwick, 2000).

The constructivist interpretation has been dismissed as being simplistic, reductionistic, reifying rational mastery and control, and positioning reflection as mental processing (thereby reinforcing a conduit thesis of learning) (Matusov, 2001). The situated antithesis of reflection may, therefore, also be helpful in elucidating what Vygotsky may have meant by internalization. Lave (1993) and Wenger (1999) postulate that learning has its foundational roots in the situation (or context) in which students participate. Learning is ratiocinated as inherent in human nature, as the ability to negotiate new meanings to create emergent structures, which are social, experiential and transformational (Wenger, 1999). Learning occurs as a result of engagement in the changing processes of activity in a particular community (Lave, 1993). As a consequence, students participate in communities with the tools that they are given, in moments of activity. Knowledge emerges as an interaction of participation, tool use and social activity (Wenger, 1999). In terms of this reasoning, the role of the lecturer is to enable students to participate in a meaningful manner in learning practices by arranging authentic conditions and activities in which they may practice interaction with both the lecturer and one another (Wenger, 1999). Lave (1993) and Wenger's (1999) approach has its historical roots in the work of Bruner's (1987) scaffolding approach, in which the primary role of the lecturer is to provide assistance, and so the role of conflict in development may be obscured. The situated antithesis may also be criticised for over-stating the fact that knowledge is context-dependent, and the investigator has to explore the subject positions of every participant within a particular, broadly defined community. Because of the dialectic

surrounding the premises of Vygotsky, a synthesis of the constructivist and situated understandings of reflection needs to be examined.

In order to avoid Piagetian connotations of transmission, Wertsch, (1985) prefers the term "appropriation" to that of "internalisation". It would appear that Wertsch (1984) is interested in the act of setting apart (the social and individual planes) and how students take objects from the social plane for their own use. As a result, the use of the word "appropriation", rather than "internalisation" may be more expedient and judicious, given the important role that tools play in Vygotsky's ideas. Wertsch (1984, 1991) also utilises the notion of "conscious reflection", which he relates to appropriation. Hence, reflection does not necessarily cause appropriation or tool use. Particular examples of appropriation are distinguished by the extent to which conscious reflection has occurred, the forms in which conscious reflection has occurred, and willingness, voluntary use, or motivation, to appropriate the tool. Here Wertsch (1985; 1991) acknowledges historical factors in the appropriation of tools by students, i.e. *what* tools the student currently possesses and *how* the student is using these tools. In any given learning situation there may be a multiplicity of individual histories, an important site of diversity in large, heterogeneous populations of students.

2.5.6. *The Use of Neo-Vygotskian Thought in Higher Education in South Africa at the beginning of the Twenty-First Century*

The interpretation of Vygotsky's work by Russian authors emerged from the interpretations by Luria and Leontiev and Vygotsky's many students, who were known to write "poems in honour of his journey" when Vygotsky gave lectures in different parts of Communist Russia (Luria, 1979, p. 52 in Wertsch, 1987, p.3). Historically, interpretations of Vygotsky's work that occurred in the Soviet Union were related to the practice of education in schools, particularly primary schools (Karpov, 2006). Accordingly, Soviet writers investigated pathology in education (Leontiev, 1959), reading development (Elkonin, 1963); mathematics learning (Kalmykova, 1955; Krutetski, 1961); the development of scientific concepts in school children (Bogoiavlenski & Menchinskaia, 1959, 1960; Fleshner, 1958; Natadze, 1957); the development of technical skills (Milerian, 1960); mixed-mode forms of

teaching (Zankov, 1957); art education (Teplov, 1946) and the relationship between personality and education (Kostiuk, 1956).

The Western neo-Vygotskians have utilised Vygotsky's theoretical concepts, particularly the ZPD, in educational settings (Blank & White, 1999; Griffin & Cole, 1999; Moll, 1990; Wood, 1999). Development in the school years has concentrated on the importance of social interaction (Brown, 1999); reading (Clay & Cazden, 1999); the development of concepts in mathematics (Cordeiro, 1999; Saxe, Gearhart & Guberman, 1999); understanding the relationship between the past, present and future (Valsiner & van der Veer, 1999); the role of peers in learning (Tudge, 1999; Tudge & Rogoff, 1999); the relationship between IQ and learning (Brown & Ferrara, 1999); the role of technology in schools (Crook, 1999) and literacy practices (Gallimore & Tharp, 1999). In terms of language development, Western Neo-Vygotskians have also focussed on the interaction between children and parents, particularly mothers, and not on the social interaction between the child and the teacher (Heckhausen, 1999; McNaughton & Leyland, 1999; Meins, 1999; Pacifici & Bearinson, 1999; Pratt, Kerig, Cowan & Cowan, 1999; Rogoff, Ellis & Gardner, 1999; Wertsch, Mcnamee, Mclane & Budwig, 1999).

In South Africa, there have been a plethora of studies that have used Vygotskian and neo-Vygotskian ideas in order to investigate teaching and learning in higher education. These have included foundation programmes in the Faculty of Science (Grayson, 1996); computer-based mathematics literacy programmes (Frith, Jaftha & Prince, 2004); methods of increasing participation by previously marginalized groups (Warren, 2002); the role of web-based learning (Czerniewicz & Brown, 2005; Tait, 2003); facilitating critical thinking in nursing education (Mangena, 2005) and managing classroom discussions (Gravett & Henning, 1998).

Thus, how Vygotsky's ideas have been interpreted to date is the subject of much debate and disagreement (Belmont, 1995; Engestrom, 1996; Lave, 1993; Wenger, 1999; Wertsch, 1984). Vygotsky's General Genetic Law of Cultural Development dictates that development of the individual can only occur when there is a movement of information from the social plane to the individual plane (Vygotsky, 1987). This shift of focus away from the individual learner to the social and historical

circumstances in which learning occurs is in stark contrast to Capitalistic, Western conceptualisations of learning. Vygotsky's focus implies that social interaction is of primary importance in development.

The polemic debate around his ideas requires careful subject positioning of the empirical researcher. These problems exist because Vygotsky himself shifted focus and revised his own ideas over time (Minick, 1987). Issues of Cold War era political expedience are evident in the translation of his work, and as a result of differences in the social and historical circumstances in which the development of his theory has occurred (Kozulin, 1996; Wertsch, 1991). These controversies dictate that further interpretation of the theory is required, particularly when it is used in new social and historical circumstances.

A central site of disagreement is the manner in which the inter-psychological and intra-psychological arenas have been constructed and the relationship between these two planes. The Soviets (Davydov, 1988; Leontiev, 1997) focussed on activity, while ignoring symbolic systems that could account for how information moves from the social to the individual plane. However, the symbolic interactionists (Engestrom, 1996; Lave, 1993; Wenger; 1999; Wertsch, 1984) may be accused of not upholding the fundamental tenet of the social and individual planes as being mutually formative elements in a single interacting system. Both schools are also guilty of ignoring wider social, historical, political and economic factors that are present in learning contexts.

The fundamental role of conflict in Vygotsky's sociohistorical theory is subject to diverse interpretations (Bruner, 1987; Daniels, 1996; Das, 1995). In *Mind and Society*, Cole and Scribner (1978) mention the importance of conflict by stating that Vygotskian thought is concerned with the transformation of simple forms of thought to more complex ones. They describe changes in thought as relating to changes in the basic characteristics, form and structure of thinking (Cole & Scribner, 1978).

The diversity of operalizations of the ZPD adds confusion to the interpretation of Vygotsky's (1987) ideas. The scaffolding, cultural, situated and collectivist/societal perspectives of the ZPD have been proposed (Engestrom, 1996; Lave, 1993; Wenger; 1999; Wertsch, 1984). However, alone none of these is sufficient. This study will

propose that a blend of these approaches may be more appropriate in order to investigate and account for learning in its entirety. This represents a more cohesive attempt than previous interpretations to incorporate Vygotsky's (1987) dialectical approach of thesis-antithesis-synthesis, which characterises his ideas concerning the development of higher mental functions.

The current study, in line with Vygotsky's (1987) dialectical approach, will attempt to understand the social aspect of the ZPD in terms of the dialectic between tasks and tools. In addition, a synthesis of the scaffolding (Moll, 1990), cultural-situated (Davydov, 1988; Lave, 1993; Wenger, 1999) and societal/ collectivist perspectives will be utilized. Both the scaffolding and situated approaches focus on the issue of guidance in the ZPD, in contrast to collaboration, which is the focus of the collectivist approach. This study will challenge these notions and suggests that any attempt to understand and operationalise the ZPD has to include both guidance and collaboration in order to retain the spirit of Vygotsky's metaphor. The relative value of these previous contributions is as follows. The scaffolding approach emphasises the importance of initial, but not complete, elements of the task solution, thereby locating the ZPD within an anti-transmission framework of teaching. The cultural/ situated approach values the use of meaningful examples derived from the students developmental and life context. The latter may be an attempt to include or encompass the students' actual levels of development. Finally, the collectivist approach is useful because it underlines the role of the other in the learning process.

Mediation is a central concept in Vygotsky's (1987) work as it is fundamental to the development of higher mental functions. The higher mental functions are volitional, rooted in social interaction (participation) and facilitated by tools. Tools (including language and decision-making procedures) are required for mediation to occur, and consequently, for any movement from the social to the individual plane, or any movement from the actual to the potential level of development. While the fundamental ideology of mediation (i.e. intervention is necessary in order for learning to occur) is upheld, the present study seeks to define mediation both more broadly and more concisely. This definition will attempt to address the problems of interpretation present in previous understandings of mediation.

This dissertation attempts to refine the practical activity in which mediating artefacts (tools) are utilized (Davydov, 1988), while synthesizing Lave (1993) and Wenger's (1999) ideas of a community of practice in which teachers have to investigate the impact of discourses in which they locate themselves. The main proponent of Vygotskian thought in the West, Wertsch's (1981) work is problematic because it is founded on certain untenable assumptions, for example, his irreducible account of agency and teleological action. This dissertation argues that these foundational assumptions are problematic in any meaningful application of Vygotsky's (1987) work. However, the value of Wertsch's theorising (1987) lies in his attempt to provide a rationale for investigating single elements in the mutually formative system. Unfortunately though, Wertsch (1984) and other theorists (Davydov, 1988; Lave, 1993; Wenger, 1999) have then ignored the interacting system as a whole.

How the movement occurs from the social to the individual plane, or how the mediation moves into the individual plane of the learner, is an issue that is problematic in both Vygotskian and post-Vygotskian work. Vygotsky (1987) positioned himself as against transmission forms of teaching. Accordingly, mediation is not simply sent by the teacher and passively received by the learner. In order for mediation to facilitate the attainment of the potential level of development, the learner has to reflect on it. Because Vygotsky (1987) provided no explanation for internal psychological structures, the nature and role of reflection in the movement towards the potential level of development has been the subject of much debate (Cole & Chan, 1994; Coats, 2002; Mezirow, 1998; Penny & Harley; 1995; Roth et al., 2001). Vygotsky's work has been located within both constructivist and situated perspectives on reflection (Ball, 2000; Bitzer, 2001; Lave, 1993; Wenger, 1999). These two perspectives differ vastly in their emphasis and explanation. Wertsch (1991) attempted to circumvent this debate with his use of the term "appropriation" rather than that of "internalisation". The current study explores the notion of appropriation by investigating the students' perceptions of the value of tasks and tools for the development of critical thought.

2.6. Methods of Developing Critical Thought

Although there are diverse ways to develop critical thought in students, there appears to be agreement concerning some aspects of teaching and learning in higher education. These aspects include the provision of structure and learning materials by the lecturer, and a relationship between new knowledge and the students' current understanding. The characteristics of both lecturers and students are also thought to be important. There has been much debate regarding how to ensure that students play an active role in their own learning experiences, particularly in the classroom situation.

Firstly, there is pervasive agreement concerning the notion that the teaching and learning situation in higher education needs to be carefully structured by the lecturer (de Groot & Dison, 1996; Feldens & Duncan, 1986; Jacobs & Gravett, 1998; Nuy, 1991; Thomas et al., 1991). The notion of structure mirrors Bruner's (1987, p. 32) idea of mediation as a "navigational instrument". Structure is thought to be achieved through the development of a "materials-based pedagogy" (Bertram, 2003, p. 76), or "learning package" (de Groot & Dison, 1996, p. 29). However, the needs of individual students are not addressed in this manner (Bertram, 2003).

Secondly, the relationship between the students' current knowledge and new knowledge is also thought to be important. Arguably, this is the incorporation of Vygotsky's dialectic between scientific and everyday concepts, or the social and the historical (Vygotsky, 1987). This relationship is constructed in diverse ways, including "personal significance" (Wessels, 2001, p. 219) to students, the linking of the "course material and the real world" (Entwistle et al., 1991, p. 249), and making theoretical content "relevant and applicable' (Jacobs & Gravett, 1998, p. 55). Relating course content to the context of South Africa has also been found to be important (Frescura, 2002). One teaching strategy that is thought to relate theoretical content to the students' current knowledge is the use of case studies (Romm & Mahler, 1986; Weil et al., 2001). However, case studies are more effective if they are accompanied by some form of mediation (Ertmer & Dillon, 1998).

Thirdly, the characteristics of both lecturers and students have also been found to influence the development of critical thought. The characteristics of lecturers include

personality variables (Gravett & Henning, 1998; Neuman, 1994; Stein & Janks, 1996). Lecturers are thought to act as models of learning for their students (Simpson & Erikson, 1983; Wertsch, et al., 1980). In addition, the ways in which lecturers reinforce students' behaviour impacts upon the students' learning experiences (Baker, Bauer, Hamann & McAllister, 2000; den Brok et al., 2002; Woolfolk & Brooks, 1985). The characteristics of the students that are thought to influence teaching and learning in higher education are also diverse. Factors internally present in students include the active versus passive dichotomy of learning (Kember & Wong, 2000; Lake, 2001); student perceptions of the teaching and learning situation (Saumell et al., 1999); students' motivation and goals (Nettles et al., 1986; Wertsch, 2005); the importance of the course in the student's career trajectory (Fourie, 2001; Pea, 1993); the influence of significant others, including parents and peers (Hayden & Carpenter, 1990) and the student's intellectual ability (Jack, 1996; Saljo & Wyndhamn, 1993).

2.7. The Knowledge and Skills Dialectic

Critical thinking, or understanding at university, may be conceptualised within a Vygotskian framework as the interplay between knowledge and skills. Although, Vygotsky did not explicitly analyse the relationship between knowledge and skills, in his discussion of Thorndike's criticisms of Binet's work on the measurement of intelligence, Vygotsky emphasises a relationship between what is measured and how it is measured (Vygotsky, 1997b). Vygotsky (1987) also seemed to assume that the interplay between the two lead to understanding:

> The teacher who attempts to use this approach (direct instruction) achieves nothing but a *mindless learning of words*, an *empty verbalism* that stimulates or *imitates the presence of concepts* in the child. Under these conditions, *the child learns not the concept, but the word, and this word is taken over by the child through memory rather than thought. Such knowledge turns out to be inadequate in any meaningful application. It* (direct instruction) *substitutes the learning of dead and empty verbal schemes for the mastery of living knowledge*[20] (Vygotsky, 1987, p. 170)

[20] Italics appear as in the original

The current study will present two analytic units, namely knowledge and skills. The interplay between these two distinct units is assumed to result in the development of understanding. The construct of "knowledge" is analogous to Perkins and Simmons' (1988) "declarative" knowledge or "subject-specific" knowledge and Bloom et al.'s (1957) lowest level taxonomic category, knowledge of specifics, the ways and means of dealing with specifics, and abstractions and generalisations. The Oxford English Dictionary defines "knowledge" as a noun that denotes "information and skills acquired through experience or education awareness or familiarity gained by experience of a fact or situation" (Hawker, 2001, p. 720). The word is appropriately derived from the Old English word for "awareness"/ "consciousness" / "cognition" and is linked to both understanding and learning (Hawker, 2001). The analytic unit "knowledge" will be utilised in the current study as being "the what" and analogous to Vygotsky's question of "what is mind?". The category of knowledge is important because information is a prerequisite for development (Hannah & Michaelis, 1977). Knowledge can be procedural or declarative, as proposed by Moseley et al. (2005) and Perkins and Simmons (1988) (see Figure 2, on p. 85).

The word "skill" may be used to represent "expertise or a particular ability" (Hawker, 2001, p. 1211). This construct is similar to compiled procedural knowledge or method-specific knowledge proposed by Perkins and Simmons (1988) and Bloom et al.'s (1957) cognitive abilities and skills of comprehension, application, analysis, synthesis and evaluation. The analytic unit of "skills" will be used in the present study to reflect "the how" and is, therefore, analogous to Vygotsky's quest for a method by which the mind could be studied. Therefore, like Vygotsky's (1987) individual plane/ social plane and methodology/ psychology, knowledge and skills are inseparable in practice, but are analytically distinct (See Figure 2 on p. 85). The delimitation of skills is important because knowledge, on its own, does not result in understanding. Rather, skills are required in order to select the appropriate knowledge for a particular purpose (Moseley et al., 2005)

The noun, "understanding", is defined as "an individual's perception or judgment of a situation" (Hawker, 2001, p. 1407). The current study's explanatory principle rests on the premise that it is the *interplay* between both knowledge and skills that results in understanding (See Figure 2, on p 85). Understanding results from the integration of

knowledge and skills (Moseley et al., 2005). David Perkins's (1988) account of understanding and (mis)understanding clearly encompasses the knowledge and skill dialectic in the construction of understanding. Perkins and Simmons (1988, p. 306) outlined four frames of knowledge, or ways of viewing the learning situation, including the content, problem-solving, epistemic and inquiry frames.

Firstly, the content frame or the lowest level of understanding "contains facts, definitions and algorithms of the 'content' of a subject matter…(and includes) 'content-oriented' strategies (such as) monitoring the execution of an algorithm…memorization…(and) recall"(Perkins & Simmons, 1988, p. 305). Secondly, the problem-solving frame contains knowledge of problem-solving strategies, the individual's beliefs about solving problems and "autoregulative processes to keep oneself organized" (Perkins & Simmons, 1988, p. 305). Thirdly, the epistemic frame contains the "norms concerning the validation of claims in a subject area (and) strategies concerning the validation" of knowledge claims in that subject area (Perkins & Simmons, 1988, p. 305). Examples of student performances that characterise understanding on this third level include providing evidence, detailing rationales and the proposal of tests for knowledge claims" (Perkins & Simmons, 1988). Finally, the inquiry frame contains both beliefs and strategies that "work to extend or challenge the knowledge in a subject area"(Perkins & Simmons, 1988, p. 305). An example of thinking within this frame includes "critical and creative thinking that questions the boundaries of the domain" (Perkins & Simmons, 1988, p. 305). Perkins developed his four frames of understanding in terms of schools (Perkins, 1991), computer technology (Salomon, Perkins & Globerson, 1991), thinking dispositions (Perkins, Jay & Tishman, 1993; Perkins, Tishman, Ritchhart, Donis & Andrade, 2000) and individual and social aspects of learning (Salomon & Perkins, 1998).

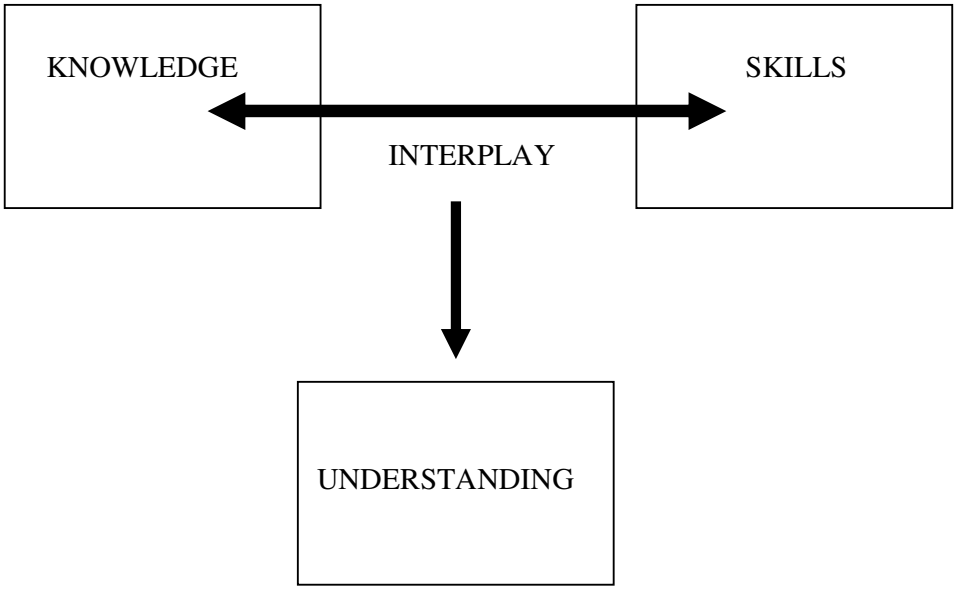

Figure 2. A schematic depiction of the current study's explanatory principle

That the interplay of knowledge and skills leads to understanding is widely accepted in teaching and learning research in higher education, both internationally (Biggs, 1999, 2001, 2002; Entwistle, 1991; Entwistle & Entwistle, 1991; Marsh, 1984; Maunder & Harrop, 2003; Meyer & Muller, 1990; Nunan, 1988; Neuman, 1994; Perkins, 1986, 1991; Perkins & Salomon, 1988; Perkins, Jay & Tishman, 1993; Prosser & Trigwell, 1990; Ramsden, 1979; Ryan, 1993; Salomon & Perkins, 1989, 1998; Salomon, Perkins & Globerson, 1991; Sheppard & Gilbert, 1991; Terenzini, Theophilides & Lorang, 1984; Tishman, Jay & Perkins, 1992) and in South Africa (Bayer, 1996; Craig & Kernoff, 1995; de Groot & Dison, 1996; Hindes & Bakker, 2004; Jacobs & Gravett, 1998; Richardson, 2005; Thomson, 2005; Viljoen, 2005). In South Africa, academic development practitioners have argued for integration between skills-based tutorials, or Academic Development tutorials, and knowledge areas or academic Departments (Warren, 2002).

The dialectic between knowledge and skills has been labelled in diverse ways. These include the relationship between theory and practice (Wierstra, Kansellar, van den Linden & Ladewijks, 1999); knowing and doing (Lau, 2001); the what and the how (Meyer & Muller, 1990); and conceptual development and reasoning processes (Schauble, 2003). The use of the terms "knowledge" and "skills" is congruent with

Bloom's taxonomy of cognitive development, which has been widely used at the University of the Witwatersrand (de Groot & Dison, 1996; Dison, Granville, Delmont & Button, 2000; Dison & Pinto, 1995; Dison & Rule, 1996; Granville, 2002)

2.8. The Problem of the Development of Critical Thinking in the First Year of Higher Education in South Africa at the beginning of the Twenty-First Century

The development of critical thinking skills in students also occurs within a specific set of social and historical circumstances in which universities are located. The nature of higher education has evolved from the "ivory tower", and the "harsh realities of life" (Hawker, 2001, p. 693) are that universities are now government-controlled, commercial enterprises in which lecturers are service-providers and students are consumers of services offered. Increased governmental control and commercialisation are found both internationally and in South Africa and has been met with resistance by academic staff.

A dialectical relationship exists between the generative (research) and disseminative (teaching) functions of institutions of higher education. A university that is successful is one that is at the forefront of knowledge generation, and produces graduates that possess good critical thinking skills. The development of critical thinking skills is subject to diverse interpretations, which differ according to the ontological and epistemological stance adopted by the researcher. There is general agreement that graduates need to be critical thinkers, and that critical thinking includes a set of evaluative skills that involve analytical problem-solving and the ability to synthesize theory and problems encountered in everyday life.

In addition, higher education has also transformed from an elite to an open system. The way in which "previously marginalized communities" is defined is dependent upon the sociohistorical circumstances in which they occur. In South Africa, these communities include those people who lacked democratic rights under the Apartheid system. The change to the open system has meant changes to teaching strategies and larger class sizes. Academic staff is, consequently, faced with greater challenges in the open system, and there has also been resistance from academia. Large class sizes

present particular complications for lecturers, and have resulted in the domination of classroom discussions by previously privileged groups.

The democratically elected government in South Africa has legislated profound changes in the educational system. These changes include the introduction of outcomes-based education in the schooling system, which it is believed, will overcome the widespread disjunction between school and higher education. However, it is widely acknowledged that the transition from school to university is particularly difficult for students. In South Africa this transition is particularly complicated for students who were subject to the racial inequities of the Apartheid-era educational system. Wits is obliged to address the issues of transformation, quality and the increasing number of years that students are taking to graduate. In addition the Faculty of Health Sciences at Wits has developed a problem-based, community-oriented curriculum. The Discipline of Psychology, which is located in the Faculty of Humanities, but offers an elective course for first year students in the Faculty of Health Sciences (Medicine, Nursing, Occupational Therapy, Pharmacy and Physiotherapy), which formed the focus of this study.
As discussed, two constructivist theories of teaching and learning have gained ascendancy in disseminative practices of universities. The approaches to learning theory has focussed on the student's understanding of learning itself, the approach adopted to learning, and the perception of the environment in which learning occurs. Students are categorised as either culturally proficient (a deep approach) or culturally primitive (a surface approach). This theory ignores specific teaching and learning tasks and tools, the relations of power between the lecturer and students, and the material circumstances that face students in today's universities (Haggis, 2003). On the other hand, the academic literacies theory focuses on cultural practices (e.g. the development of critical thought in higher education) that are contested. It asserts that social interaction between distinct and relatively powerful groups results in specific socially-situated identities. Therefore, the epistemological focus of this theory is on identity, and not the tasks or tools present in the teaching and learning situation.

Vygotsky used Marx's epistemological framework to understand the development of diverse cultural tasks and tools. Vygotsky defined development as the complex inter-relation between history and culture and the conflict that arises between history (the

knowledge and skills that students already have) and culture (critical thought in higher education). This understanding of development incorporates a complex notion of the importance of the role of history in the students' current ability. The importance of conflict to Vygotsky's model is evidenced in many of his theoretical concepts, in which tasks and tools play a pivotal role. The present study incorporates the notion of conflict in the dialectic between tasks and tools, and the differing understandings of both tasks and tools by the lecturer and students. This change concerns the conflict that arises between what students have already demonstrated that they are capable of achieving (e.g. completing secondary school) and becoming critical thinkers as a result of the process of higher education. Higher education can be viewed as a particular form of culture, which the lecturer disseminates (e.g. critical thought). Vygotsky labelled the child as the "primitive" (Vygotsky, 1929, p. 416) in the culture. Methods of developing critical thinking at universities include the provision of structure and learning materials by the lecturer, and a relationship between new knowledge and the students' current understanding. The characteristics of both lecturers and students are also thought to be important.

The polemic debate around Vygotsky's ideas requires careful ideological reflection on the part of the empirical researcher. Cold War-era Western neo-Vygotskians, based on their readings of interpretations, rather than translations of his work, have been careful to limit the Marxism in Vygotsky's account of development. Vygotsky's concept of sociohistorical development is rooted in an anti-individualistic position. This is foreign territory for those anti-Communist, and therefore, anti-Marxist, ideological positions that emphasise the rights and freedoms of the individual. The individualistic practices of Capitalism may have shackled Western theorists to a position of interpreting the social in terms of the individual. An African sociohistorical context, in which more emphasis is placed on the social or the collective community, may be better suited to the explication of Vygotsky's synthesising concept of sociohistorical development.

2.9 Research Rationale

Higher education is an ideological practice in which multiple individuals and social groups use a variety of marginalizing discourses in the service of their own positions

of power. In the history[21] of the ideological practice of higher education in South Africa, the relations of power between the state, the workplace, the university, academic staff (or lecturers) and students have been revolutionised by the ideologies of capitalism and democracy. The material conditions of academic staff and students in higher education that are described in the current study are interactions between one lecturer and a group of over three hundred students whose historical[22] development is at a point of transition or change in the form of the ideological practice of education, namely from school, or secondary education, to university, or higher education. This transition is revolutionary in the sense that it requires a complete disjuncture from historically-developed ways of thinking and acting for the pupil/learner, who is discursively labelled as the student. This new way of thinking and acting was defined as critical thinking in which the units of knowledge and skills, or parts of the whole, are developed in a cumulative and hierarchical structure.

The academic socialization view of teaching and learning in higher education is the dominant epistemological and ontological account, but lacks critical engagement with the sociohistorical circumstances that create and sustain ideological practices. The academic literacies view of university teaching and learning attempts to place ideological literacy practices at the forefront of their analyses. However, these investigations centre on the development of ideological identities, which may obscure the role of ideological tasks and ideological tools in the construction of these identities. An ontological and epistemological framework of teaching and learning that accounts for the tensions between the external, or the social, or "what is to be taught and learned", and the internal, or the historical, what has already been learned or developed may be more useful in the evaluation of the ideological practices of higher education in South Africa at the start of the Twenty-First Century. L.S. Vygotsky attempted to provide one such ontological and epistemological structure.

Vygotskian ideas about teaching and learning involve a dynamically interwoven framework of epistemology and ontology. Historically, this structural framework has not been adequately explored and described by most neo-Vygotskians, both Soviet and Western, with the most notable exception being the "tool-and-result"

---

[21] in the sense of a continuous record of events (Hawker, 2001).
[22] In the sense of development that has already taken place, or cultural experience that is internalised.

interpretation of the Americans, Newman and Holzman's (1993). Most Soviet and Western interpretations focussed on theorising and operalizationalising Vygotsky's ontological concepts.

This South African higher education interpretation of Vygotsky's work presented in this thesis focuses on his epistemological framework of dialectical historical materialism, in which real, or material circumstances are understood in terms of opposing social and historical forces. Dialectical or conflictual relationships between units of analysis (epistemology) result in dynamically related ontological concepts. In this review, the complex ontological concept of sociohistorical development was highlighted as a unified and unifying principle of Vygotsky's plethora of ontological terms, including cultural tasks and cultural tools, mediation, instruction and development, scientific and everyday concepts and the ZPD.

2.10. Research Aim

The primary aim of the study was to interrogate the ideological practices of teaching and learning, in a seven-week component of an elective Psychology course, in the first year of higher education in South Africa, at the beginning of the Twenty-First Century.

CHAPTER THREE
METHOD

3.1. Introduction

The evaluation of the teaching and learning in a large class of First Year students occurred through the analysis of multiple components. Firstly, history is constructed in terms of both the evaluation of teaching strategies (teaching) and the disjunction between secondary school and the first year of higher education (learning). Secondly, Vygotsky's social or cultural component was operationalised in terms of critical thinking in higher education. Accordingly, the evaluation of each task and tool utilized in the teaching strategies was conducted using Bloom et al.'s (1956) framework of knowledge and cognitive abilities and skills. The students' perceptions of the tasks and tools were analysed in terms of both cognitive and affective components. The relationship between the lecturer's and the students' constructions of the tasks and tools was then described.

The current study presented a longitudinal evaluation of the evolution and development of learning materials designed for a First Year Psychology for the Health Sciences course. Ontologically, the theoretical content of the Human Development sub-course, which formed the focus of the study, did not alter over the four-year duration. This theoretical content, or knowledge, related to Human Development, Personality and Abnormal Psychology. The study was also cross-sectional because it involved four successive cohorts (2000-2003) of students registered for the Psychology for the Health Sciences course. Each cohort was examined in terms of students' perceptions of the additional developments of the learning materials for the course. Analysis of the data was ecological, quantitative and qualitative and adopted a realist, social constructionist ontological position and a mixed-mode epistemological stance.

The current study was post-hoc in nature and emerged from the practice of teaching. Accordingly, the process within a community, comprising a lecturer, Course Co-ordinator and Teaching and Learning Advisors in the Faculty of the Humanities, began with the generation of the teaching strategies by the novice lecturer. As each new teaching and learning strategy was developed, student perceptions about the helpfulness of each strategy were collected through both quantitative and qualitative instruments. This data remained largely unanalysed for numerous reasons relating to

the work pressures of the staff involved. The level of understanding of the explanations and practices of teaching and learning in higher education required in order to conduct an analysis took some time to develop. Thus, to reiterate, the when the data was collected, the presentation of this data in a doctoral thesis was not envisaged. Rather, what was envisaged was that the lecturer and her community of practice gain some insight into that practice. Because of the post-hoc nature of this project, the Committee for Research on Human Subjects (Humanities and Medical), University of the Witwatersrand granted retrospective permission for the current study in 2003 (see Appendix A for ethics clearance certificate).

3.2. Philosophical Basis

Ontologically, the study has adopted a realist position. Thus, the external world or social plane does exist outside of the individual and can be known by the individual (Harre, 1981). This external world is both complex and stratified and knowledge of the external world is a social and historical product (Scheurich, 1997). At any particular point in the observation of the external world, the individual observer may not necessarily provide an accurate account of the true nature of this external world (Cameron, Frazer, Harvey, Rampton & Richardson, 1999). The realist approach, therefore, distinguishes between the individuals who observe and the situation that is observed (Payne & Payne, 2004). The realist approach to ontological considerations appears to be closely aligned to the Vygotskian distinction between the social and individual planes in which the social plane is accorded analytic primacy (Vygotsky, 1987). The current study highlights the external social world as being primary and the lecturer and students' interpretations of the social world as being secondary (Payne & Payne, 2004).

How the individual knows the external, social world, or the epistemological position of the study, is constructivist. Accordingly, individuals progressively construct how they know the world, and what rules govern their knowing (Scheurich, 1997). Importance has been placed on the manner in which the social plane has been constructed and reconstructed by both the lecturer and the students through the process of social interaction. Therefore, the current study may be located within a social constructionist approach (Payne & Payne, 2004), in congruence with a

Vygotskian ontological-epistemological position. The individual's construction of the external world is a dialectical process. Thus, our knowledge of the external world is an approximation of the social plane and we are constantly engaged in construction and reconstruction of our representations of the external world. Hegel's understanding of this dialectical approach centres on a system of logic that proceeds from thesis to antithesis (Rowan, 1981b). This notion of antithesis is central to the dialectical approach as two ideas are balanced and contrasted through their juxtaposition (Rowan, 1981b).

The system of inquiry in the current study may be conceptualised as being dialectical-conflictual in nature. This form of inquiry has four distinct characteristics. Firstly, two different actors in the social plane have been positioned in opposition to one another (Rowan, 1981a). Accordingly, the lecturer and the students represented two distinct groups. Secondly, each of these groups must be an antagonist to the other in some way (Rowan, 1981a). In the current study, the operalization of this antagonism occurred on several levels. There is an inherent difference in power between a lecturer and students (Giddens, 2002; Parker, 1999). The lecturer traditionally holds the more dominant position in terms of knowledge and skills (Louw, 2004). It is also the goal of the lecturer to challenge the students, or to place the students into a state of conflict in terms of the acquisition of new knowledge and skills. In addition, the mechanisms of power within the wider social context are inherent in the teaching and learning situation. These include issues such as the gender and race of both the lecturer and the students and within the group of students (Louw, 2004). Thirdly, the juxtaposition of the two actors in the social plane revealed the underlying assumptions of both types of actors (Rowan, 1981a). The internalisation of the teaching strategies by both the lecturer and the students has been investigated and examined in contrast to one another. This juxtaposition assumed the primacy of the social plane because "(p)eople do not create society. For it always pre-exists them and is a necessary condition for their activity" (Mouton, 1994, p.46). Finally, the dialectical-conflictual system of inquiry is well suited to problems that are not clearly structured (Rowan, 1981a). In the instance of the current study, examples of ill-structured problems included: what constitutes effective teaching and learning and how we can make judgments about the effectiveness of teaching and learning? This system of inquiry is also conceptualised

as a Hegelian system (Rowan, 1981a), and is, therefore, aligned to a Vygotskian approach to teaching and learning (Delafield, 1999; Vygotsky, 1981).

This dialectical-conflictual framework of inquiry has been operalizationalized through the triangulation of research methods (Kelly, 1999). The current study is characterised by methodological pluralism in which several or mixed-methods were utilized (Payne & Payne, 2004). This triangulation involved the analysis of multiple perspectives from multiple observers (Patton, 1980) and an examination of the social context in which these observers were located (Scriven, 1991). Both the lecturer and the students were considered the observers in the current study. Therefore, the interpretations that both the lecturer and the students (actors in the social plane) have attached to the teaching strategies (objects in the social plane) were analysed. Secondly, multiple sources of data (four different student questionnaires, classroom non-participant observers and the lecturer's analysis of the teaching strategies) were utilized. Finally, both quantitative and qualitative methods of data collection were used (Payne & Payne, 2004). The current study is "a fully integrated design in which the study's two parts (quantitative and qualitative) are implemented simultaneously with neither side dominant" (Padgett, 2004, p.35).

Firstly, the quantitative method of data collection concerned "…the counting of how frequently things happen" (Payne & Payne, 2004, p.181). A quantitative methodology was utilized in the analysis of the perceptions of the students. This analysis was centrally engaged in a description of any regularity in the social perceptions of the students (Payne & Payne, 2004). However, the quantitative design does not sufficiently account for the model of the individual that the study adopted because the study is based upon the assumption that it is not possible to separate individuals from the social context in which they are acting (Rowan, 1981b). Therefore, the limitations inherent in the quantitative approach as an individual strategy dictated that multiple approaches to the investigation of the research questions were essential (Rosenthal & Rosnow, 1991).

A qualitative design was also implemented in the lecturer's analysis of the teaching strategy and in the analysis of the perceptions of the students. Firstly, this qualitative design represented the attempt to provide an holistic portrayal of the social content of

the teaching and learning. Secondly, relationships within the teaching and learning system were examined. Thirdly, the lecturer-students interactions were evaluated. Fourthly, the study has focussed on understanding the social plane, rather than attempting to predict or control it. Fifthly, the current investigation provided a complete description of the role of the lecturer and relied heavily on the conceptualisation of the lecturer as an instrument of research (Jonesick, 1998).

3.3. An Ecological View of the Sociohistorical Circumstances

An ecological view of the social plane is in congruence with the complex and stratified external world of the realist ontological position (Scheurich, 1997). This ecological view is also aligned to the constructivist epistemological approach. The constructivist position relates to Hegel's levels of consciousness in human interactions. Hegel's realized level of consciousness (Tertiary level) involves not suppressing the primary level (subjective experience), but rather exploring ways in which material from the subjective level may be negotiated into conscious experience. This subjectively experienced material is, therefore, negotiated into the level of the social (Secondary level) (Rowan, 1981b). Therefore, the Realized level concerns acknowledging the social plane "…as *our* world, rather than *the* world" (Rowan, 1981b, p. 116).

The context of South Africa, the Higher Education context, the Health Sciences and the discipline of Psychology, and large, diverse student constituencies have been described in an attempt to fully explore factors within the social plane. In line with a social constructionist approach to learning in which an objective "truth" does not exist (Mason, 2000), two stakeholders in the social plane were identified. A perception of reality is constructed by the internalisation of the social plane by the different operators within that social plane. The stakeholders in the social plane in this study are the lecturer and four successive classes (2000-2003) of students.

The ecological approach adopted by the study is also operationalised through the analysis of these two distinct stakeholders. Because these two actors in the social plane are all conceptualised as learners, no perception of the reality of the teaching and learning situation is conceptualised as the "expert" opinion. Instead, each actor

has a contribution to make in the interrogation of the teaching strategy. Therefore, each position will be elucidated for each aspect of the teaching and learning strategy in order to decide on the merits and shortcomings of the strategy. This juxtapositioning of the actors in the social plane is also congruent with the dialectical historical materialist method.

The teaching strategies used in the course were interrogated by firstly providing an analysis of each teaching strategy. Secondly, the students' perceptions of these strategies were investigated. Finally, a comparison of the lecturer and students' understandings of the teaching strategies as aspects of the social plane is given (See Figure 3).

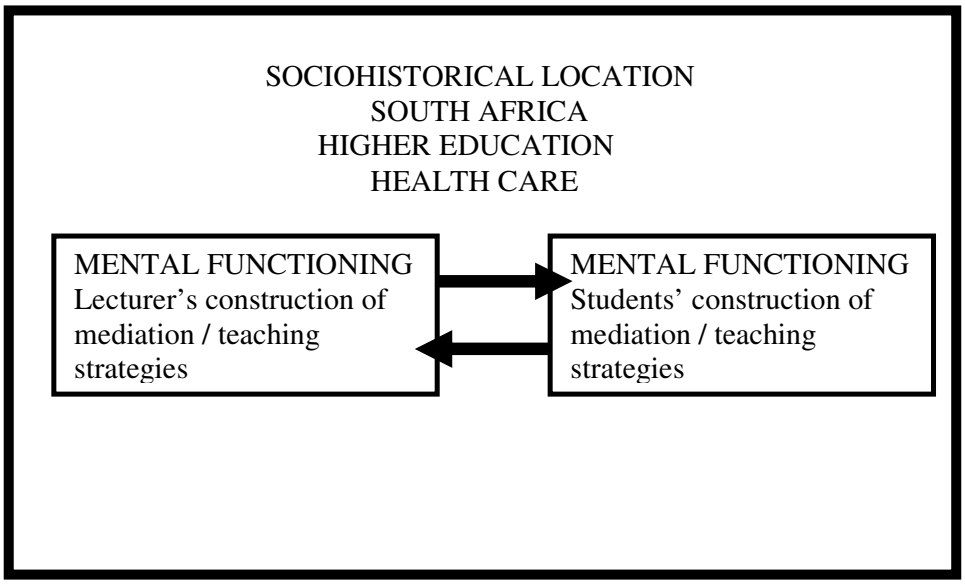

Figure 3. Methodological constructions in the current study

3.4. Sample

Thus, in congruence with the Marxist approach to method, two actors are analysed. Accordingly, these two actors are the lecturer and a large, diverse group of students.

3.4.1. *The Lecturer*

The description of the lecturer focussed on the lecturer's history as a student and history of employment at the university. In addition, the relationship between the

disseminative (i.e. teaching) and generative (i.e. research) roles of the lecturer has been explored. Categories that have been assigned to students have also been used to describe the lecturer.

The lecturer was a White female who was twenty-six to twenty nine years of age when the data were collected. The lecturer had obtained her Bachelors and Honours degrees at the University of the Witwatersrand. In South Africa, the Bachelor of Arts degree is a three-year undergraduate degree in which two major subjects (e.g. Psychology and Law) are completed. The Honours degree is a postgraduate qualification in one academic field, Psychology in this instance. As an Honours student, the lecturer had received what is known as a "Postgraduate Merit Award" from the university, which is awarded on the basis of a mark of seventy percent or more (an upper second or first-class pass) in the Third Year (or major) subject. This bursary covers all tuition costs for the Honours degree and includes a stipend. Students who accept these bursaries are expected to 'work' in the Department for six hours of every week of term. One of the duties commonly assigned to students include tutoring groups of twenty to thirty First Year students. Postgraduate student tutors are utilised in the first and second year in the Psychology department in order to manage the large numbers of students who register for these courses. The postgraduate students are required to conduct two forty-five minute tutorials per week. Tutorial preparation, tutors' meetings and student consultation constitute the remaining 'work' hours.

In 1997, the lecturer was employed at the university as a "tutor". Tutors in the Department of Psychology develop and conduct eight or nine tutorials per week and oversee the large administrative burden that such large student numbers involve. This is an entry-level position, and it is common practice that tutors also register for a further postgraduate degree. At the end of 1998, the lecturer completed her Masters degree in Psychology. In 1998, the lecturer taught the Human Development subcourse in the Psychology for the Health Sciences course for the first time. In 1998, none of the lecturers on the course were able to construct a Resourcepack. This circumstance existed because the Course Co-ordinator of the course had edited a textbook in which each of the lecturers on the course contributed chapters that were directly relevant to the material presented in their courses. These chapters generally summarised central

theoretical concepts and discussed the relationship between these concepts and the practice of health care in South Africa. In 1999 the lecturer was confirmed, or awarded tenure by the university as a Senior Tutor. The senior tutorship position is one level above the tutor position, and is considered the "teaching track" equivalent of a lectureship position. Thus, tutors are considered to be individuals who have expertise in teaching and learning. However, this historical distinction made between "teaching" and "research" track positions is no longer recognised in the "research" university in which all members of the academic staff are expected publish. In terms of teaching the Human Development subcourse, in 1999, a Resourcepack was constructed by the lecturer with the assistance of the Teaching and Learning Advisors in the Faculty of the Humanities. However, it was only in 2000 that the lecturer, Course Co-ordinator and Teaching and Learning Advisors started to investigate the student perceptions of the subcourse.

The lecturer was constituted as an active participant in the research process and, thus, the current study may be conceptualised as participatory research (Patton, 1980). Participatory research involves a complete commitment on the part of the researcher and neither the roles of teacher, nor researcher, are used as a mask (Rowan, 1981). This notion of the participant observer has been incorporated into studies of teaching and learning (e.g. Besozzi, 1999; Goolam, 1997; Gravett & Henning, 1998; Henning 1997; Henson, 2001; Hugo, 2003; Waghid, 2001). In the instance of the current study, the observer (researcher) is also constituted as an active participant (teacher).

The view of reflexivity emphasised the construction of meaning by the lecturer. The lecturer's meaning construction was placed into the social plane (through textual and verbal mediation). The students' constructions of meaning are then negotiated (Payne & Payne, 2004). These constructions of meaning involve a measure of self-awareness on the part of the lecturer. This self-awareness included the values, attitudes and the effects of these values and attitudes on the context (Psychology in higher education) in which the study is located (Payne & Payne, 2004). Accordingly, the teaching strategies and context have been considered and reconsidered as the analysis of the longitudinal data occurred (ibid). This role of the reflective practitioner is appropriate given the practice-based nature of the research questions (Padgett, 2004).

Therefore, the lecturer was located as engaging in participant observation. The nature of the current study may be described as such because a particular community (in this instance teaching and learning in a series of large, diverse First Year classes) is investigated from within this community, both the lecturer and the students have been observed in their normal contexts, there are complex relationships between the lecturer and the students and complicated patterns of interaction between the lecturer and the students (Rosenthal & Rosnow, 1991). The lecturer adopted an active role in the teaching and learning situation (Payne & Payne, 2004). In addition, the current study meets the criteria for the label of "participant observation" because the data collection procedures occurred over an extended period of time (four years). These data collection procedures involved both observing and asking questions of the students as they engaged in their everyday activities and the lecturer was constituted as a member of the teaching and learning community (Payne & Payne, 2004). The current study's form of participant observation was based on the theoretical perspective of Vygotsky (1987, 1993, 1997a, 1997b, 1998, 1999), which has served to prioritise events in the social plane and the constructions of meaning made by the actors within it (Payne & Payne, 2004).

The lecturer in the current study may also be positioned as engaging in action research. This positioning is possible because the current study represented applied research in which new teaching and learning strategies were introduced and the effects of the strategies were monitored (Payne & Payne, 2004). The primary aim of action research is to explain what is being investigated, rather than to change the object of investigation. The post-hoc nature of the investigation of the relationship between the constructions of the teaching strategies by the lecturer and the students also ensured that the teaching and learning is explained rather than changed. The realist philosophical positioning of this form of action research allowed for the adoption of a detached view of the teaching and learning processes (Payne & Payne, 2004).

An important distinction needs to be made concerning the role of the lecturer in the current study. Accordingly, the post-hoc nature of the current study serves to avoid criticisms generally levelled at other studies of research in practice in which the dual roles of the researcher and practitioner results in both weak research practices and

poor delivery of services (Padgett, 2004). The notion of the reflective practitioner is appropriate given the qualitative aspects of the current study (Padgett, 2004). Schon's (1983) understanding of the notion of the reflective practitioner is useful to the current study because of his emphasis on human endeavours in the "real" world (in this instance a contextualised teaching and learning situation), rather than abstract notions of positivist research data. However, the notion of reflexity in the current study seeks to avoid the "endless self-absorption" (Padgett, 2004, p.11) of both postmodern and Schon's (1983) hermetic perspective through its emphasis on both the lecturer and the constructions of the students.

It is important to acknowledge that when the lecturer attempted to elicit the students' perceptions, a particular discourse was utilized. The acknowledgement of a helping discourse is important because "discourses are social phenomena in the sense that whenever people speak, listen, write, read or act, they do so in ways which are determined socially and have social impacts" (Goodley, 1999, p.211). This discourse centred on the notion of helping and enabling the students to understand the material. Examples of this helping discourse are present in all of the questionnaires. The lecturer, therefore, located herself within a discourse of adult guidance that centred on assistance (particularly in a specific direction), the alleviation of a burden, contribution to and the improvement of a specific set of knowledge and skills on the part of the students. In addition, the repeated use of an "enabling" discourse implied an attempt on the part of the lecturer to provide the students with adequate power, means, opportunity and authority to accomplish the learning tasks of the sub-course.

3.4.2. *The Students*

Because of the importance of social factors in Vygotsky's theory, each of the four successive cohorts for which the mediation strategy was designed need to be explicated in terms of the degree towards which they are studying, and their racial and gender characteristics[12] (see Table 3.1). These factors, as well as the large size of the

[12] The racial descriptors used are those that were utilized by the Faculty of Health Sciences, University of the Witwatersrand during the time that the data was collected. These racial labels have subsequently been altered, e.g. the descriptor "African" is now utilised instead of "Black". Once again illustrating the relationship between sociohistorical location and racial descriptors, see Section 1.2.2. In addition, the students may not have categorized themselves in the same manner as the University.

class, were important in terms of an investigation of social conditions that may impact upon both the perception and mediation strategy. The total number of students involved in the current study was 1387. It is acknowledged that every student may not have responded to the individual questionnaires. The demographic characteristics of the respondents to individual questionnaires will be provided in the analyses of the questionnaires. The demographic variables utilised include gender, race and type of degree registration.

Table 3.1.

The gender, racial and degree composition of the students registered for the sub-course (2000 to 2003)

Demographic variable	2000	2001	2002	2003
		Race (N)		
Black	13% (31)	30% (96)	22% (65)	22% (57)
Coloured	1% (2)	1% (2)	3% (8)	>1% (1)
Indian	37% (89)	27% (87)	33% (97)	34% (87)
White	49% (117)	42% (134)	42% (125)	44% (114)
		Gender		
Female	74% (178)	69% (220)	79% (233)	80% (207)
Male	26% (61)	31% (99)	21% (62)	20% (52)
		Degree		
Medicine	59% (141)	54% (172)	37% (109)	35% (90)
Nursing	5% (11)	3% (10)	6% (19)	10% (25)
Occupational Therapy	16% (38)	14% (44)	17% (49)	15% (39)
Physiotherapy	15% (35)	16% (53)	21% (63)	20% (52)
Pharmacy	6% (14)	13% (41)	19% (55)	20% (53)
Total n	239	319	295	259

Firstly, in terms of the racial characteristics of the population of the sub-course, in 2000, the fewest number of Black students (13% of the students) registered for the course. There was the largest increase in Black students in 2001 (30% of the students) and the number of Black students remained constant in 2002 and 2003 (22% of the students). A total number of 249 Black students registered for the sub-course during the duration of the investigation. Only 13 Coloured students registered for the sub-course during this period, the smallest racial grouping (>1% to 3% of the students). Indian students formed the second largest grouping of students (i.e. 360 students). White students consistently constituted the majority of the class (490 students). The lowest percentage of White students was 42% (in 2001 and 2002) and the highest was nearly 50% in 2000. Secondly, females were the dominant group in all four years of the investigation. Females consistently numbered more than two-thirds of the class. Thirdly, learners who were registered for a Medical degree were the dominant group (512 learners) in all four years, although their percentage of the class declined (59%, 54%, 37% and 34%). The minority of the class were Nursing students (65 learners over the 4 years of investigation) and these students consistently comprised 10% or less of the class. A total number of 170 Occupational Therapy students registered for the sub-course. The total number of Physiotherapy students was 203. Finally, the total number of Pharmacy learners who registered for the sub-course was 163. Therefore, the majority of the population was White, female and studying Medicine.

3.4.2.1. *The sample for the Diverse Participation Questionnaire (2000)*

The Diverse Participation Questionnaire (DPS) was administered to the 2000 cohort of students. This questionnaire attempted to elicit the cognitive and affective responses to peer collaboration in the massified lecturer-students interaction. (See Section 3.5.8. for a full description of this questionnaire). One hundred and sixty-seven students completed the Diverse Participation Questionnaire. This represented 70% of the students registered for the course. Of the students who completed the questionnaire, 19% did not provide any demographic information. Their responses to the questions have been included in the analysis of the questionnaire. Fifty-six percent of the total number of the students registered for the course provided demographic information. The demographic information provided by these students is represented in Tables 3.2. and 3.3.

Table 3.2.

The gender and race characteristics of the sample for the Diverse Participation Strategy Questionnaire

Race	Male	Female	Total
Black	6	13	19
Coloured	0	1	1
Indian	8	24	32
White	12	71	83
Totals	26	109	135

Fifty- three percent of the sample that provided demographic details was White females. Females represented 81% of the known demographic variables. The sample of males represented 43% of the total number of males who registered for the course in 2000. The sample of females represented 62% of the number of registered females in the course.

Table 3.3.

Gender and race characteristics by degree registration of the sample for the Diverse Participation Strategy questionnaire

Degree	Gender and Race
Medicine	8 BF; 4 BM; 27 WF; 10 WM; 17IF; 7IM
Nursing	1BF; 1BM
Occupational Therapy	2BF; 15WF
Physiotherapy	1BF; 23WF; 2WM; 1IF
Pharmacy	1BF; 1BM; 3WF; 2IF

Key to Table 3.3. : BF = Black, female; BM = Black, male; IF = Indian, female; IM = Indian, male; WF = White, female; WM = White, male

Nineteen Black students (13 females and 6 males) provided their racial information, which represented 61% of the Black students who were registered for the course. Racial characteristics were provided by 27 Indian students (20 females and 7 males). This number comprised 30% of the Indian students registered for the course. Eighty (68 females and 12 males) White students included their racial information, constituting 67% of the total number of White students registered for the sub-course. Therefore, the responses to the Diverse Participation Questionnaire represented the majority of Black and White, and the minority of Indian students in the class.

Fifty-two percent (n=73) of the students who were registered for Medicine responded to this questionnaire. The respondents to this questionnaire constituted 18%(n=20) of the Nursing students. Forty-five percent (n=17) of the total number of Occupational Therapy students responded to the questionnaire. Seventy-seven percent (n=27) of the Physiotherapy students elected to complete the questionnaire. Finally, fifty percent (n=7) of the Pharmacy students completed the Diverse Participation Strategies questionnaire. Therefore, the majority of Medical, Physiotherapy and Pharmacy students' perceptions have been considered in the analysis of this questionnaire.

3.4.2.2. *The sample for the Usefulness of the Resourcepack Questionnaire (2001)*

The Resourcepack Questionnaire required the students to rate the "helpfulness" of the tasks and tools contained in the Resourcepack. These tasks and tools included the learning outcomes, the essay tasks, the problem-solving strategies for the essay tasks, the general and specific lecture outlines, case studies and challenge questions (see Section 3.5.9. for a full description of the nature and purpose of this questionnaire). The 2001 cohort of students responded to this questionnaire. Table 3.4. represents the demographic characteristics of the students who completed the Usefulness of the Resourcepack Questionnaire (246 students). This is 77% of the students who were registered for the course, an increase of 7% from the previous questionnaire. Sixty-eight percent of the total number of registered students provided demographic information on this questionnaire.

The highest response was from the Nursing students (90%). Medical and Occupational Therapy displayed the second highest response rate (77%). A five percent difference in response rate was found between the Pharmacy (71%) and Physiotherapy (66%) students. Thus, at least two-thirds of the number of registered students responded to the questionnaire in the five degree categories. Similar findings were present in terms of gender because 67% of males and 68% of females responded to the questionnaire. Similar patterns (Indian and White students = 67%) were also found for race, but Black students (69%) demonstrated a slightly higher response rate.

Table 3.4.

Gender and racial characteristics of students who completed the Usefulness of the Resourcepack Questionnaire by degree registration

Demographic variable	N	Percentage of sample
	Degree	
Medicine	133	54
Nursing	9	4
Occupational Therapy	34	14
Physiotherapy	35	14
Pharmacy	29	12
No response	6	2
	Gender	
Female	150	61
Male	67	27
No response	28	11
	Race	
Black	66	27
Coloured	2	1
Indian	58	24
White	90	37
No response	28	11

The perceptions of the majority of the students in the class were represented in this questionnaire. Thus, the majority of the male and female, and all racial and degree groups' responses were incorporated in the analysis. This questionnaire had the highest response rate and the data includes the perceptions of more than two-thirds of the 2001 class.

3.4.2.3. The sample for the Usefulness of the Problem-Solving Strategies Questionnaire (2001)

In this questionnaire, the students rated the helpfulness of the tasks and tools that related to the essay tasks. In terms of tasks these included the learning outcomes and the required reading. The tools investigated included the problem-solving strategies of the selection and organization of theoretical material, application of the theory to case studies and the role of evidence in argument. (See Section 3.5.10. for a complete description of this questionnaire). One hundred and eighty-nine students completed this questionnaire, representing 59% of the students registered for the course. One hundred and eight-nine students (55% of the total number of registered students) provided demographic information. The demographic characteristics of these students are represented in Table 3.5. below.

Table 3.5.

The degree, gender and racial characteristics of the sample for the Usefulness of the Problem-Solving Strategies Questionnaire

Demographic variable	N	Percentage of sample
	Degree	
Medicine	113	60%
Nursing	7	4%
Occupational Therapy	18	9%
Physiotherapy	30	16%
Pharmacy	21	11%

Demographic variable	N	Percentage of sample
	Gender	
Female	125	66%
Male	51	27%
No response	13	7%
	Race	
Black	70	37%
Coloured	2	2%
Indian	26	14%
White	77	40%
No response	13	7%

The majority of Nursing (70%), Medical (67%), Physiotherapy (57%) and Pharmacy (51%) responded to this questionnaire. Occupational Therapy students reflected a minority of the total number of registered number. Females had a higher response rate than males (59% versus 52%). Similarly to the Usefulness of the Resourcepack questionnaire, the Black students displayed the highest (73%) and the Indian students the lowest (30%) rate of responses. A majority (57%) of the White students completed the questionnaire.

3.4.2.4. *The sample for the Lecture Notes Questionnaire (2002)*

One hundred and twenty-two students completed the questionnaire. This figure represents 41% of the total number of students registered for the course. The questionnaire did not require the students to provide any demographic information. Section 3.5.11. provides a detailed description of the questionnaire.

3.4.2.5. *The sample for the General Mediation Questionnaire (2003)*

As in the instance of the Lecture Notes questionnaire, the students were not required to provide any demographic information on the General Mediation questionnaire. Ninety-four students completed the questionnaire. This figure represented only 36% of the total number of students who were registered for the sub-course, which was the lowest response rate of all the questionnaires. This open-ended questionnaire did not constrain the responses of the students in terms of specific teaching strategies. (See Section 3.5.12. for a description of the nature and purpose of the questionnaire).

3.5. Materials

Eight different teaching strategies were analysed. Firstly, the Resourcepacks (2000 - 2003) contained six teaching strategies. These strategies were the learning outcomes, essay tasks, the problem-solving strategies for the essay tasks, the general and specific lecture outlines, the case studies and the challenge questions. Four Resourcepacks (2000-2003) were examined as examples of Vygotsky's "adult guidance" and frameworks for independent problem solving (Wessels, 2001). The Resourcepack attempted to provide the students with a "manual" on how to successfully complete the sub-course. In addition, attempts to facilitate diverse forms of participation, namely the Diverse Participation Strategies (DPS) in 2000, and the Lecture Notes (LN) in 2002 were analysed. Finally, the mediation strategy in general was reviewed (2003).

3.5.1. *The Learning Outcomes*

The learning outcomes were conceptualised as the products of the specific learning process and thus stated what the student should be capable of demonstrating on completion of the course. (See Appendix B for examples of Learning Outcomes).

3.5.2. *The Essay Tasks*

The essay tasks were utilized to assess whether or not the students were able to achieve the learning outcomes for the sub-course. The essay tasks were the only tasks

that were compulsory for each student. These tasks were essay-type questions that required the students to construct an academic argument that related to Psychological theory, the practice of Health Care and the South African context. (See Appendix C for an example).

3.5.3.*The Problem-Solving Strategies for the Essay Tasks*

The problem-solving strategies for the essay tasks focussed on the higher order skills required by the compulsory learning tasks. The problem-solving strategies "were designed to prepare (the students) to handle the complexities of the theories and case studies and provided approaches for enabling (the students) to synthesize readings and structure a detailed critical evaluation" (Dison, 2001, p.1). These problem-solving strategies were conceptualised as applications of the dialectical framework and the scaffolding of content. The problem-solving strategies were introduced to the students by stating their purpose (help in the construction of their assessment responses). The strategies were linked to the tutorial programme, although completion of the exercises was not compulsory. Each strategy was accompanied by a "hint" that gave the relevant reading for the completion of the exercise and the assessment question to which it related. (See Appendix D for an example of the problem-solving strategies).

3.5.4. *The General and Specific Lecture Outlines*

The general and specific lecture outlines provided the structure and sequence for the lecturer-students interactions. The specific lecture outlines also included the relevant prescribed textbook reading, case studies and questions for each lecture designed to elicit thinking beyond the scope of the theoretical content (challenge questions). (See Appendix E for examples).

3.5.5. *The Case Studies*

In 2000, the case studies were presented in the Resourcepack with the correct solution. Twenty case studies (2001), 22 case studies (2002 and 2003) in the Resourcepack included tasks that related specific theoretical content (psychological abnormality) to a specific contextual example. (See Appendix D). The exercises

included with the case studies were "student-centred activities based on topics that demonstrate theoretical concepts in an applied setting" (Davis & Wilcock, 2004, p1.). These case studies, because of their structure and format, were located within a project-based paradigm of learning (Davis & Wilcock, 2004). The project-based paradigm is characterised by lecturer construction and supervision of predominantly task-oriented activities and the student production of solutions and strategies (Savin-Baden, 2003). (See Appendix F for examples).

3.5.6. *The Challenge Questions*

A series of questions were presented for each lecture-student interaction. These questions were designed to elicit thinking beyond the confines of the theoretical content and to reflect on the relationship between the current sociohistorical context and theoretical concepts. (See Appendix G for examples).

3.5.7. *The Lecture Notes*

In 2002, an additional learning material, namely the lecture notes, was included in the sub-course. These lecture notes were printed pages of information that had previously been contained on overhead transparencies and included definitions of the central theoretical concepts and issues. This teaching strategy was introduced in response to comments made in a peer review, "(t)hough the overheads were highly comprehensive and contained key information, some of the (students) were immersed in recording the points verbatim rather than listening to (the lecturer's) explanations and illustrations of the stages. This is a particular problem (lecturers) face at the undergraduate level and the challenge is to find a balance between providing appropriate amounts of information on the overhead at the same time as encouraging active listening and engagement on the part of the (students)" (Dison, 2000, p.1). Twenty-four A4 pages were investigated in terms of the presentation of theoretical content and applications as an academic discourse (see Appendix F for an example). The lecture notes provided a representation of an object (prescribed textbook) in the social plane. Students in the classroom setting evaluated this tool in terms of the facilitation of participation.

In order to attempt to understand the students' intrapsychological/ internal interpretations of the tools provided above, several questionnaires were constructed. The use of language in these questionnaires is "simple, non-technical and unambiguous" (Payne & Payne, 2004, p.186). The questions were specifically related to every aspect of the teaching strategies and were both open-ended and close-ended. The close-ended questions sought to uncover the students' perceptions of the different teaching strategies, while the open-ended questions were given to add depth and detail to the students' responses (Payne & Payne, 2004). The analysis of the perceptions of the students sought to avoid an important criticism that may be levelled at reflective self-evaluation, namely that it constitutes weak research (Padgett, 2004). An important consideration when reviewing this data is the evidence that there is a difference in the assessment responses and performances between students who volunteer to participate in research studies and those who do not (Huysamen, 2001). Thus, it is assumed that complex relationships exist between the following measures of perception of mediatory tools and the wider intrapsychological functioning of the students.

3.5.8. *Diverse Participation Questionnaire (Appendix J)*

This questionnaire contained ten items that were constructed to assess the affective components, and perceived comprehension of meaning, involved in small group teaching strategies. This analysis, therefore, occurred in two ways. Firstly, the first five questions attempted to address participation preferences of students and their global reactions to teaching strategies designed to facilitate participation. Secondly, five items attempted to ascertain the perception of students of "adult guidance" and "peer collaboration" within the framework of perceived aids and obstructions to learning when the small group teaching methodology was utilized.

3.5.9. *Usefulness of the Resourcepack Questionnaire (Appendix K)*

This questionnaire comprised twenty-one items, with two questions concerning demographic details. Respondents could also provide their student numbers, but were advised that this was optional. This was an attempt to examine the relationship between students' perceptions of mediation and their gender and racial characteristics.

The questionnaire was constructed using four different types of question structure. Firstly, twelve items are constructed in the form of a 7-point Likert scale. The scale range is very helpful, helpful, slightly helpful, unhelpful, neutral, slightly unhelpful, unhelpful, and not at all helpful. Six Likert-type items concerned the general instructions and outcomes of the course, and six items referred to a specific aspect, namely the general and specific lecture outlines (including the case studies and challenge questions). Secondly, two items required multiple responses to a categorical list of options. The first of these two questions concerned the usefulness of the Resourcepack in general, in relation to structure, content and the relationship between activities. The second question attempted to assess a specific facet of the tool, namely, the role of the open-ended challenge questions presented in the Resourcepack in providing both the opportunity and means for preparation, reflection, application and situational redefinition. Thirdly, one item required a yes/no response concerning the completion of the case studies. Fourthly, six items required open-ended responses. Three of these items required respondents to provide reasons for previous responses. Two of these items attempted to assess an affective reaction on the part of the student. The last item called for suggestions for the improvement of the Resourcepack.

3.5.10. *Usefulness of the Problem-solving Strategies Questionnaire (Appendix L)*

This twenty-six-item questionnaire attempted to assess the usefulness of the scaffolding of student's responses to assessment. The 7-point Likert scale ranged for twenty-three items is very helpful, helpful, slightly helpful, neutral, slightly unhelpful, unhelpful, and not at all helpful. One item required an open-ended response, while two items required multiple responses to a given list. Assessment was operationalised in terms of mark allocation, the wording of the question, learning outcomes and required reading. Respondents are asked to provide their perceptions of the different sections of the teaching strategy.

3.5.11. *Lecture Notes Questionnaire (see Appendix M)*

This six-item questionnaire attempted to assess the additions made by students to the lecture notes (tool) and the reasons for these additions. The questionnaire also attempted to evaluate the perceived contributions of peer collaboration and the tool to

student understanding. The format of the questionnaire was as follows, two yes/no-type response questions, one 3-point Likert scale question and two questions requiring open-ended responses.

3.5.12. *General Mediation Questionnaire (Appendix N)*

This questionnaire consisted of four open-ended items. Respondents were required to present aspects of the mediation strategy that were the most and least helpful in terms of learning and the reasons for choices. An opportunity was provided for suggestions for improving the mediation strategy in order to improve learning.

3.6. Procedure

In terms of the teaching strategies, the Resourcepack (including the learning outcomes, essay tasks, problem-solving strategies for the essay tasks, general and specific lecture outlines, case studies and challenge questions) and the Diverse Participation Strategies were present in all four years of the study. The lecture notes were used in the final two years of the study only. In each year of the study, a different student questionnaire was utilized (See Table 3.6.).

Table 3.6.
The longitudinal presentation of the Teaching Strategies and the sequence of the Student Questionnaires.

Year	Teaching Strategies	Student Questionnaire
2000	Resourcepack and Diverse Participation Strategies	Diverse Participation Strategies
2001	Resourcepack and Diverse Participation Strategies	Usefulness of the Resourcepack; Usefulness of the Problem-Solving Strategies
2002	Resourcepack, Lecture Notes and Diverse Participation Strategies	Lecture Notes
2003	Resourcepack, Lecture Notes and Diverse Participation Strategies	General Mediation

3.6.1. *Classroom Observations (2000)*

Nine observations of contact time (lecture periods) made by three independent observers over a period of four weeks (Monday 31 July 2000 – Tuesday 22 August 2000) were analysed. The naturalistic observations were made by the Course Co-ordinator for the Psychology for the Health Sciences course, Kirston Greenop, and the Teaching and Learning Advisors from the Faculty of the Humanities, Moira de Groot and Alison Button. These observations focussed on the number and types of questions asked by the lecturer, the seating pattern and demographic characteristics (gender and race) of participating students, and the structuring of student-student discussion. (See Appendix O).

Differences between the gender and racial groups were noted in the lecturer-students interactions in the large classes. In 1999, the lecturer requested a review of the overall teaching strategy from one of the Academic Development Advisors for the Health Sciences, Human Development sub-course. One of the advisors, Moira de Groot commented:

> (o)ne of the points raised during consultation with (the lecturer) has been the observation that student (student) participation has tended to be dominated by a number of individuals who are particularly eloquent and confident. Although (the lecturer) has been aware of this, it has been difficult to draw in other members of the class

In an attempt to receive responses from a more diverse group of students in the large class discussions, the principles of small group learning were used in the large class (Prosser & Trigwell, 1999). This methodology involved (1) asking a question/ posing a problem to the class, (2) dividing the large class into groups of two to four students, (3) giving the small groups time to discuss the question or problem and (4) facilitating and consolidating the points made by the representatives of the small groups in the large class (Felder & Brent, 1994).

3.6.2. *Questionnaire Administration*

The students were asked to complete the Diverse Participation questionnaire in the large class interactions. The Course Co-ordinator for the Psychology for the Health Sciences administered this questionnaire. The Resourcepack questionnaire was administered during the tutorials. Tutorials were conducted on a weekly basis by postgraduate tutors. These groups comprised approximately twenty students each. The postgraduate tutors were given administration instructions during a weekly tutors' meeting. The students completed the Usefulness of the Problem-Solving Strategies, Lecture Notes and General Mediation questionnaires in the large class facilitated by the lecturer.

Differences in how the sociohistorical variables were elicited need to be examined. For the Diverse Participation questionnaire, no sociohistorical item was included on the questionnaire. The students were given the verbal instructions that they could volunteer the sociohistorical variables of degree, gender and race. Two items were included in the Resourcepack questionnaire, namely degree and student number. The student number (official university registration number) provides information about the student's degree, year of study, population group (race), gender, full name, Matriculation province and Matric rating for Health Sciences (selection criteria for Health Sciences courses) and performance in the Psychology course. One item (degree) was included in the Problem-Solving Strategies questionnaire. The students were verbally instructed that they could volunteer to write their student numbers anywhere on the questionnaire.

3.7. Analysis

3.7.1. *The Teaching Strategies*

A content analysis was performed in order to investigate the teaching strategies (Parker, 1999). A content analysis is "any technique for making inferences by systematically and objectively identifying (the) special characteristics" of the teaching strategies (Berg, 1995, p.173). This systematic identification involved the allocation of the content of the teaching strategies to detailed, pre-determined categories (Payne

& Payne, 2004; Titscher, Meyer, Wodak & Vetter, 2000). The pre-determined categories used in the current study were taken from Bloom et al.'s (1956) taxonomy of the cognitive domain[23]. "The cognitive domain includes those educational objectives which deal with the recall or recognition of knowledge and the development of intellectual abilities and skills" (Lawton & Dufour, 1973, p.352).

The category of knowledge is subdivided into knowledge of twelve different aspects of knowledge. These are knowledge of specifics, terminology, specific facts, the ways and means of dealing with specifics, conventions, trends and sequences, classifications and categories, criteria, methodology, the universals and abstractions in a field, principles and generalizations, and of theories and structures (Bloom et al., 1956). The subdivisions of knowledge move from simple to the most complex forms of knowledge.

The first subdivision of the category of knowledge is knowledge of specifics, which concerns "the recall of specific and isolable bits of information" (Bloom et al., 1956, p. 201). In this category emphasis is placed "on symbols with concrete referents" (Bloom et al., 1956, p. 201). This is the most basic category of knowledge and "is at a very low level of abstraction" (Bloom et al., 1956, p. 201). Thus, "more complex and abstract forms of knowledge" are constructions from the foundation of knowledge of specifics (Bloom et al. 1956, p. 201). This lowest category of knowledge was omitted from the analysis. Knowledge of specifics includes isolable pieces of information that constitute the "hard core of facts and information" in Psychology (Bloom et al., 1956, p.63). The nature of this information, i.e. its "very specificity" implies that it is a part or unit that has "some meaning and value" by itself (Bloom et al., 1956, p.63). An isolable piece of information in Psychology that has meaning and value in itself is the use of the letter "p" to represent the probability of a statistical finding.

There are fundamental problems with this subcategory of knowledge and the logic of its inclusion in the taxonomy. These problems may be related to the fact that the authors do not provide any examples in their description, but merely state "even the

[23] Because Bloom et al.'s (1956) categories formed the basis of comparison between the lecturer and students, each category has been presented its the original form. The current author's interpretation of these categories has subsequently been presented.

specialist has great difficulty in keeping up with all the new specifics found or developed in field" (Bloom et al., 1956, p.63). There is a contradiction between the preceding statement and the notion that "(s)uch information represents the elements the specialist must use in communicating in his field, in understanding it, in organizing it systematically"(Bloom et al., 1956, p.63). The classification of the organization of an academic field at the lowest level of knowledge is not tenable. The specifics in any academic discipline are "usually symbols which have concrete referents and are, for the most part, at a relatively low level of abstraction" (Bloom et al., 1956, p.63). The classifications of the specific "p", and the systematic organization of an academic field, as being at a relatively low level of abstraction do not appear to be appropriate. In addition, the authors did not present examples of test items assessing knowledge of specifics. This omission demonstrates inconsistency in a taxonomic system that is focussed on the assessment of educational objectives. Because of these difficulties, this subcategory was omitted during the analysis of the teaching model.

Secondly, knowledge of terminology relates to

> knowledge of the referents for specific symbols (verbal and non-verbal). This may include knowledge of the most generally accepted symbol referent, knowledge of the variety of symbols (that) may be used for a single referent, or knowledge of the referent most appropriate to a given use of a symbol. To define technical terms by giving their attributes, properties, or relations (Bloom et al., 1956, p. 201).

An example that Bloom and his colleagues provide includes "(f)amiliarity with a large number of words in their common range of meanings" (Bloom et al., 1956, p. 201).

Thirdly, knowledge of specific facts is defined by Bloom et al. (1956, pp.201-202) as

> (k)nowledge of dates, persons, places, etc. this may include very precise and specific information such as the specific date or exact magnitude of a phenomenon. It may also include approximate or relative information such as an approximate time period or the general order of magnitude of a phenomenon.

Bloom and his co-workers provide examples that consist of important facts about different cultures or the type of organisms that are studied in a laboratory (Bloom et

al., 1956). The examples provided perhaps reflect the ideological practices of Psychology in the United States in the middle of the last century in which the Behaviourist perspective, which attempted to produce a scientific understanding of human functioning, was dominant.

Knowledge of the ways and means of dealing with specifics details

> Knowledge of the ways of organizing, studying, judging and criticizing. This includes the methods of inquiry, the chronological sequences, and the standards of judgment within…(Psychology) as well as the patterns of organization through which…(Psychology) itself is determined and internally organised (Bloom et al., 1956, p. 202).

Knowledge of the ways and means of dealing with specifics and is at an "intermediate level of abstraction" (Bloom et al., 1956, p. 202). The level of abstraction is intermediate because it is located between knowledge of specifics and knowledge of universals. This subdivision of knowledge involves a "passive awareness" of Psychological materials rather than demanding "activity" on the part of the student (Bloom et al., 1956, p. 202).

Knowledge of conventions includes

> (k)nowledge of characteristic ways of treating and presenting ideas and phenomenon. For purposes of communication and consistency, workers in…(Psychology) employ usages, styles, practices, and forms which best suit their purposes and/or which appear to suit best the phenomena with which they deal. It should be recognized that although these forms and conventions are likely to be set on arbitrary, accidental or authoritative bases, they are retained because of the general agreement or concurrence of individuals concerned with the subject, phenomena, or problem" (Bloom et al., 1956, p. 202).

This category of knowledge clearly locates the taxonomy within a specific area of knowledge. Thus, lecturers perpetuate the ideological practices (Street, 2006) of specific academic disciplines and students have to learn the ideological practices of the academic disciplines in which they engage (Bloom et al., 1956).

Knowledge of trends and sequences is defined as "(k)nowledge of the processes, directions, and movements of phenomena with respect to time" (Bloom et al., 1956, p. 202). This category of knowledge is not comprehensively explained as only one example, namely "(u)nderstanding of the continuity and development of American culture as exemplified in American life" is provided (Bloom et al., 1956, p. 202). However, the category is important because it encompasses the historical development of knowledge within a particular academic discipline.

Knowledge of classifications and categories refers to "(k)nowledge of the classes, sets, divisions, and arrangements which are regarded as fundamental for…(Psychological) argument(s) (and) problem(s)" (Bloom et al., 1956, p.203). The description of this type of knowledge, once again, reflects the importance that knowledge can only be understood in relation to a specific area of knowledge, Psychology in this instance (Bloom et al., 1956).

Knowledge of criteria includes "(k)nowledge of the criteria by which facts, principles, opinions and conduct are tested or judged" (Bloom et al., 1956, p. 203). Students have to become familiar with the appropriate forms of judgement that are utilised in specific areas of academic study. This familiarity relates to the type and purpose of academic work (Bloom et al., 1956).

Knowledge of methodology refers to "(k)nowledge of the methods of inquiry, techniques, procedures employed in…(Psychology) as well as those employed in investigating… (Psychological) problems and phenomena" (Bloom et al., 1956, p. 203). Like knowledge of the ways and means of dealing with specifics, emphasis is not placed on the student's "ability to use the method", but rather, whether or not the student is aware of the existence of the method (Bloom et al., 1956, p. 203). Examples of knowledge provided in the original taxonomy include knowledge of "scientific methods" and "the methods of attack relevant to the kinds of problems of concern to the social sciences" (Bloom et al., 1956, p. 203).

Knowledge of the universals and abstractions in a field describes "(k)nowledge of the major schemes and patterns by which (Psychological) phenomena and ideas are organized. These are the large structures, theories and generalizations which

dominate…(Psychology) or which are quite generally used in studying phenomenon or solving problems" (Bloom et al., 1956, p. 203). The "highest levels of abstraction and complexity" are found in knowledge of universals and abstractions in Psychology (Bloom et al., 1956, p. 203).

Knowledge of principles and generalizations relate directly to more abstract forms of knowledge because this category includes "(k)nowledge of particular abstractions which summarise observations of phenomena" (Bloom et al., 1956, p. 203). These forms of abstractions accord an active role to the student because they determine "the most appropriate and relevant action or direction to be taken" (Bloom et al., 1956, p. 203). Therefore, these abstractions are of value because they describe, explain and predict different courses of action on the part of the student (Bloom et al., 1956). Examples of knowledge in this category provided by Bloom and his colleagues include "(k)nowledge of the important principles by which our experience with biological phenomenon is summarised (and)… major generalizations about particular cultures" (Bloom et al., 1956, p. 203).

The final and most complex subdivision of knowledge is knowledge of theories and structures. This category is defined as "(k)nowledge of the <u>body</u> or principles and generalizations together with their interrelations which present a clear, rounded, and systematic view of a complex phenomenon, problem or field" (Psychology) (Bloom et al., 1956, p. 204). Knowledge in this category are "the most abstract formulations, and they can be used to show the interrelation and organization of a great range of specifics" (Bloom et al., 1956, p. 204). Examples of knowledge in this category include "(t)he recall of major theories about particular cultures… (and) a relatively complete formulation of the theory of evolution" (Bloom et al., 1956, p. 204).

Therefore, the taxonomy of educational objectives defines knowledge "as little more than the remembering of the idea or phenomenon in a form very close to that in which it was originally encountered" (Bloom et al., 1956, p.30). However, the category of knowledge also involves ascending complexity, "remembering a theory is a more complex task than remembering a specific fact" (Bloom et al., 1956, p.30) and the categories in the knowledge class move from "concrete" to the "abstract" formulations (Bloom et al., 1956, p.30).

The knowledge category is distinct from the cognitive abilities and skills category because knowledge "involves the recall of specifics and universals, the recall of methods and processes or the recall of a pattern, structure or setting" (Bloom et al., 1956, p. 201). In terms of assessment of this knowledge, "the recall situation involves little more than bringing to mind the appropriate material. Although some alteration of the material may be required, this is a relatively minor part of the task" (Bloom et al., 1956, p. 201).

While the "psychological process" of "remembering" is central, the process of "relating" is also important (Bloom et al., 1956, p. 201). Accordingly, an assessment situation "requires the organization and reorganization of a problem such that it will furnish the appropriate signals and cues for the information and knowledge the individual possesses" (Bloom et al., 1956, p. 201). Bloom et al. (1956) liken the mind of the student to that of a file. In an assessment situation (e.g. a test or exam) "the problem…is that of finding in the problem or task the appropriate signals, cues, and clues which will most effectively bring out whatever knowledge is filed or stored" (Bloom et al., 1956, p. 201). However, this underlines a problem in the knowledge category as distinct from the cognitive abilities and skills category because "remembering" and "relating" are referred to as "psychological processes" and there seems to be little distinction between "psychological processes" and "cognitive abilities and skills". The distinction between the two classes made by the authors relates to the notion of understanding. Accordingly, the class of knowledge does not reflect "understanding" on the part of the student. "Understanding" is only present in the class of cognitive abilities and skills (Bloom et al., 1956).

Cognitive abilities and skills comprise five distinct classes in the taxonomy. These are comprehension, application, analysis, synthesis and evaluation. As in the instance of the knowledge class, the cognitive abilities and skills move from simple to complex forms of understanding on the part of the student.

Comprehension "represents the lowest level of understanding" (Bloom et al., 1956, p.204). This lowest level of understanding is defined as "apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other material or seeing its

fullest implications" (Bloom et al., 1956, p.204). Three forms of comprehension are discussed, namely translation, interpretation and extrapolation.

Firstly, translation is "(c)omprehension as evidenced by the care and accuracy with which the communication is paraphrased or rendered from one language or form of communication to another" (Bloom et al., 1956, p.204). The assessment of the cognitive ability and skill of translation occurs "on the basis of faithfulness and accuracy, that is, on the extent to which the material in the original communication is preserved although the form of the communication has been altered" (Bloom et al., 1956, p.204). Translation describes the "objective part-for-part rendering of a communication" (Bloom et al., 1956, p.204). Examples of translation included in the taxonomy are "(t)he ability to understand non-literal statements (metaphor, symbolism, irony, exaggeration) (and) (s)kill in translating mathematical verbal material into symbolic statements and vice versa" (Bloom et al., 1956, p.204). Secondly, interpretation refers to "(t)he explanation and summarization of a communication… a reordering, rearrangement, or a new view of the material (Bloom et al., 1956, p.204). Examples of interpretation from the taxonomy include "(t)he ability to grasp the thought of the work as a whole at any desired level of generality (and) (t)he ability to interpret various types of social data" (Bloom et al., 1956, p.205). Thirdly, extrapolation is "(t)he extension of trends or tendencies beyond the given data to determine implications, consequences, corollaries, effects, etc., which are in accordance with the conditions described in the original communication" (Bloom et al., 1956, p.205). Extrapolation indicates a higher level of understanding than translation or interpretation. Students who extrapolate are able "to deal with the conclusions of a work in terms of the immediate inference made from explicit statements (and) predict (the) continuation of trends" (Bloom et al., 1956, p.205).

The cognitive ability and skill of application is the class in the taxonomy that is the most ill defined. It seems as though this class relates directly to the relationship between the abstractions of Psychological theories and concrete or material circumstances. Accordingly, application is defined by Bloom et al., (1956, p.205) as

> (t)he use of abstractions in particular and concrete situations. The abstractions may be in the form of general ideas, rules of procedures, or generalised methods.

> The abstractions may also be technical principles, ideas, and theories which must be remembered and applied.

In the original formulation of the taxonomy, examples of the cognitive ability and skill of application include "(a)pplication to the phenomena discussed in one paper of scientific terms or concepts used in other papers (and) (t)he ability to predict the probable effect of a change in a factor on a biological situation previously at equilibrium" (Bloom et al., 1956, p.205). Bloom et al. (1956) are essentially writing about the transfer of knowledge and skills in one experience of writing to another experience of writing. The transfer of skills to other areas other than the one in which they were developed is problematic because it does not automatically occur (Perkins & Saloman, 1988)

The third cognitive ability and skill in the cumulative hierarchy is analysis (Bloom et al., 1956). Analysis is defined as

> The breakdown of communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit. Such analyses are intended to clarify the communication, to indicate how the communication is organised, and the way in which it manages to convey its effects, as well as its basis and arrangement (Bloom et al., 1956, p. 205).

The class of analysis is subdivided into three categories, namely analysis of elements, a set of abstract relationships and organizational principles. Firstly, analysis of elements refers to three different cognitive abilities and skills. These are the "(i)dentification of the elements included in a communication, (t)he ability to recognise unstated assumptions and (s)kill in distinguishing facts from hypotheses" (Bloom et al., 1956, p. 205). Secondly, analysis of a set of abstract relationships includes the identification of the "connections and interactions between elements and parts of a communication, (the) (a)bility to check the consistency of hypotheses within given information and instructions (and) (s)kills in comprehending the interrelationships among the ideas in a passage" (Bloom et al., 1956, p. 206). Thirdly, analysis of organizational principles includes an understanding of the "organization, systematic arrangement and structure (that) hold the communication together. This includes the "explicit" as well as "implicit" structure. It includes the bases, necessary

arrangement, and the mechanics which make the communication a unit" (Bloom et al., 1956, p. 206).

Synthesis is the cognitive ability and skill that involves the

> (t)he putting together of elements and parts so as to form a whole. This involves the process of working with pieces, parts, elements, etc., and arranging and combining them in such a way as to constitute a pattern or structure not clearly there before (Bloom et al., 1956, p. 206).

The cognitive ability and skill of synthesis, like both comprehension and analysis, is further subdivided. These sub-categories include the production of a unique communication, a plan or proposed set of operations and the derivation of a set of abstract relations (Bloom et al., 1956). The production of a unique communication refers to "(t)he development of a communication in which the writer or speaker attempts to convey ideas, feelings, and/or experiences to others" (Bloom et al., 1956, p. 206). Examples provided in the taxonomy relate to both written (e.g. in an academic essay) and spoken (e.g. in interactions between the lecturer and a large group of students) forms of communication (Bloom et al., 1956). The cognitive ability and skill of synthesis would result in an academic essay in which there is "excellent organization of ideas and statements" (Bloom et al., 1956, p. 206). In terms of spoken communication, the cognitive ability of synthesis would be demonstrated in the effective narration of "a personal experience" (Bloom et al., 1956, p. 206). Secondly, a plan or proposed set of operations requires the student to develop his/her own plan for action. In order for a student's plan to be classified as demonstrating the cognitive ability and skill of synthesis, the plan of action "should satisfy the requirements of the task which may be given to the student or which he may develop for himself" (Bloom et al., 1956, p. 206). The examples included in the taxonomy refer to both the student and the lecturer. Accordingly, the student demonstrates the cognitive ability and skill of synthesis if he or she is able "to propose ways of testing hypotheses", while the lecturer demonstration centres on the (a)bility to plan a unit of instruction for a particular teaching situation" (Bloom et al., 1956, p. 206). Thirdly, the derivation of a set of abstract relations is defined as "(t)he development of a set of abstract relations either to classify or explain particular data or phenomena, or the deduction of propositions and relations from a set of basic propositions or symbolic

representations" (Bloom et al., 1956, p. 207). The ability to derive a set of abstract relations includes the formulation of "appropriate hypotheses based upon an analysis of factors involved, and to modify such hypotheses in the light of new factors and considerations" (Bloom et al., 1956, p. 207).

The highest level of understanding, or the most complex cognitive ability and skill is evaluation. Evaluation is defined in the classification system as

> (j)udgments about the value of material and methods for given purposes. Quantitative and qualitative judgments about the extent to which material and methods satisfy criteria. Use a standard of appraisal. The criteria may be those determined by the student or those which are given to him (Bloom et al., 1956, p. 207).

Judgments can be made in terms of internal evidence or external criteria (Bloom et al., 1956). Firstly, judgement in terms of internal evidence refers to

> Evaluation of the accuracy of a communication from such evidence as logical accuracy, consistency, and other internal criteria. Judging by internal standards, the ability to assess general probability of accuracy in reporting facts from the care given to exactness of statement, document, proof, etc (Bloom et al., 1956, p. 207).

In contrast, judgements in terms of external criteria are defined as

> Evaluation of material with reference to selected or remembered criteria. The comparison of major theories, generalizations, and facts about particular cultures. Judging by external standards, the ability to compare a work with the highest known standards in its field—especially other works of recognised excellence (Bloom et al., 1956, p. 207).

Cognitive abilities and skills are "organised modes of operation and generalized techniques for dealing with materials and problems" (Bloom et al., 1956, p. 204). Therefore, implicit in the taxonomy is a direct relationship between the tasks and tools of specific academic subject areas. The taxonomy encompasses the notion that materials and problems (tools and tasks) "may be of such a nature that little or no specialised and technical information is required" (Bloom et al., 1956, p. 204). It is questionable whether any material or problems encountered at a university do not require specialised or technical information. For example, essay-writing tasks in

Psychology (and in any other discipline for that matter) require specialised information (e.g. a theory of death and dying, how to write an academic argument) and technical information (how to reference such information).

Bloom and his colleagues argue further that non-specialised or non-technical information "can be assumed to be part of the individual's general fund of knowledge" (Bloom et al., 1956, p. 204). Thus, there is an assumption in the taxonomy that some knowledge and cognitive abilities and skills required at a university level are part of the student's current level of ability or internal everyday concepts (Vygotsky, 1997a). Everyday concepts include the knowledge discussed at schools, and the skills developed at schools. However, given the disjunction between school and university education, it would be untenable for lecturers to rely on students' general fund of knowledge. In addition, students' general funds of knowledge are different because there is a difference between the educational experience that a pupil has at an urban or rural, state or private school and the general funds or the socio-economic status of each school determines the general fund of knowledge with which a student enters university.

In the analysis of the teaching strategies in the current study, attention was given to both the manifest (the actual words used in the teaching strategies) and the latent (symbolic interpretation) content of the strategies (Payne & Payne, 2004). Firstly, themes were extracted from the teaching strategies according to Bloom's six cognitive tasks (Berg, 1995). Each theme was clearly defined and these themes were relevant to the research questions (Titscher et al., 2000). Secondly, concepts were derived from the teaching strategies by grouping central conceptual clusters (e.g. higher and lower order skills) (Berg, 1995). An advantage of a content analysis methodology is that it allows for information to be added if it had been missed or incorrectly themed and the lecturer is compelled to scrutinize the teaching strategies and classify them according to specified criteria (Titscher et al., 2000).

3.7.2. *The Students' Perceptions*

Because both the lecturer and the students' perceptions of the external social world are based upon their own conceptualisations of "reality", both of these

conceptualisations needed to be investigated (Cameron et al., 1999). Any meaning that is attached to the social plane has to be given with reference to each of the actors' own conceptualisation of the social plane. The current study is founded upon the assumption that the lecturer and the students have different frameworks of understanding the social world and these differing frameworks need to be renegotiated with reference to the different positions (Cameron et al., 1999).

3.7.2.1. *The demographic characteristics of the students*

Frequencies for gender, race and degree were calculated for the students who responded to the Diverse Participation Questionnaire, Usefulness of the Resourcepack and Usefulness of the Problem-solving Strategies Questionnaires. The Kolmogorov-Smirov test for normality of distribution was performed. None of the demographic variables (gender, race and degree) were normally distributed. Therefore, the non-parametric Kruskal-Wallis test was utilized to examine any significant differences between the three demographic variables and the items of the questionnaire (Rosenthal & Rosnow, 1991). The results of these are reported in the next chapter.

3.7.2.2. *Frequencies*

Frequencies were calculated for five types of items in four questionnaires. These were:

3.7.2.2.1 Seven-point Likert scale (Usefulness of the Resourcepack and Usefulness of the Problem– solving Strategies Questionnaires)

3.7.2.2.2. Three-point Likert scale (Lecture Notes Questionnaire)

3.7.2.2.3. Single response to a categorical list (Diverse Participation Questionnaire)

3.7.2.2.4. Multiple responses to a categorical list (Usefulness of the Resourcepack, Usefulness of the Problem– solving Strategies and Lecture Notes Questionnaires)

3.7.2.2.5. Yes/No responses (Usefulness of the Resourcepack and Lecture Notes Questionnaires)

In addition, frequencies were manually calculated for the variables of gender and race in the classroom observations. These are detailed in the next chapter.

3.7.2.3. *Ethnographic analysis of the open-ended items.*

The analysis of the open-ended items in the student questionnaires occurred in terms of the ethnographic method. This is congruent with the methodological core of "fundamental reflexivity" which upholds that individuals operate in the social plane and reflect upon themselves and their actions as objects in the social plane. Ethnography is concerned with writing about the Other (Hamilton, 1998) and is therefore in line with Vygotsky's use of Janet's work (Cole & Scribner, 1978). Ethnography may best be described as "analys(ing) language and text in the context of culture" (Titscher et al., 2001, p.91). Used in this context, culture "denotes an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men (sic) communicate, perpetuate and develop their knowledge about and attitudes towards life…" (Geertz, 1973, p.89).

The specific features of the ethnographic method are important. Firstly, the most important method of data collection is participant observation. The study has utilized this method in the investigation of the lecturer. Secondly, there is a dialectical framework of the construction of meaning. Thus, data collection and data analysis need to be balanced and contrasted with one another. The perceptions of both the teacher (as a lecturer) and the students (as a large, diverse group) were analysed in order to fully operationalised the dialectical approach. Thirdly, a questioning approach concerning objects and events was adopted (Hammersley & Atkinson, 1995; Humphreys, 1999).

An important aspect of ethnographic analysis is that the analytical categories need to be generated (Humphreys, 1999). The first step in this process was to allow the concepts to emerge from the data. Secondly, the data was then coded through utilising these emerging concepts. The focus of this coding process was to progressively construct a set of categories and code the data in its entirety. Finally, analytical categories, which reflect the central concepts under investigation, were explored. This exploration involved investigating their precise meaning and the relationships between categories (Hammersley & Atkinson, 1995). The results of this are reported in the next chapter.

3.7.3. *Comparative analysis of the lecturer and students' views of the social plane*

Once both the lecturer's analysis and the students' opinions had been investigated, these separate positions were compared and contrasted. The central findings for each of the eight teaching strategies for both of the distinct actors were related to one another. Differences between the two actors were highlighted.

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1. Introduction

The aim of the current study was to evaluate the teaching and learning of a large group of students in their First Year of higher education. In order to do this, evaluation contained many parts, which were initially analysed as separate units, following which, the relationships between these units was explored. The first two analytic units that were distinguished were that of the lecturer and the large group of students. The constructions made by the lecturer-researcher were framed in terms of the categories provided by the cognitive domain of a taxonomy of educational objectives (Bloom et al., 1956, see Section 3.4.1). Members of the American Psychological Association (APA) developed Bloom's taxonomy and there is, thus, articulation between it and the knowledge area of the teaching and learning. The taxonomy was revolutionary in the sense that it was the first of its kind, and subsequent development of the taxonomy has not altered its basic structure (Anderson & Krathwohl, 2001; Moseley et al., 2005; Paul, 1993; Quellmartz & Hoskyn, 1988).

The second analytic unit was the large group of students. These students were in their first year of higher education and were registered for degrees in the Health Sciences (medicine, nursing, physiotherapy, pharmacy, occupational therapy). In relation to the large class interactions/ lectures/ student-lecturer interactions, the students were categorised in terms of gender and race by non-participant observers. The analysis of the students' constructions of printed or textual mediation (i.e. the Resourcepack and lecture notes) related to whether or not the texts were helpful or not in the construction of the students' understanding, and, if and how the text was utilised by the students. The reasons that the students provided for their constructions were also explored. The analysis of both the students' constructions of the lecturer-students interactions and the textual mediation occurred within the structure of an interaction between cognitive and affective perceptions.

The constructions of the lecturer-researcher and the large group of students were integrated in order to discover the relationship between the perceptions of the two distinct actors. Thus, there has been an attempt to create a synthesised explanation. An essential, subsequent part of the synthesis is the relationship between the lecturer and students' constructions and other empirical investigations. The evaluation of the

teaching and learning is an historical presentation of the data in terms of the large class interactions, the classification of the textual mediation and the perceptions of the students. The findings relating to the large class interaction were derived from the classroom observations and the perceptions of the students. This was the first set of data and it was collected in 2000. These findings were viewed in relation to Vygotsky's (1987, 1993, 1997a, 1997b, 1998, 1999) notion of socially mediated activity and the production of social relations (Elhammoumi, 2001), empirical evidence from large university classes from international and South African universities, and to the notion of open participation in higher education. The classification of the textual or printed mediation, namely the Resourcepack and its component parts, and the lecture notes, occurred within Bloom et al.'s framework (1956). The separate parts of the Resourcepack included the learning outcomes, the essay tasks, the problem-solving strategies for the essay tasks, the general and specific lecture outlines, the case studies and the challenge questions. In 2001, the students' perceptions regarding the Resourcepack and its component parts were collected. In 2002, the lecture notes, an additional tool, were added to the teaching and learning. Finally, in 2003, students were asked open-ended questions about the teaching and learning in order to elicit responses that were not directly related to an individual part of the teaching strategy. These findings from the lecturer-researcher's analysis and the students were contextualised in terms of Vygotskian and neo-Vygotskian ideas concerning semiotic mediation, or cultural tasks and tools, and other evidence from universities, both internationally and in South Africa.

In presenting the above findings, the study thus attempted to adopt both an activity (large class participation) and a semiotic (cultural tasks and tools) approach to teaching and learning in higher education. This was a distinct shift away from neo-Vygotskian thought in which, traditionally, there is a focus on either one or the other approach.

4.2. Participation in the Large Class Interactions

While an interaction between social and individual factors is important, social interaction, also termed "socially mediated activity" (Daniels, 2001, p. 56), or "externally mediated activity (Lee, 1987, p. 76), or culturally shaped social practices

(Cole, 2001) is the moving power of development (Vygotsky, 1987,1993, 1997a, 1997b, 1998, 1999). The importance of activity to Vygotsky's thinking was primarily emphasized by the Russian neo-Vygotskians (Bogoiavlenski & Menchinskaia, 1959, 1960; Elkonin, 1963; Fleshner, 1958; Kalmykova, 1955; Kostiuk, 1956; Krutetski, 1961; Leontiev, 1959; Milerian, 1960; Natadze, 1957; Teplov, 1946; Zankov, 1957). However, as Vygotsky focussed on the adult-child dyad, both the Western and the Russian neo-Vygotskians have focussed on dyads, either adult-child (Bruner, 1987), parent-child (Wertsch, 1985, 1987; Wertsch et al., 1980), or teacher-child (Engestrom, 1996). In the current study, the dyad has undergone massification, i.e. what is represented by the "child", or the unacculturated, is now 300 students. In addition, the nature and purpose of higher education has been emphasised. Thus, the lecturer and a group of 300 students are regarded as separate analytic units. The relationship between the perceptions of the lecturer and the group of 300 students is viewed as central to understanding teaching and learning. In addition, what "the child" represents, namely, a first year university student, is a new interpretation of Vygotskian theory.

The massification, or increase in the number of students, of higher education in South Africa provides a unique opportunity for investigating the Vygotskian and neo-Vygotskian notion of socially mediated activity. This massification has an important impact on the disseminative role of the university. The University of the Witwatersrand (Wits), where the current study was undertaken, is a contact university, and as such, contact time between a lecturer and a group of students is an essential part of the disseminative role of the university. Increased participation by previously marginalized groups in university education is measured by the number of such students who register for a course offered by the university, and more importantly in terms of funding, the number of such students who graduate from the university. This measurement of the "transformation" of higher education in South Africa into a system that is "open to all" races does not do not provide any information concerning whether or not previously marginalized groups are actively participating in the central form of knowledge and skills dissemination. Therefore, classroom observations were performed in the current study in order to investigate voluntary student participation in response to questions posed by the lecturer.

In the attempt to investigate the patterns of participation during the lecturer-student interactions (class time), three independent observers made nine observations of lecture time over a three-week period (31 July 2000 to 22 August 2000). Two of these observers were Teaching and Learning Advisors from the Faculty of the Humanities, and the third was the Course Co-Coordinator of the Psychology for the Health Sciences course. All of the observers were White females. It is important to acknowledge that the three observers had their own particular set of assumptions about the social world and good teaching and learning practice. These social positionings may have influenced their perceptions and recordings so that this data represented a selective and unique representation of the complexities of the lecturer-students' social interactions (Payne & Payne, 2004).

The class observations were an example of non-participant observation because the three observers recorded the events that occurred in the class without taking an active role in them (Payne & Payne, 2004). The observers only played an active role in terms of actively listening, attending to and recording the events in the class in a systematic and structured manner (Payne & Payne, 2004). The observations were confined to the completion of an observation checklist and the compilation of a report by each observer. Firstly, a standardized observation sheet was completed during the classroom observation (see Appendix O). This participation checklist included the course code, the lecturer's name, the size of the class, date, time and day of the observation, a sketch of the physical surroundings, the questions asked by the lecturer, and, most importantly, the gender and racial characteristics of the students who voluntarily verbally responded to the lecturer's questions. The variable of "degree" was not considered because the observers had no way of determining this merely by observing the students. The participation checklists were categorized according to these gender and race variables. Frequencies were calculated for each variable. Secondly, each observer provided a report that summarized her findings from the participation checklists. These reports were written in different styles and formats, and therefore, in order to extract meaning, were progressively coded in order to construct central themes. A thematic content analysis was conducted on these three summaries provided by the observers.

The results of the classroom observations concerned which students participated voluntarily in class. Seating position was found not to be an important factor in participation. White females dominated participation in class. The thematic content analysis of the observers' reports primarily referred to the teaching style of the lecturer. Themes that emerged here included the types of questions asked and lecturer characteristics.

4.2.1. *Seating Position*

The seating position of the participating student did not appear to be a factor in volunteering to respond to the lecturer's questions as students from different lecture theatre positions (i.e. front, back, centre, left and right) voluntarily responded to questions posed by the lecturer. Therefore, it would appear that this external factor has less of a role to play than factors internal to the student. This finding, that seating position was not an important factor, is congruent with Mpofu et al.'s (1998) evidence, although these authors examined a very different student constituency (Health Sciences, gender-segregated of sixteen to thirty students in the United Arab Emirates). Studies in secondary schools have also found that the seating position of pupils is not central to their participation in class (Kahle et al., 1993; den Brok et al., 2002; van Boxtel et al, 2000).

4.2.2. *The Dominance of White Females*

Activity on the part of the student was measured by a voluntary response to a question posed by the lecturer. This response required the student to (1) interpret the question, (2) relate the question to an aspect of their everyday experience or to a concept that has already been formed, thus, an internal concept, (3) communicate their response in English (4) to the lecturer and three hundred other students. Differences were found between the genders and races in terms of their willingness to respond to the lecturer's question in the presence of a large group of peers. See Table 4.1. for a full analysis of the demographic characteristics of voluntarily participating students.

Table 4.1.

The racial and gender characteristics of students who voluntarily participated on an individual basis

Day of Observation	BF	BM	IF	IM	WF	WM	Total
Day 1	1	0	1	0	17	0	19
Day 2	0	0	4	0	26	4	34
Day 3	1	0	5	0	25	3	34
Day 4	0	1	4	0	29	3	37
Day 5	2	0	3	1	12	1	19
Day 6	0	0	3	1	7	2	13
Total (156)	4	1	20	2	116	13	
Totals as percentages	3%	0.5%	13%	1%	74%	8%	

BF = Black, female; BM = Black, male; IF = Indian, female; IM = Indian, male; WF = White, female; WM = White, male

As can be seen in Table 4.1., females responded more than males, and White students volunteered more than Indian students, who responded more than Black students. A complex relationship between gender and race variables was also found. Indian females participated more than White males, and Black females participated voluntarily more than both Indian and Black males. Therefore, a coterminous relationship existed between the influence of gendered and racialized identities (Schafer & Ratele, 2006) of students who voluntarily verbally responded to a question posed by the lecturer.

Vygotsky was emphatic about the consequences for individuals of exclusion from social interaction. He utilised the concept of "social education" (Vygotsky, 1993, p.206) to refer to individuals who have been, and continue to be, marginalized, or "pedagogically neglected" (Yaroshevsky, 1989, in Daniels, 2001, p. 2) specifically on the basis of physical disability, e.g. deaf and blind children (Vygotsky, 1993). Accordingly, "(s)ocial education is based on the underdevelopment of speech; the underdevelopment of speech leads to the exclusion from the collective; and exclusion from the collective stalls both social education and speech development" (Vygotsky, 1993, p.206). In the above statement, "(t)he term *speech* must be taken to mean

approximately "linguistic communication"" (Rieber & Carton, 1993, p. 70; Vygotsky, 1987). In the current study, "speech" has been operationalised as a verbal response to a question posed by the lecturer. The student's response is voluntary in the sense that the student is considered to be acting of his or her own free will (Hawker, 2001, p. 1451). Thus "exclusion from the collective" in the current study was conceptualised as resulting in negative consequences for the student's development. This is a particular problem because the large class interaction did not promote engagement in the discussion by racial groups that have a history of educational exclusion in the context of South Africa. Thus, interaction between a lecturer and a large group of students may result in student participation that mimics previous social marginalization.

Social "barriers to participation are a cause for concern" for both Vygotsky and Neo-Vygotskian theorists (Daniels, 2001, p. 46). The dominance of females, regardless of racial characteristics, is in contrast to studies from diverse sociohistorical circumstances in which males are consistently found to dominate classroom discussions (Kahle et al., 1993; Pollard, 1993; Scott-Jones, 2002; Weil et al., 2001). Stein and Janks (1996), who are also White female lecturer-researchers at the University of the Witwatersrand, concluded that "(o)ur large university classes are frequently monopolised communicatively by white men, followed by white women, and then by black men, even when white students or men are in the minority" (Stein & Janks, 1996, p.114). In contrast, the classroom discussions in the current study were "monopolised communicatively" by white females, followed by Indian females, White males, Black females, Indian males and then Black males. It should be remembered that White females constituted the majority of registered students.

The marginalization of females is related to the influence of patriarchal ideological practices within diverse aspects of society (Marchbank & Letherby, 2007) and in institutions of education, particularly universities (Pollard, 1993; Stein & Janks, 1996). However, this explanation does not account for the evidence generated in the current study. This is a particularly surprising result because in developing nations, females are thought to be at a disadvantage in terms of participation in gender-mixed classes, particularly in the school setting (Scott-Jones, 2002). The current study, thus,

confirms the notion that "(g)ender differences are longstanding, not uniform in all contexts, and are complex" (Scott-Jones, 2002, p. 59).

The domination of females may be more adequately accounted for in terms of an interaction between identification with the lecturer (female) and with other students in the large class. Firstly, the notion of identification with the lecturer has been utilised to account for racial differences in participation in classes of less than thirty students (den Brok et al., 2002; Simpson & Erickson, 1983). This notion of racial differences may be extended to include gender differences because of the "interrelatedness of gender and race within the discursive production of identities" (Govender, 2006, p. 107; Schefer & Ratele, 2006). Accordingly, female students may be more willing than male students to respond to questions posed by female lecturers and male domination of classroom discussion may occur in classes with male lecturers. However, an analysis of gendered participation in classroom discussion conducted at the same university with White female lecturers found dominance of classroom discussions by males (Stein & Janks, 1996). Therefore, student identification with the lecturer based on gendered ideologies may only provide a partial explanation.

The domination of female students may be viewed in relation to the percentages of male and female students who registered for the course. Females were the dominant gender group in the context of registered students (74%). The student had to communicate his or her ideas to both the lecturer and to a group of three hundred other students. It may be easier for a student to verbally respond when the student perceives a similarity (in this instance being female) between herself and, not only the lecturer, but also between herself and the majority of students. In the lecturer-students interactions the more dominant gender group in terms of registration became even more dominant, while the marginalized gender group displayed a reduction in participation. Accordingly, females contributed to 90% of the discussions in the large class, but comprised 74% of the total number of registered students. In contrast, male students constituted the marginalized group in both the lecturer-students interactions in which voluntary verbal participation by the students was required (9.5%) and in the group of registered students (26%).

In terms of the sociohistorical variable of race, a similar pattern of domination and marginalization was found. Black students constituted the most marginalized group of registered students (13%) and lost power or representation in the lecturer-student interactions because they only contributed 3.5% of the classroom discussions. Indian students were also a marginalized group in the set of registered students (37%), but lost the most power/representation in the lecturer-students interactions (14%). However, Indian students still participated more often than the Black students. The White students were disproportionally dominant in the individual participation lecturer-students interactions (80%), and were the dominant group of registered students (49%).

The influence of racial identity is perhaps more complex than that of gender. The notion that White students participated in the lectures more than students of other races may also be related to identification with the lecturer (den Brok et al., 2002; Simpson & Erickson, 1983). This presents a particular problem for Black and Indian students because White lecturers are currently the norm in universities in South Africa and "the predominantly white institution is a negative environment that marginalizes students" (Williams et al., 1999, p.234). This may become less of a problem as the racial ratios amongst academic staff become more equitable. The lecturer may, consciously or unconsciously, also discourage Black and Indian students from participating in classroom discussions. Accordingly, Feldman (1985, 47) found that "both White and Black lecturers appear to behave more positively towards members of their own race than towards members of other racial groups". However, Feldman's study included only non-verbal reinforcement (e.g. "more positive facial expressions"). In addition, the study was conducted in the artificial setting of the laboratory (Feldman, 1985), thus limiting its ecological validity.

Stein and Janks (1996) provided four reasons for the domination of White students in South African university classrooms that refer to the relationship between race and language. Their study is important because they investigated verbal responses made by students in lectures at the same university. Accordingly, they reasoned that English second language students are (1)"not in control of the language", (2) have to concentrate more when dialogues are occurring and "lose their turns because speech is happening too fast", (3) "battle to make their ideas precise/meaningful in English"

and (4) “others show their impatience (which) leads to anxiety” (Stein & Janks, 1996, p. 113). This “race as language” explanation does not account for why Indian students (also English first language speakers) did not constitute the dominant participating group. In addition, this explanation locates Black students within a deficit model. It is questionable whether this explanation represents a sufficient shift away from the educational policies that were instituted in Apartheid South Africa. Stein and Janks (1996, p. 114) may offer a better explanation when they wrote- “(a)s soon as students begin to talk and work together, patterns of domination and subordination in relation to gender, class and race emerge”. Stein and Janks (1996) believe that these patterns of dominance and subordination are a reflection of the wider social context. However, the evidence from the current study suggests that patterns of wider social domination (i.e. political and social power residing in the Black population) were not mirrored in the classroom.

It is the argument of the current study that domination and marginalization are based upon the gender and racial composition of the student constituency. As mentioned earlier, in terms of the number of students who registered for the course, female (74%) and White (49%) groups were dominant. Dominant and marginalized groups have been calculated as a percentage of registered students before (Nettles et al., 1986; Simpson & Erickson, 1983; Siraj & Blackford, 1991). Therefore, dominance and subordination are not based on the wider social context, which the findings of the current study contradict, but rather, on the gender and racial groups within the student constituency. Accordingly, a gender or racial group will dominate participation in classroom discussion if that group is the dominant group of the student constituency. In the attempt to ensure a more equitable form of participation in the large class discussions, the small group method was instituted in the lecturer-student interactions.

4.2.3. *Description of the Intervention*

The lecturer utilised techniques typically used in small group teaching in an attempt to facilitate more diverse participation in classroom discussions (Beard & Hartley, 1988; Felder, 1997). Following this methodology, students were instructed to respond as a small group (constituted by four students sitting in close proximity to one another). Initially, these groups elected their own spokesperson. Later, the lecturer randomly

selected the spokesperson, e.g. the spokesperson was the student whose birthday was in July, had peas for dinner the previous evening, or was wearing the most black. The selection of the spokesperson generated much discussion in the small groups. During the later stages of the intervention, students were only instructed to form groups, i.e. no direction as to how many students should constitute these groups was given. The observers noted that in these instances, groups of two to three students were constituted. This intervention was based on the assumption that structuring the way in which students participate, either individually or in groups, may facilitate participation by all students. While the individual student may not be the representative of the small group during the large class discussion, he or she may have made a contribution in the small group. This contribution to the small group discussion would still constitute participation in class discussions.

4.2.4. *Observations of the Intervention Stage*

Table 4.2.

The racial and gender characteristics of students participating during the intervention

Day of Observation	BF	BM	IF	IM	WF	WM	Total
Day 1	0	1	2	3	9	4	22
Day 2	5	2	7	0	10	1	25
Day 3	0	0	4	0	6	3	13
Day 4	0	0	2	1	10	1	14
Day 5	4	0	3	0	15	3	25
Total (99)	9	3	18	4	50	12	
Total as percentages	9%	3%	18%	4%	50%	12%	
Total (pre-intervention)	3%	0.5%	13%	1%	74%	8%	

BF = Black, female; BM = Black, male; IF = Indian, female; IM = Indian, male; WF= White, female; WM = White, male

The results of the classroom observations indicated that several factors appeared to affect the participation rates of the students when they responded in smaller groups. These factors were the racial characteristics of the students, the types of questions asked, the amount of time allowed for small group discussion and characteristics of

the lecturer. Table 4.2. provides an analysis of the gender and racial characteristics of the students who represented their small groups in the large class discussions.

4.2.5. *A Reduction in Dominance*

The use of the small group method to manage participation in the large class appeared to contribute to the decreased dominance of White females in the class. However, no totally equitable racial and gender participation in classroom discussion was achieved. Results of the rates of participation when using the small group method reflect that White female participation dropped by 24%. Thus, the most dominant group in the class became less dominant. All other racial and gender groups demonstrated an increase in participation – Black females (by 6%), Indian females (by 5%), White males (by 4%), Indian males (by 3%), and Black males (by 2.5%). Females still appeared to dominate discussions and there was still no equitable participation across all the racial groupings. (See Table 4.2. for the frequencies of participation by gender and race).

It could be argued that a more equitable pattern of participation was present when the small group methodology was used, if the differences between the genders and races were considered in the context of the percentage number of males and females, and Black, White and Indian students registered for the Psychology 102 course. Firstly, 77% of the small group representatives were female (74% of the registered students). Thus, the dominance of the dominant group was reduced (by 13% from the 90% in the individualistic participation, as discussed in Section 4.2.2.). Nineteen percent of the group representatives were male. The marginalization of the marginal group (26% of the registered students) was only reduced by 10% and the male students still remained disproportionally represented (26%: 19%) in the lecturer-students interactions.

Secondly, as in the individualistic form of participation, the White students had a higher proportion of participation relative to their numbers (percentage of registered students: percentage of verbally participating students). However, the small group methodology reduced the dominance of the White students relative to the other race groups (from 80% in the individualistic participation to 62% in the small group

method). The Indian students remained the most disproportionally represented race group in the lecturer-students interactions, i.e. Indian students comprised 37% of the registered students and only 22% of the participating students in the small group methodology. However, there was an 8% increase in participating Indian students from the findings for the individualistic form of participation. There was a similar (8.5%) increase in participating Black students with the small group methodology (3.5% in the individualistic form of participation to 12% in the small group methodology). However, in the small group methodology, the Black students were proportionally represented (i.e. 13% of the registered students and 12% of the participating students) in the lecturer-students interactions. The above percentages of gender and racial grouping also highlight an inaccuracy in the data collection. Four percent of the contributing students in the lecturer-students interactions were not assigned to either a gender of race group by the observers in the class observations. This may have occurred because the observers were unsure of the student's racial and gender category, or may have omitted to note these characteristics. These students were not included in the frequencies.

The use of the peer collaboration method ensured a greater degree of representivity in the large class discussions. This was particularly the case for Black students (12% of participating students and 13% of registered students), but the male students and Indian students also achieved a higher level of representivity. It is important to distinguish representivity from representation. The use of the word "representation" has been deliberately avoided in the current study because it does not incorporate diversity (Duncan, 1983), implies the substitution of the voice of individual groups for the "general reason of the whole" (Sunstein, 2003, p. 94), and involves the surrendering of control by minority groups (Beetham, 1993). The word "representation" denotes "stands for" (Weale, 1999, p. 108; Cunnigham, 2002) and is a theoretical stance in which "only a few are entitled to take part" (Beetham, 1993, p. 62). The use of the small group method was a direct attempt on the part of the lecturer to avoid only a few (White females) taking part in the classroom discussions.

What was of primary importance in the classroom discussions was the representativeness (Parry & Moyer, 1994) of the groups in the student constituency. The use of peer collaboration was an attempt to decrease the dominance of White

females "by increasing the representation of groups that were previously excluded" (Phillips, 1993, p.129) and thus ensure that representivity of the minority groups (males, Black and Indian students) was achieved. Thus, the use of peer collaboration did, to a certain degree, ensure the representativeness of the views presented in the large class discussions and that "everyone who will be affected (was) a party to the deliberations" (Goodin, 2003, p. 65). It should be noted, however, that achieving representivity did not ensure that all individual students' views were presented in the large class discussions because "in mass deliberations, what typically happens is that some may speak and many listen. Hopefully those who speak are broadly typical of those who do not" (Goodin, 2003, p.65). Therefore, the current study has adopted an approach that may be categorized as "democratic". A democracy, in this sense is a "representative system of… decision-making… a sphere for debate…(that) is constituted by rules" (Waghid, 2001, p. 1). This notion of democracy in the classroom discussions, as in the case of democracy in societies, placed certain demands or responsibilities on both the lecturer and the students. The demands made on the students include responding to a question posed by the lecturer, while the responsibilities of the lecturer encompass both the type of questions asked by the lecturer and the characteristics of the lecturer.

4.2.6. *The Types of Questions Asked*

An analysis of the observations revealed that the type of questions asked by the lecturer was also important. The analysis revealed four types of questions asked by the lecturer. These were rapport-establishing questions, procedural questions, content-related questions and sub-questions. During the intervention stage, the number of responses received from the class (and therefore questions asked by the lecturer) decreased from 156 to 99. It should be noted, however, that the reduced number of responses does not necessarily reflect reduced numbers of students who responded. Rather, these responses represented a response from groups of three to four individuals rather than merely one student.

Firstly, rapport-establishing questions asked by the lecturer represented an attempt to develop accord in the lecturer-student interaction and relationship. These questions were used to establish agreement between the lecturer and students in the classroom.

Examples of these questions included, "How was yesterday's lecture? Are you all finding this interesting? Do you all know where we are?". The lecturer utilized these rapport-establishing questions to establish a common purpose or goal in the lecturer-student interaction. Accordingly, Observer One (28 July 2000) commented that "…these questions are often phrased in "we" language – inclusive kind of talk, also very casual, relaxed, informal register… class seemed very open, friendly to me- but don't know if everyone experienced it in the same way. Perhaps not if it is mostly the White females who are responding and asking so many questions". Thus, many of the rapport-establishing questions were "not 'real' questions at all, but rather serve to: call class to attention, link one section to the next, serve as a verbal marker signifying that a section is being concluded or a new section started" (Observer Three -7 August 2000).

The manner in which the lecturer asked these questions indicated to the students that they did not require an answer. This was communicated to the class through the body language of the lecturer (e.g. the lecturer "moves behind lectern whereas for a "real" question she stands in front of class" and "does not make eye contact for these 'questions'" - Observer Three -7 August 2000) and

> no wait/ think time allowed, (lecturer) moves straight on to next point. Examples of such "questions" - Now, what was Freud trying to explain? Is everybody clear? Can I move on? Can we get started? Everybody remember that? What do we mean here*?* (Lecturer promptly answers her own question). (Student) responses to these questions generally involve a low murmur or general shifting in seats, picking up pens, focusing on notes. So the questions were effective in maintaining student attention and signalling that (a) change of activity was required (Observer Three -7 August 2000).

Secondly, related to the rapport-establishing questions, procedural questions were asked. These procedural questions signified the lecturer's manipulations of the lecturer-student interactions in terms of the presentation of visual aids, e.g. overhead transparencies. These were generally asked in rapid succession and were not asked in order to generate discussion, but concerned the progression of student activity in the classroom situation. Examples of this type of question included, "Have we all written them down? Can I move it (the overhead transparency) up?" These procedural

questions were also asked using vocabulary which demarcated the lecturer and student as a single group with a common purpose. Observer One (7 August 2000) commented:

> Consistent use of inclusive we/us language had the effect of lessening social distance between lecturer and students, suggested common purpose between the two parties. Probable that this lessening of social distance contributed significantly to student participation.

Thirdly, content related questions required students to provide examples, apply knowledge in different contexts, critique theory and utilize their own experiences. It was noted by all the classroom observers that responses to these questions were often reinforced and the importance of the concept was underlined in this manner. Fourthly, the lecturer, mainly in conjunction with content-related questions, asked sub-questions. These questions were generally asked when no response to an original question was forthcoming. The purpose of these questions appeared to be reframing and simplifying the original question. Examples included:
Content-related question – "Do you think it is fair to assume that people are logical or are we making assumptions we have no right to?"
Sub-questions – "What do you think? Who do you think should decide what's logical and rational? Do we look at different definitions, take law? Should a doctor be the gatekeeper of what's logical? "

The manner in which the lecturer phrased the content-related questions and sub-questions was also important. Observer Two (7 August 2000) wrote:

> Analysis of these questions shows that they required a specific response (asked for a specific answer rather than a vague statement), were open-ended in the sense that there was no right or wrong answer, required students to draw on their own experiences, and were frequently rephrased or followed by "supporting" questions or prompts which had the function of creating think time.

Therefore, the manner in which the lecturer framed questions to the large class may have an effect on the participation of the students. Several other factors were also found to be important in terms of encouraging student participation in the large class

discussions. These factors include the amount of time given for small group discussion, the characteristics of the lecturer, and the relationship between collaboration and challenge amongst students.

4.2.7. *The Amount of Time Given for Small Group Discussion*

The time allowed for discussion needs to be carefully considered in order to fully understand the role of the small group technique in increasing the diversity of participation in large class discussions. Observer Three noted (22 August 2000) "if too much time is given, the students may stray off the topic and the lecturer has difficulty re-establishing order. If too little time is given, participation may be limited". The amount of time given for discussions, however, is not necessarily a predictor of the depth of subsequent large class discussion. Observer One noted (28 August 2000) that "(the lecturer) then leaves groups to discuss question, but gives very little time, but, contrary to my expectation, there is a huge response from the class". Observer One (28 August 2000) also remarked that Black students tend to respond only after "adequate" discussion time has elapsed, and were therefore only comfortable with engaging in the class discussion once it seemed safer to do so (e.g. other groups have responded in a similar manner).

4.2.8. *Lecturer Characteristics*

The analysis of the classroom observations also revealed that the personality characteristics and presentation style of the lecturer might influence the diversity of participation. Accordingly, Observer One, based on the observations of 31 July and 7 August 2000, noted that:

> Lecturer characteristics that reinforce participation included: lecturer came across as spontaneous, relaxed, genuinely interested in what students had to say, reacted as if their responses were interesting and important, lot of humour.

The contributions of the students need to be positively reinforced by the lecturer. Observer One (28 August 2000) provided both verbal and nonverbal ways in which this positive reinforcement occurred, e.g.

> nonverbal: lecturer maintained eye contact with student, listened attentively, often responded with a smile. Verbal: Nice example there. An excellent point. You guys are being absolutely brilliant today. That's interesting, so we've got two different ways of responding to the death of a spouse.

Other examples of positive reinforcement given by the lecturer to the students included rephrasing the student's point, "which gave it some kind of importance" and the lecturer "frequently engaged in a two or three interchange dialogue with a student, which signalled that what the student was saying was interesting enough to respond to" (Observer One, 28 August 2000).

The lecturer also needed to make the purpose of participation clear to the students. The purpose of participation was to generate a diversity of opinion. Thus, indicating to the students "there is no "hidden agenda", i.e. try to guess what's in my mind, try and guess the right answer. This appears to reinforce participation, as students believe lecturer is genuinely interested in what they have to say" (Observer One, 28 August 2000). It is important to note that the reports of the three observers were generally positive in nature. Thus, no negative points concerning the lecturer's teaching style emerged from the analysis of the observers' reports. This may have occurred because the non-participant observers were focussed on the responses of the students, and not the lecturer. Thus, the purpose of the observations was not the development of the lecturer's teaching role. They may have focussed on factors that encourage, rather than discourage, student participation. The absence of a description of factors that may discourage participation may be conceptualised as a weakness of the non-participant observations.

4.2.9. *The Relationship between Collaboration and Challenge amongst Students*

Allowing the students to discuss questions in small groups before the large class discussion is conducted also seemed to facilitate peer challenge in the larger group. Observer One (28 August 2000) observed that "Included in the student responses was a challenge to something another student had said (from a White female, and a question, also from a White female)…students were really listening to and challenging each other". Thus, the students were able to consider and question the responses of other students. This questioning of opinions of the other can, therefore,

be incorporated into the understanding of peer collaboration. However, only the dominant group, namely White females, presented challenges to the opinions of the dominant group.

4.2.10. *Summary of the Findings from the Classroom Observations*

The use of the small group method only reduced, but did not reverse the dominance of White females. The highest increase in willingness to participate was seen in Black females, Indian females, White males, Indian males and Black males. Females still remained dominant, but pre-intervention patterns were altered, with Black females being more dominant than Indian females in the intervention stage. The pre-intervention pattern for males remained unchanged, (i.e. White, Indian, Black). Using the small group methodology, the power of the dominant group was reduced relative to the size of the dominant group. Marginalized groups did increase their representation in the lecturer-students interactions. However, equitable representation was only found in the Black student group. The small group methodology did contribute to greater diversity of participation, but the manner in which the lecturer managed the lecturer-student interactions was also found to be important.

There was evidence of a more refined questioning technique on the part of the lecturer and the number of questions asked was reduced when the small group method was used. The task was made clearer to the students from the beginning because the time available for discussion was limited and required careful consideration of how the questions were asked. Four types of questions were asked by the lecturer, namely rapport establishing, procedural, content and sub-questions. Both rapport establishing and procedural questions were close-ended, did not require a verbal answer from the students and were asked using inclusive linguistic markers (e.g. “we”, “us”). Rapport establishing questions served as verbal markers that signalled the beginning or end of a theoretical section. The students’ responses to these included a change in activity (e.g. picking up a pen) and directing their attention to the lecturer. Procedural questions concerned the negotiation of visual aids and were asked in rapid succession. Therefore, both the rapport establishing and procedural questions were aimed at establishing a commonality of process and purpose between the lecturer and students, and between the students as a group. In contrast, the content and sub-questions were

designed to encourage diversity of student opinion. The sub-questions were the attempts by the lecturer to clarify the content questions. These clarifications provided additional support and created time for the students to consider the question. Both the content and the sub-questions were open-ended and required verbal responses from the students. These responses required the students to draw on their own experiences and provide a specific answer.

Two factors emerged from the analysis of the time allowed for student-to-student discussion. Firstly, Black students (of both genders) contributed to the large class discussion if a perceived "adequate" amount of time was given. The question of what constitutes "adequate" discussion time relates to the second factor. If too much time was allotted for discussion in small student groups, the students were not consistently engaged in the small group discussions. If too little time was allowed, the students may not have had enough time to process their thoughts on an individual plane and/or negotiate a common social plane on the level of the small group. However, the factor of time allowed for small group discussion also depended on how interested and engaged the students were about the issue under discussion.

The engagement on the part of the students may be partly related to the characteristics of the lecturer. The lecturer provided positive reinforcement to the individual students in both verbal and non-verbal ways. The lecturer rephrased and summarized the students' responses and related them to responses from other students. This was an attempt to ensure that all the students were involved in the social plane and to avoid shared understandings between the lecturer and one student only. In addition, the lecturer demonstrated that she actively valued the opinions of the students. Therefore, the lecturer positioned the opinions of the students as an important part of the social plane.

4.2.11. *The Use of Peer Collaboration in a Large Class of University Students*

The use of the small group method, or peer collaboration, has been considered to be important for learning both internationally (Kember & Wong, 2000; Lake, 2001; Phipps et al., 2001; Trigwell et al., 1999), in South Africa (Gravett & Henning, 1998; Stein & Janks, 1996) and with Health Sciences students (Bligh et al., 2000). Previous

findings have only involved twenty-five to one hundred students (Bligh et al. 2000; Gravett & Henning, 1998; Kember & Wong, 2000; Lake, 2001; Phipps et al., 2001; Simpson & Erikson, 1983; Stein & Janks, 1996; Trigwell et al., 1999). The current study provided a unique application of the small group method in classes of three hundred students. This study has demonstrated that it is possible to use peer collaboration in large classes. Since large classes are a current reality in tertiary education in South Africa (Allers et al., 2005; Frescura, 2002; Fourie, 2001; Hind et al., 2003; Koch & Kriel, 2005; Lumina, 2005; Nel & Dreyer, 2005; van Lill, 2005), the use of the small group learning method may counter the negative effects on learning thought to be present in such large classes (Jaques, 1991). The current study has demonstrated that an active role on the part of the student is possible within a large class.

The disadvantage of traditional lectures is thought to be that the students are positioned as passive in the lecturer-students interactions (Lake, 2001). This can be countered by using the central characteristics of the small group method, namely the use of questioning, debate and inter-student discussion (Lake, 2001). When utilising the student- focused small group method (Trigwell et al., 1999), students may maximise their learning experiences (Bligh et al., 2000), as the dialectic between method and content is believed to be best facilitated (Stein & Janks, 1996). The use of the small peer group method facilitated a situation in which another individual functions as a “mediator of meaning” or as a “vehicle of symbolic tools” (Kozulin & Pressessen, 1995, p. 69).

The notion that the lecturer has to create a relaxed atmosphere in lectures has been found to be important both internationally (Neuman, 1994) and in South Africa (Gravett & Henning, 1998; Stein & Janks, 1996). There is also support for the influence of both non-verbal (den Brok et al., 2002; Woolfolk & Brooks, 1985) and verbal reinforcement (Baker et al., 2000; Brown & Renshaw, 2000) of students’ contributions in the university classroom. Verbal and non-verbal reinforcement of students’ contributions is thought to encourage participation (Entwistle et al., 1999) and serves to maintain student interest in the classroom discussions (Baker et al., 2000). The rephrasing of points made by students by the lecturer is known as

"revoicing" (Brown & Renshaw, 2000) or "reconstructive recapitulation" (Elbers & Streefland, 2000) and is also thought to encourage student participation.

The use of peer collaboration in such large classes requires a particular form of facilitation on the part of the lecturer, namely the hierarchy of dialogues. According to the hierarchy of dialogues approach that is explicated in the current study, the lecturer has to adopt "the role of manager of the discussion" (Elbers & Streefland, 2000, p. 45) or "vicar" of the culture (Bruner, 1987, p. 32). This role is more than a conversation (Pea, 1993), or turn taking (Brown & Renshaw, 2000) or a mixture of lecturer and student interaction (Kember & Wong, 2000). In addition, this hierarchy of dialogues is not problem-based learning as Walker and Wright (1996) utilised the concept in the teaching of Sociology to First Year Health Sciences students at the University of the Witwatersrand. Although there are similarities to the model proposed by Walker and Wright (1996), namely, the primacy accorded to the lecturer-students interactions and mediatory objects that provide structure to the learning experience. However, Walker and Wright's (1996) assumption that providing knowledge will necessarily facilitate skills development is untenable given the evidence presented in the current study (see Section 4.11.). In addition, these authors focus on peer collaboration as the primary source of learning, rather than adult guidance. A hierarchy of dialogues approach is more congruent with Stein and Janks' (1996, p. 112) position in which the curriculum is not "jointly constructed" with students and it is the role of the lecturer to "structure the situation so that learning can take place".

The use of the term "hierarchy of dialogues" is an acknowledgement of the power relations inherent in the lecturer-students interaction. Anti-transmission approaches to the learning process (e.g. Bligh et al., 2000; Lake, 2001; Walker & Wright, 1996) may be accused of ignoring the notion of adult guidance or that the lecturer is constituted as "the voice of authority" (Gravett & Henning, 1998, p. 4) or tutelage (Bruner, 1987). The sociocultural Vygotskian school has attempted to include this notion of adult guidance in the collective argumentation approach in which the role of the lecturer is an active one (Brown & Renshaw, 2000). Brown and Renshaw (2000, p. 53) describe the lecturer's role as "participating in the development of conjectures and refutations… modelling particular ways of constructing arguments… facilitating class participation in the discussions of the strengths and weaknesses of a group co-

constructed argument". The hierarchy of dialogues model attempts to extend the use of collective argumentation to adults (and not only children) and clearly accords authority to the lecturer. Thus, the role of the lecturer in the hierarchy of dialogues is analogous to "other-regulation" in which the lecturer assumes "the strategic responsibility for directing… behaviour" (Wertsch et al., 1980, p. 145). There is thus, a hierarchical relationship between the lecturer and the students (Das, 1995). The acknowledgement of the power accorded to the lecturer is congruent with Vygotsky's notion of the adult in socially mediated activity. The findings from the Lecture Notes (see Section 4.19) confirm the power that is given to the lecturer by the students. The students consistently noted the explanations and examples provided by the lecturer more often than they noted their own or other students' examples.

Effective teaching in the hierarchy of dialogues model requires a "balanced combination of knowledge and personality" variables (Dukes & Victoria, 1989, p.447). The Health Sciences students in the current study, and in other developing countries, have been found to respond to a lecturer who "know(s) how to dialogue with students… and (who) respects students' opinions" (Feldens & Duncan, 1986, p. 645). The lecturer's creation of a relaxed (Stein & Janks, 1996) and informal (Gravett & Henning, 1998) atmosphere is a fundamental part of the dialogue between the lecturer and the students. Thus, the voice of authority has a character that is defined by a humanistic character (Neuman, 1994) or is in the spirit of "ubuntu" (Goduka, 2005; van Wyk, 2005). The value of both verbal and non-verbal reinforcement is central to this humane use of power by the lecturer and has been found to be important in other models of dialogue between the lecturer and the student (Baker et al., 2000; Brown & Renshaw, 2000; Entwistle et al., 1991;van Brok et al., 2000; Woolfolk & Brooks, 1985).

Therefore, the lecturer's judicious use of his or her power is operationalised through the positive reinforcement of the responses of the students. An additional aspect to the lecturer's exercise of adult guidance or power is the careful use of different forms of questions in the lecturer-students interactions. There are two forms of questions in the hierarchy of dialogues approach, namely, questions that establish a commonality of purpose amongst the lecturer and the students and questions that encourage a diversity of opinion between the students. These two forms of questions represent what Haggis

(2003) refers to as an alignment between the theory-in-use and the stated aims of higher education, and what Newman and Holzman (1993) call Vygotsky's tool-and-result framework. Questions referring to a commonality of purpose are tools or methods that establish shared activity between the lecturer and students. The questions that facilitated a diversity of opinion modelled critical thinking, or the examination of different viewpoints in order to formulate an opinion.

Firstly, questions that establish a commonality of purpose are similar to the "signposts" or "frames" utilised by Brown and Atkins (1988, p. 22). However, Brown and Atkins' (1988) framework does not explicitly describe the nature of this type of question. This lack of clarity is also present in Noels et al.'s (1999) conceptualisation, which merely states that a commonality of purpose is important. Commonality of purpose in the large classes was established in the current study through rapport-establishing questions, which signalled the start or end of a particular theoretical section. Procedural questions concerned the negotiation of visual aids. Thus, commonality of purpose is defined in relation to both theoretical content and activity in the classroom. This conceptualisation is central to the use of the dialectic between knowledge and skills in the creation of understanding in the current study.

Secondly, the lecturer also asked questions that encouraged a diversity of opinion in the classroom. These questions related to the negotiation of understanding, and as such, related to the explanation of the theoretical content and its application to both the Health Care and South African contexts. Diversity of opinion assumes that there are diverse interests and experiences present in the classroom situation (Narsee, 2004). In the hierarchy of dialogues approach, diversity of opinion is "welcomed, respected, celebrated and fostered. Within this context, diversity is an asset, not deficit, a resource, not defect" (Narsee, 2004, p. 91). Learning can occur through the expression of diverse opinions (Matusov, 2001). In addition, the encouragement of diverse opinions is congruent with "ubuntu" or "humaneness" as it centres on a "policy of engagement and respect" (Narsee, 2004, p. 91).

Therefore, the lecturer constitutes the adult in the Vygotskian (1987) ZPD. The hierarchy of dialogues approach is not the mere facilitation of problem-based learning or outcomes-based education. The perspective (unapologetically) accords power to

the lecturer. This power is a necessary condition of an active agent of change. Thus, developmental change requires active mediation (Vygotsky, 1987). The problems of both problem-based learning and outcomes-based education are the central premises that any student is independently capable of the developmental change required in the process of learning. Lecturers in these approaches are downgraded into facilitators who make learning processes easier, rather than instructing, informing or creating a state of conflict within the students (Vygotsky, 1929, 1997b). The current study is a firm rejection of this, and places responsibility on the lecturer as an instructor, a guide and an educationalist.

An analysis by the lecturer-researcher and Teaching and Learning Advisors of both the students and lecturer's roles in the large class interactions has been presented. In congruence with a dialectical understanding of teaching and learning, the constructions of the students regarding the large class interactions is pivotal. The students' responses to participation in both the large class and the small group were collected and analysed. The student perceptions were analysed in terms of both cognitive and affective elements, and are presented in the next section.

4.2.12. *The Students' Cognitive and Affective Responses to the Use and Non-use of Peer Collaboration*

The Groupwork Questionnaire (2000) was designed to elicit students' responses to the two different forms (small group discussion and individual participation) of managing participation in the large class. This questionnaire asked two different types of questions. Firstly, the close-ended questions elicited responses that were affective (what form of participation made the student feel more comfortable) and cognitive (what form of participation helped the student to understand the concepts better). Secondly, open-ended questions required the students to provide reasons for their affective and cognitive responses. For both the affective and cognitive questions, the options were (1) using group work, (2) not using group work, (3) no difference between using and not using group work and (4) neither using group work nor not using group work. These categories constituted the framework for a content analysis of the data. The responses to these questions were also coded in terms of the racial and gender characteristics of the students. Frequencies were calculated for each of the

categories. The analysis of the students' reasons for their perceptions had aspects of both a content and ethnographic analysis. Firstly, in terms of the guidelines for a content analysis, the reasons were separated into the students who preferred either group work or individual participation. These reasons were coded with the gender and racial characteristics of the students. Secondly, categories emerged from the data within the framework provided by the content analysis.

4.2.12.1. *The students' affective responses to the use and non-use of peer collaboration*

In order to assess the affective components of the use or non-use of peer collaboration, the students were asked about what form of participation made them "feel comfortable" in the large class interaction. The word "comfortable" has been understood as a feeling of ease, feeling relaxed and unworried (Hawker, 2001). Thus, this question aimed to assess an affective dimension of learning (Lave, 1993).

Without reference to the gender and racial characteristics of the sample, 45% of the students stated that they felt more comfortable with peer collaboration, while 20% preferred participating on an individual basis. Twenty-eight percent of the students perceived no difference between the two forms of participation. Four percent of the sample did not feel comfortable with participating in class at all, with 3% not answering the question. (See Table 4.3).

Table 4.3.

Responses to the question "Did you feel more comfortable with?":

Option	Gender and Race
Using group work	8BF;2BM;12IF;7IM;24WF;6WM; 16DM
Not using group work	1BF;1BM;2IF;1IM;23WF;1WM;5DM
No difference between the two	1BF;2BM;8IF;22WF;5WM;8DM
Neither using nor not using group work	1BF;1BM;1IF;1WF;3DM
Not answered	2BF;1IF;1WF

BF = Black, female; BM = Black, male; IF = Indian, female; IM = Indian, male; WF= White, female; WM = White, male; DM = Demographic missing

One hundred and thirty students provided demographic information. This represents 78% of the students who completed the questionnaire and 54% of the total number of students registered for the course. Eighty percent of these students were female, and 20% were male. Firstly, in terms of gender, females felt more comfortable with using peer collaboration (42%). Thirty percent of the females stated that there was no difference between the two forms of participation, and 25% felt more comfortable with participation on an individual basis. Three percent of the females felt comfortable with neither peer collaboration, nor individual participation. Males also tended to feel more at ease with peer collaboration (58%), followed by no difference between the two forms of participation (27%), not using peer collaboration (12%) and 3% feeling comfortable with neither form of participation. The preference of First Year students for "interactive lectures and group-based activities" (Saunder et al., 2000, p. 309) has been found before (Mpofu et al., 1998).

In terms of race, 17 Black students completed this item. They generally felt more relaxed using peer collaboration (60%), 18% perceived no difference between the two forms of participation, 11% of Black students feeling more comfortable individual participation and 11% feeling more comfortable with no participation. Black females felt more comfortable when peer collaboration was used in the large class interaction (73%). Thirty-one Indian students answered this question. They felt more comfortable using group work (61%), perceived no difference between the two forms of participation (26%), felt more comfortable not using group work (10%) and 3% preferred neither form of participation. Both Indian females (52%) and Indian males (88%) felt more comfortable using group work than in individual participation. Finally, 82 White students completed this item. There appeared to be little difference in terms of the participation preferences of the dominant group of registered students (White females), i.e. using peer collaboration (30%), not using peer collaboration (28%), no difference between the two (27%). White males also did not demonstrate a distinct preference. In conclusion, peer collaboration, or participation in groups, appears to be the dominant preference of the students. Black and Indian students, particularly Black females and Indian males displayed this preference, with White students demonstrating no particular preference. The evidence supports Lave's (1993) contention that individuals who are part of a particular situation have different experiences and interests derived from their different locations in society.

The internalisations of the dominant group of students (White females) encompassed no definite preference for peer collaboration because, in effect, intersubjectivity was easier to achieve in the large class because of their dominance. Thus, individuals who share the same experience of the sociohistorical context are more likely to have similar internalisations of the social plane than those whose experience of the sociohistorical context is different (den Brok et al., 1999). The internalisations of the subordinate groups of students (all other race groups and males) entailed a preference for peer collaboration before negotiation in the large diverse class. The smallest group in the large class (Black students) displayed this preference because it afforded them an opportunity to participate in the class discussions that individual participation did not provide. Therefore, the use of the small group techniques in the large class provided these students with an opportunity to bid in the intersubjectivity auction. In this instance the what (small group) is the why or the reason for the preference and is congruent with Kember and Wong's (2000) findings that students want the opportunity to participate. Differences between the dominant and marginalized groups may be based on how the other is constructed. For the dominant group, there are more others who are similar to the individual. Thus, the same/ other boundary is less distinct or pronounced or peers are perceived to be similar to the self (Phillips, 1993). In contrast, the subordinate groups may have preferred the small group discussion because they were able to hear the opinions of those who sit in close proximity, who generally shared experiences of the sociohistorical context. Thus, the subordinate groups may have preferred the small group discussion because the individual was able to negotiate intersubjectivity with others whose opinions were more similar to theirs as opposed to the diversity presented in the larger class.

4.2.12.2. *The students' perceptions of the learning process*

The questionnaire also required the respondents to consider and reflect upon which form of participation they experienced as more conducive to their own learning of the concepts (see Table 4.4.). Thus, cognitive components of participation were also assessed. In general, one hundred and sixty-five students responded to this item. This figure represents 99% of the sample and 69% of the total number of students registered for the course. Thirty-eight percent (n=62) of these students perceived that there was no difference between peer collaboration and individual

participation in terms of the understanding of concepts, with 32% (n=53) perceiving peer collaboration as facilitating better understanding, 17% (n=28) perceived individual participation as facilitating understanding, 7% (n=12) displayed no preference, and 6% (n=10) of students did not complete the question.

Table 4.4.

Responses to the question "What helped you understand the concepts in the course more?"

Option	Gender and Race
Using group work	5BF;1BM;7IF;5IM;24WF;3WM;8DM
Not using group work	1BF;2BM;2IF;1IM; 3WF;1WM;8DM
No difference between the two	3BF;1BM;12IF;2IM;30WF;6WM;8DM
Neither using nor not using group work	3BF;1BM;2IF;2WF;1WM;3DM
Not answered	1BF;1BM;1IF;2WF;1WM;4DM

BF = Black, female; BM = Black, male; IF = Indian, female; IM = Indian, male; WF= White, female; WM = White, male; DM = Demographic missing

The students' perceptions about which form of participation contributed the most to conceptual understanding were also analysed in terms of the gender and racial characteristics of the students. One hundred and twenty-eight students completed this question and provided demographic information, totalling 77% of the sample and 54% of the total number of students registered for the course. Of this number, 72% (n=104) were female and 18% (n=24) were male. Forty-three percent (n=45) of the females perceived that there was no difference between peer collaboration and individual participation, 35% (n=36) perceived peer collaboration, and 15% (n=16) perceived individual participation as best facilitating the understanding of concepts. Thirty-eight percent (n=9) of males perceived peer collaboration and no difference between the two forms of participation respectively, as facilitating understanding. Sixteen percent (n=4) perceived individual participation and 8% (n=2) perceived neither peer collaboration nor individual participation as facilitating understanding. In terms of both gender and racial characteristics, half of the Black female students perceived group work as facilitating understanding. Indian and White students perceived no difference between the two forms of participation in terms of the

understanding of concepts. The findings relating to the White, Indian, male and female students concerning the relationship between the use of peer collaboration are similar to other international results from higher education. Physics students in the United States believed that they had learned less in lectures in which the small group method was used than in large classes (Lake, 2001). Health Sciences students, also in the United States, also perceived peer collaboration positively, but did not believe that it resulted in increased understanding of the concepts discussed in the course (Phipps et al., 2001).

4.2.13. *Reasons given by the Students for their Perceptions*

The reasons that students provided for either their positive or negative perceptions of peer collaboration were collapsed into central, interrelated categories. These categories have been separated into the role of others, including the role of fellow students or peers and the role of the lecturer, and the role of the self in peer collaboration. In addition, reasons were categorised as being either cognitive or affective in nature. It should be noted that the cognitive and affective reasons were related to the reasons that concerned the role of the self and the other. Finally, the reasons for positive or negative perceptions of peer collaboration were also related to the characteristics of lectures. The reasons provided by the students were also analysed in terms of the gender and racial characteristics of the students.

4.2.13.1. *The role of the Other in peer collaboration*

The role of the other in peer collaboration was derived from seven themes that emerged from the analysis. These were primarily derived from responses to peer collaboration. The role of the other was divided into both positive and negative aspects. In terms of a positive role of the other, the students identified hearing the opinions of others and meeting fellow students as important factors in a positive perception of peer collaboration. Secondly, in terms of a negative perception of peer collaboration, digression from the topic, confuse one another, problems within the small group, poor report back, and not all students participate were themes that were derived from the students' responses.

The primary reason provided by the students for a positive perception of peer collaboration was hearing the opinions of others. In this context, “others” were fellow students and not the lecturer. One hundred and thirty students, i.e. nearly half of the student constituency, provided this reason. Hearing the opinions of others was identified by all gender and racial groupings as the primary reason for a positive perception of peer collaboration. Some of the ways in which the students described hearing the opinions of others in peer collaboration included, “enjoyed hearing other people’s views” (Diverse Participation Questionnaire (DPQ66); “listening to other people’s opinions” (DPQ35) and “you got to hear other people’s views” (DPQ64). The reasons that students presented for a negative perception of individualistic participation were related to a positive perception of peer collaboration. Thus students acknowledged that when peer collaboration was not utilised they “only heard a few opinions” (DPQ65) and “not everyone got to have a say” (DPQ57). Students also acknowledged that the students with whom they discussed the answer to a question posed by the lecturer might have a view that differed from their own. This difference was perceived both positively and in racialized terms. Accordingly, one White female student responded that peer collaboration was a positive aspect of the large class because it allowed for “(d)iscussing different ideas with other people, who may be of (a) different race and culture” (DPQ 2). However, two Black students’ opinion appears to contradict this view. Accordingly, one Black male student wrote, “group members choose themselves in terms of colour, not geographics” (DPQ 101), seemingly referring to the notion that seating position did not influence participation to a large extent. Similarly, one Black female commented “people were grouping themselves according to their races, e.g. blacks only, Chinese only etc” (DPS106). The most important reason provided by the students, i.e. hearing the opinions of others, was conceptualised as indicating a passive orientation to discussions in class. This reason is conceptualised as standing in opposition to the role of the self in discussions in the large class (see following paragraphs).

In addition, regarding a positive perception of peer collaboration, eighteen students, from all gender and racial groupings, stated that meeting fellow students was important. The students described this theme as “got to meet people and interact” (DPQ 20) and “got to meet new people and understand other people’s point of view (DPQ 71). However, it is questionable whether all the students engaged with fellow

students who they did not already know. Accordingly, a Black female student commented “some people were not prepared to share with others outside their friendship group. Preference for one’s own friendship group” (DPQ93).

Students described the problems of peer collaboration in terms of digression from the topic, increased confusion, not all students participate, problems in reporting to the large class and problems with the group. Firstly, digression from the discussion topic was the reason most often stated by the students for a negative perception of peer collaboration. Fifty-nine students stated this reason. The students articulated this reason as “we would talk about irrelevant issues” (DPQ 37), “some of the topics brought up by students are off track” (DPQ46), “some people bouncing around – not sticking to a single concept” (DPQ18) and “when people’s opinions lead you totally off the topic” (DPQ10). Secondly, thirty-nine students stated that the use of peer collaboration lead to increased confusion. The students stated this in clear terms, for example, “confusion on difficult issues” (DPQ 49), “other people often confused me as they themselves did not understand what was going on” (DPQ 63) and “sometimes people gave ideas which nobody else thought was right and confused us all” (DPQ24). Thirdly, and of nearly equal importance as increased confusion, the students believed that not all students participated in the small peer group discussions. Thirty-five students responded in this manner and framed their responses in terms of “some people didn’t participate” (DPQ 34), “uncooperative group members” (DPQ86) and “other did not participate” (DPQ107). Fourthly, seven students believed that the group representative did not always correctly present the views of the group. One White female student stated this in the following way, “most representatives just made up an answer on the spot. One’s opinion/response sounds different when someone else (group representative) is stating it for one” (DPQ5). Finally, in terms of the role of the other in peer collaboration, problems with negotiating a diversity of opinions was identified as a negative consequence of peer collaboration by fourteen students. One student described these problems rather succinctly, “Group work is TOTALLY counter-productive. We have to investigate different points of view when split up into groups and people waste soooooooooo much time. Group work intimidates shy people and gives the verbose ones a platform. There is nothing more hideous than little clusters of people all arguing over who will represent them” (DPQ25). The students held diverse opinions about the value of the contributions of

peers. For many students, the discussions in the small group functioned to both increase and decrease understanding. It would seem that the perception of the value of the contribution of peers is a further point of diversity in large university classes.

In terms of the lecturer's role as an other, sixty-four students identified the informative discussion with the lecturer as a positive aspect of large class participation. This was the second most important reason for a positive perception of the non-use of peer collaboration and was identified by all gender and racial groupings. The students described this in a number of different ways including "(lecturer's) very descriptive and vivid explanations and examples" (DPQ43), "explanations by (the lecturer)" (DPQ98), "Lecturer also gave good examples" (DPQ97) and "The examples the lecturer put across" (DPQ26). There was thus general agreement amongst the students that the contributions of the lecturer, as an other, served to increase student understanding.

4.2.13.2. *The role of the self in peer collaboration*

The role of the self in peer collaboration was also explored. The second most important reason for a positive perception of peer collaboration was verbal exchange (talking/debating/ participating). One hundred and seven students provided this reason across all gender and racial groupings. This theme is distinct from hearing the opinions of others because it accorded an active role to the individual student. Thus, there was a difference between listening to others and presenting one's own opinion to the small group. This theme was described by the students in terms of "everybody got a chance to say something" (DPQ66), "it <u>made</u> you think about an answer, and not rely on others for answers" (DPQ18), and "thinking about the concept myself, not just hearing others talk" (DPQ9).

The notion of talking and debating appears to be related to the effects of a large class size. Thus, students generally felt more comfortable expressing their views in a small group of peers, rather than to a large class. Black female students expressed this notion as, "you get to know first what you can say in front of the whole class. Saying something from your own thinking, it's like you are saying rubbish and others would laugh at you" (DPS 107), "you have a million eyes on you than when in the smaller

group, it's more uncomfortable" (DPQ112) and "for a shy person, it's not easy to raise your hand and say something in front of the whole class so it's easy to say your opinions in your small group" (DPQ105). Another Black female student commented that in the small peer group "also made me able to raise my views, get something out of it" (DPQ103). White female students also seem to feel a greater sense of ease with expressing their ideas to a smaller group of students. This was described as "It's easier speaking to 3 people rather than 300" (DPQ8), "I felt intimidated to put my point of view across to 300 students" (DPQ43), "feel embarrassed to answer in front of so many people" (DPQ5) and "if you do not like speaking out loud in class you get a chance to express yourself to friends" (DPQ 29)

However, the utilization of peer collaboration resulted in a feeling of coercion in fourteen students. These students were Black and Coloured females, and White males. They commented on this sense of coercion in participation in terms of "everyone is forced to think about the questions" (DPQ 23); "pressure to talk" (DPQ 53) "to be picked on to answer the question" (DPQ111), "we all had to say something/participate in our small groups (DPQ105) and "being forced to discuss something" (DPQ41). This finding was confirmed by the students' reasons for a positive perception of individualistic participation. Accordingly two Black males, four Indian females, fourteen White females and one White male stated not having to participate in the discussions as a positive aspect of individualistic participation. However, this coercion seemed to have positive consequences for some students, who indicated that peer collaboration "forced you to express your own opinions. Forced you to become more alert and attentive to the lecture, because you had to participate" (DPQ15).

In terms of factors that may be construed as being cognitive in nature, three themes emerged from the students' reasons. These were increased understanding of the concepts when peer collaboration was used, the notion that peer collaboration facilitated individual thinking, the role of examples and help when confused. The third most important reason for a positive perception of peer collaboration was an increased sense of understanding. Forty-seven students of all gender and racial groups provided this reason. The students described the role of peer collaboration in understanding as "something I did not understand could be explained to me on a one to one basis and so I got enough attention to be able to understand (DPQ112), "you

got to know whether your answer is appropriate or inappropriate" (DPQ102), "the concept seems to sink in for longer. The things I learned during group work made it seem easier to understand" (DPQ19), "if you didn't understand you could ask someone around you, even if it was only an example" (DPQ22). A decreased sense of understanding was related to the individualistic form of participation in the following way, "couldn't relate the concept to an everyday happening that would make it more understandable" (DPQ101).

An increased sense of understanding was also related to the discussion of examples in the peer group. Forty-six students of all gender and racial groupings, except Black males, provided this reason. The role of examples in increased understanding was described in terms of "using examples that are familiar to us, so that you can remember the theory better" (DPQ 28), "the examples that were mentioned made it easier to grasp the concepts that were being taught" (DPQ27), and "we would get an understanding of the subject through personal examples of the members of the class" (DPQ6).

A small number of Indian and White females (eighteen responses) also believed that the discussion in the small peer group also facilitated thinking, which also resulted in increased understanding of the theoretical concepts. The students described this facilitation of thinking as follows, "new/different angles/interpretations of the concepts. Original ideas helped clarify the concepts- you thought about the concepts yourself" (DPQ31), "think for yourself" (DPQ 20) and "I suppose group work does encourage everyone to think and participate and internalise the info, instead of the same people" (DPQ1).

Also related to an increased sense of understanding was the notion that the small peer group functioned to help students who were confused. This theme emerged from the reasons for a negative perception of individualistic participation and was given by nineteen students. These students were Black, Indian and White females and White males. Thus, when the peer group was not utilised the students believed that confusion was more difficult to manage. Accordingly students wrote, "if I was stuck I could not get the answer" (DPQ85) and, rather crudely, "if you have no clue – you're screwed" (DPQ86). However, it would appear from the negative perceptions of the

peer group (see above) that the small peer group could also be a source of confusion, e.g. "concepts that I was not sure about were not properly explained to me by my misinformed colleagues" (DPQ 11). Therefore, the peer group may have, in some instances, been constituted with "more competent" peers (Bruner, 1987, p. 23).

The relationship between the generation of notes from the lecture and peer collaboration was also explored. Student opinion was divided regarding which form of participation resulted in better lecture notes. Accordingly, White and Indian students, males and females (n=23) believed that individual participation generated better lecture notes. While Black and White females, and Indian and White males believed that individual participation generated too many lecture notes (n=21). The students did not refer to the generation of lecture notes in the small peer group. This would suggest that there was a disjuncture between discussion and note-taking. One student articulated this as "too many notes to take down and to think/understand/write simultaneously" (DPQ82)

Student opinion was also divided in terms of an effective use of lecture time. Twenty-two students believed that peer collaboration wasted lecture time. This was the belief of both gender groupings, with the exception Indian males. This belief was presented in terms of comments such as "takes a long time for people to give the answers (DPQ 23) and "wasted time and broke concentration" (DPQ 49). In addition, twenty-eight students felt that individual participation, or the non-use of peer collaboration saved lecture time. All gender and racial groupings mentioned this, with the exception of Black females. Accordingly, students wrote that in individual participation "lots of work done quickly, there wasn't the 'faffing' of groupwork and wasting of time" (DPQ27) and "not wasting too much time" (DPQ 53). However, fourteen students, namely Black males and Indian and White females felt that more time was need for discussion in the small peer group. Thus, it seems as there was no consensus amongst the students regarding the most effective use of lecture time.

In conclusion, the students ascribed both active and passive roles for themselves in the large class interactions. The students identified both affective and cognitive aspects of the large class and small peer group interactions. Once again, there was a diversity of

student opinion concerning the positive and negative aspects of the peer group and the relationship between the peer group discussion and understanding.

4.2.14. *Gender and Racial Differences in Participation*

In summary, a slight preference for participating in groups was found. The dominant group in the class, White females, in particular, did not demonstrate any preferred form of participation. However, an examination of the minority groupings, particularly Black females, but also Indian students, revealed a stronger preference for group participation. Similar reasons for these perceptions were given for the different gender and race groups. Positive factors about small group participation included hearing the opinions of others (White and Indian females and Indian males), talking and debating (Black males and females), the discussion of relevant examples and meeting other students. Black students (male and female) provided similar reasons for their perceptions, as did Indian and White females. The emphasis by the students on the discussion of relevant examples is a further piece of evidence for the importance placed by the students on the use of examples. This emphasis was also found in the analysis of the problem-solving strategies (see Section 4.10.), case studies (see Section 4.15.) and lecture notes (See Section 4.19).

In addition, the students were able to provide coherent reasons for their opinions concerning group versus individual participation. There is, therefore, evidence of reflection or metacognition on the part of the students as only eighteen responses to this question were vague (e.g. “facilitated thinking”). The students also acknowledged the need for discussions in small groups to be highly structured by the lecturer, as the central reason for a negative perception of this form of discussion was digression from the topic. Reasons provided for a preference for individual participation focussed on the valuing of individual opinion and lecturer-student discussion. However, the students did acknowledge that this form of discussion resulted in not all the students being included in the discussion. All gender and race groups, except Indian males, gave these reasons.

Black students (both males and females) perceived the opportunity to participate that group work provided as the most important reason for a positive perception of group

participation. Similarities between Indian and White females were found. These similarities included similar prioritisation of the reasons for their perceptions and one reason, namely, providing a break from the lecture. Indian males valued hearing the opinions of peers more than any other reason. The reasons provided by White males clustered around hearing the opinions of peers, talking/debating and understanding/asking.

There appeared to be no agreement among Black and Indian students, either male and female, concerning the negative consequences of peer collaboration. White males tended to state that they had been coerced into participation and group work was too noisy. White females perceived that their fellow students' contributions led to confusion and digression from the topic. However, more negative responses were given here than for any other reason. Interestingly, the dominant group in individual participation, White females, perceived the most positive aspect of individual participation as the fact that more individual opinion could be heard (46 responses). This is a somewhat confusing result as it may suggest that individual opinion was lost in peer collaboration. Related to this rejection of the class as a cohesive group, was the valuing of adult guidance (informative discussion with the lecturer). Therefore, it would seem that some opinions (i.e. the lecturer's and select students') were valued more than others. These select students may be perceived by White females to be other White females. This result is reinforced by the perception that better lecture notes were generated by individual participation and may suggest that individual students did not construct notes reflecting the small group discussions.

Generally, students did not perceive a relationship between the form of participation and the understanding of concepts. In terms of gender, both males and females were undecided about which form of participation contributed the most to understanding. However, when a preference was provided, this was more often for group than individual participation. Similar patterns emerged in terms of race. Black female students perceived a stronger relationship between these two factors than any other gender or racial grouping.

Peer collaboration, or communicating with peers, was the reason most often provided for a positive perception of group participation. Students, however, were also aware

that peer collaboration sometimes led to greater confusion and digression from the topic of discussion. The minority of the class, i.e. Black students, welcomed the opportunity for participation that the group provided.

4.2.15. *The Affective and Cognitive Components of Peer Collaboration*

There were several affective aspects to student participation in the large class. Firstly, the students generally felt more comfortable participating in the large class using peer collaboration than using individual participation. This sense of comfort was related to the difficulty in expressing one's view to a group of three hundred students and the ease of communicating with a small group of three of four peers. The majority of the most marginalized group, i.e. the Black students, identified this feeling of comfort as important. This sense of comfort may have been related to the notion that the students enjoyed interacting with, and hearing the opinions of others, particularly because these others may already have been part of the student's friendship group. However, not all the students experienced a sense of comfort because some believed that the peer group participation forced or coerced them into participating in the large class.

Thus, most of the students may have felt more at ease in the large class utilising peer collaboration. In terms of understanding the terms of the cognitive components of participation in the large class, the most students (38%) perceived that there was no difference between peer collaboration and individual participation. However, more students (32%) believed that peer collaboration, rather than individual participation (17%), contributed to understanding the concepts in the course. Peer collaboration facilitated understanding through the discussion of examples and the individual's engagement with the topic under discussion.

4.2.16. *The Limitations of the Investigation of Student Participation in the Large Class*

A primary limitation of the current investigation related to the classroom observations. There is a degree of reduction present in observations conducted in the classroom (van der Aalsvoort & Harinck, 2000). This was particularly problematic in the current study as non-participant observers coded the students in terms of gender

and racial characteristics. Thus, the student, as a multifaceted individual, was not incorporated into the study. In addition, the students may have ascribed different gender and racial labels to themselves. Reductionism was also present (van der Aalsvoort & Harinck, 2000) because only lecturer questions and responses and student responses were noted, and thus, several types of interactions may have occurred that were not noted by the observers (van der Aalsvoort & Harinck, 2000). This may be one of the effects of the large class size. Secondly, the construction of the category system may have been flawed. Accordingly, seating position was not related to student participation and the gender and racial categories may have also been problematic (see above). Finally, the classroom observations also isolated the student and lecturer's behaviour from the context in which it occurred (van der Aalsvoort & Harinck, 2000).

4.2.17. *Participation Beyond Literacy Events to Literacy Practices*

The evidence from the current study suggested a unique method of conducting large class lecturer-students interactions. The evidence from both the lecturer and the students supported the use of the small group learning techniques in the large classes. In the current study's use of the small group method, importance was placed on a hierarchy of dialogues between the lecturer and the students in which adult guidance (or the lecturer's contribution) is of central importance. This adult guidance is dependent upon certain characteristics of the facilitation by the lecturer. The shortcoming of this particular method of conducting large classes is that dominant and marginalized groups of students still existed in the large class. However, representivity of the marginalized groups was achieved when the small group method was used. In addition, the students did not relate the use of the method to increased understanding of the concepts in the course. In terms of practice, the current study also proposed a unique definition of participation in which multiple forms of activity are present.

The construction of participation in the current study focussed on the context of the interaction between the lecturer and the students. When the open-ended methodology was used, the classroom discussions were considered by the students to be an effective teaching strategy. Participation is defined as involving the action of taking

part in/ joining or being involved in an activity. Thus participation denotes the action of involvement or contribution. Participation requires the student to take an active role in the learning experience. The current study's definition of participation implies cooperation or working together. The individual who participates, joins in or shares the learning experience. Finally, participation also implies the notion of inclusion or membership to the teaching and learning community or group (Wenger, 1999).

Certain assumptions are present in the formulation of the notion of participation. Individuals have different styles of or preferences for participation (Woolfolk & Brooks, 1985). These different styles or preferences arise from the individual's sociohistorical context. This sociohistorical context involves the social relationships between different genders and races within the context of South Africa. These social relationships are defined by the dominance and subordination of different social groups. The difference styles of participation also relate to the individual's perception of the self and participation in a particular sociohistorical context. The lecturer has to consider this diversity of participation definition and preferences when designing the learning experience. The lecturer, therefore, has to present the students with many forms of participation.

There were four practices of participation in the lecturer-students interactions presented in the study. The first type of participation was that the students could engage in internal processing, or thinking about the question posed by the lecturer. Both the lecturer and the students constructed this as listening to and absorbing information discussed in class. Secondly, the students were required to place their internal processing into the social plane. This placement of the individual's internalisation of concepts occurred in three different ways. The students signalled their internalisation of concepts by raising their hands in agreement or disagreement with a statement made by the lecturer or another student. Secondly, the students could present their internalisations in the dialogue in a small group of students. Thirdly, the students could offer a contribution to the large class lecturer-students dialogues. The presentation of the individual's internal processing in the dialogues between the students and between the lecturer and the students involved other individuals making evaluations of the individual's internal processing.

All the forms of participation involved activity on the part of the students. This activity occurred on both the individual (internal processing) and the social planes (raising a hand and discussion with others). The practices of participation presented may cater for the diverse needs of the students. Thus, a fundamental assumption of these practices is that students have different preferences for placing their ideas into the social plane. Some students are "more capable" of verbally expressing their views in the large class setting. This capability relates to being a member of the dominant social group in the student constituency and identification with the lecturer. The practices of participation, once again, incorporate the notion of the interplay between teaching and learning, or the lecturer and students. Thus, two elements (the lecturer and the students) interact in order to provide an explanation. The study is also Vygotskian in the sense that it is the individual's social interaction with other actors and objects in events that provide an explanatory account.

Traditionally the schism in interpretations of Vygotsky's work has been between activity and semiotic mediation (Daniels, 2001). The current study presented an interpretation of the Vygotskian opus in terms of a new sociohistorical context, and a large group of older learners. The investigation of activity, or the large class interaction focussed on the relations of power between the lecturer and students and among the students. A lack of explanation of relations of power has been a criticism that has been levelled at the neo-Vygotskian work (Elhammoumi, 2001). The current study also investigated the nature and purpose of cultural tools as constructed by both the lecturer and a large group of students. The study did not focus on the cognitive development of students, but on the historical development of a teaching model and the students' interpretation of cultural tasks and tools. This marks a distinct shift away from neo-Vygotskian studies (e.g. Bruner, 1993; deLoache & Brown, 1993; Meier, 1993; Wertsch, 1987).

The analysis thus far has focussed on the teaching and learning that occurred in the large class interactions between the lecturer and the students. This analysis may be understood as relating to interpretations of Vygotskian theory that focus on activity. The analysis that follows centres on semiotic mediation, or what Bruner (1987, p. 23) calls "props" and "instruments" that make it possible for the student to go beyond his/her present level of development, and what Cole (2005, p. 206) refers to as the

unique function of educational institutions in which "activity is mediated through print".

4.3. The Analysis of the Teaching Strategies According to Bloom et al.'s Classification System

The analysis of the teaching and learning strategies, which were in the form of print, occurred according to the classification system of Bloom et al. (1956). Firstly, the teaching strategies were investigated in terms of knowledge categories that each teaching tool and task involved. Secondly, the relationship between these knowledge categories and cognitive skills and abilities was analysed. Thirdly, the historical changes in the teaching tasks and tools were investigated.

4.3.1. *The Analysis of the Teaching Strategies in terms of Bloom et al.'s (1956) Knowledge Category*

Bloom et al.'s (1956) "knowledge" is the lowest level of classification, and thus constitutes the foundation of the classification system. The category "knowledge" is a complex and multi-layered category which progresses from lower to higher order forms of knowledge, or what the authors refer to as "types of behaviours" (Bloom et al., 1956, p.62). These behaviours progress from specific to more complex, thus, from concrete to abstract forms (Bloom et al., 1956). Accordingly, the lowest level of classification, knowledge of specifics, represents "types of information, or knowledge which can be isolated and remembered separately", while the highest level, knowledge of universals and abstractions, "emphasises the interrelations and patterns in which information can be organized and structured" (Bloom et al., 1956, p.62).

The detailed nature of Bloom et al.'s (1956) knowledge category required a reduction in the number of examples needed to determine, and evaluate, the relationship between the model of teaching and the classification system. In terms of the analysis of the tasks and tools in the teaching model, a summary of the knowledge categories has been given (see Table 4.5). This summary provides a framework upon which the cognitive abilities and skills are related to the knowledge tasks. Knowledge categories and skills are, thus directly interrelated.

Table 4.5.

Summary of Bloom et al.'s (1956) knowledge tasks and teaching strategies

Knowledge of:	Examples from the teaching strategies
1.Specifics 1.1. Terminology – the relationship between theoretical symbols and their referents 1.2. Specific facts – dates, persons and places	Learning Outcomes – the process of development; theoretical orientations to personality; and abnormal behaviour, the average age at which children learn to talk, or adolescents undergo puberty Essay tasks – theoretical terms of one theory in Psychology, e.g. denial, anger, bargaining, depression, acceptance Lecture Outlines and Notes – stages of development, personality theories, psychological disorders Case studies – terminology in psychological disorders Challenge questions - definitions of adulthood, adolescence, conditions of worth
2. The ways and means of dealing with specifics – organizing and criticising phenomena and ideas	
2.1. Conventions – the characteristic ways of treating ideas; usages styles and practices employed in Psychology	Learning Outcomes – physical, cognitive, social development; foci of theories of personality, e.g. psychosexual, psychosocial Essay tasks – the APA format of referencing ideas Lecture Outlines and notes – structures and development of personality Case studies – symptoms and diagnosis
2.2. Trends and sequences processes with respect to time	Learning Outcomes – developmental stages and norms, development from conception to death; emergence of pathology, Psychological theories of personality were written to investigate the psychosexual approach to human development (e.g. Erikson) or were written in reaction to the psychodynamic approach to human development (e.g. Rogers) Essay tasks – developmental phases of the dying process Lecture Outlines and notes – developmental stages

Knowledge of:	Examples from the teaching strategies
	Challenge questions – relationships between health and developmental stages
2.3. Classifications and categories – divisions and classes that are regarded as fundamental to Psychology	Learning Outcomes – developmental stages; theoretical orientations to personality (e.g. behavioural, psychoanalytic); normal and abnormal behaviour, Psychological divisions of human development, e.g. infancy, childhood, adolescence, adulthood Essay tasks – the sets of that are present in one theory of death and dying Strategies for the essay task – behaviour, affect and power relations Lecture Outlines and notes – types of development (e.g. cognitive and social); biological and environmental explanations of language and personality; symptoms and diagnosis of pathology Case studies – symptoms and diagnosis of pathology
2.4. Methodology – Psychological methods of inquiry, techniques and procedures	Learning Outcomes – distinguish between psychological and medical interpretations of pathology, the methods of inquiry, techniques, procedures were utilised by Freud, Erikson and Rogers to investigate human development. Essay tasks – the method by which one theory of death and dying was constructed Strategies for the essay task – determining the quality of evidence Lecture Outlines and notes – evaluation of theories of development and personality Case studies – techniques for the deconstruction of case studies Challenge questions – the differences between explanations provided by different theories of personality

Knowledge of:	Examples from the teaching strategies
2.5. Criteria – by which opinion is judged or tested	Learning Outcomes – the relationships between everyday experience, sociohistorical factors, the health care context and theories in Psychology, the standards by which theories in Psychology are deemed to be acceptable Essay tasks - the relationship between one theory of death and dying and the context of health care Strategies for the essay task – determining the persuasiveness of evidence, description of "critically evaluate", argument formulation Lecture Outlines and notes – evaluation of personality theories, the relationship between personality and social practice; differences between the explanations of disorders Challenge questions – aspects of psychology that are useful to health care professionals, treatment programmes, and the judgment of psychological health
3. The universals and abstractions in Psychology	
3.1. Principles and generalizations the abstractions that summarize Psychological phenomena	Learning Outcomes – developmental stages, perspectives on personality Case studies – facts, symptoms (behavioural and emotional), diagnosis of pathology Challenge questions – the relationships between normal and abnormal behaviour
3.2. Theories and structures the presentation of a systematic and comprehensive view of Psychology and psychological phenomena	Learning Outcomes – human development, i.e. all aspects of development and how they relate to lifespan and diverse functions Essay task –(2003) – the assumptions present in developmental theories Lecture Outlines and notes – explanatory models in Psychology, e.g. biological and cognitive systems Challenge questions – the ways in which disorders, death

Knowledge of:	Examples from the teaching strategies
	and dying are treated in Psychology, in South African culture, in the student's culture; the construction of the student's model for understanding pathology

The category of knowledge of terminology and its relationship to Psychology requires further discussion. Knowledge of terminology encompasses knowledge of three separate, and increasing complex relationships between referents and symbols. Firstly, knowledge of the generally accepted "referents[24] for specific verbal and non-verbal symbols" is required (Bloom et al., 1956, p.63). An example of a spoken and written symbol, or theoretical term in Psychology, the term "development" is used to describe individuals "in the world" (Hawker, 2001, p. 1060). In terms of knowledge in Psychology, development of the individual is structured in physical, social, cognitive, and emotional categories that are related to the age of the individual. Thus, one symbol, or theoretical term in Psychology can have a complex range of referents. Secondly, knowledge of terminology also requires "knowledge of the variety of symbols (that) may be used for a single referent" (Bloom et al., 1956, p.63). A single referent, for example a three-year old child, can be represented by a diverse array of symbols or theoretical terms constructed by different theorists. Examples of relevant Psychological theoretical terms include "the Oedipal complex" (Freud's psychosexual category), "initiative" and "guilt" (Erikson's psychosocial category), "egocentrism" (Piaget's cognitive category). Thirdly, and the most complex relationship between symbols and referents, is "knowledge of the referent most appropriate to a given use of a symbol" (Bloom et al., 1956, p.63). For example, the most appropriate use of Freud's symbol "the Oedipal complex" is in relation to a three-year old child, who is male, and who is part of the traditional family structure that is triadic (i.e. mother-father-child). Knowledge of terminology is "the most basic type of knowledge" that is the "basic language" of Psychology (Bloom et al., 1956, p. 64). The basic language that is used to understand human development is structured into categories (e.g. physical, emotional, social development), which included a large number of theoretical terms. For example, Freud's theory contains a large number of complex terms, including "thanatos", "phallic stage", "superego". Many theoretical terms

[24] From Linguistics, "the thing in the world that a word or a phrase denotes or stands for" (Hawker, 2003, p.1060)

relate to a number of categories. An example of this is Erikson's "role confusion", which relates to physical, emotional and social categories. Therefore, the lowest level of classification of the teaching model is complex, and represents particular ideological practices in Psychology.

The teaching strategy encompassed all of the knowledge tasks in the taxonomic structure. Emphasis has been placed on the learning outcomes, which can be related to all of the classes of knowledge, and reflects the types of thinking that the students were expected to develop during the seven-week period of teaching. The presentation of the teaching model in the knowledge category represented a reordering of the taxonomic structure. Accordingly, in terms of knowledge of the ways and means of dealing with specifics, knowledge of criteria has been located as a higher form of knowledge than knowledge of methodology.

4.3.2. The Relationship between Knowledge and Cognitive Abilities and Skills

The taxonomy presents five categories of cognitive abilities and skills that relate to knowledge. As in the instance of the knowledge category, the cognitive abilities and skills move from simple to higher levels of skill and abstraction. The analysis of the teaching strategies occurred, firstly, by demonstrating the relationships between the knowledge categories and cognitive abilities and skills categories. After these relationships have been established, the relationships between the cognitive abilities and teaching model are discussed.

Firstly, the lowest cognitive ability and skill is that of comprehension. Comprehension represents the students' understanding of literal meaning that is communicated in a text (Bloom et al., 1956). Three types of cognitive abilities and skills were involved in comprehension (Bloom et al., 1956). These are translation, or putting texts into different forms of language, interpretation, or reordering ideas in a text to understand the relationship between ideas, and extrapolation, or inferences that are made concerning implications or consequences of ideas (Bloom et al., 1956). Comprehension relates to knowledge of specifics, or knowledge or terminology and specific facts. Examples from the teaching model include translation, interpretation and extrapolation. In terms of translation, the students were required to write an essay

in which information contained in the prescribed textbook and readings in the Resourcepack were paraphrased. The reordering of one theory in terms of given criteria (interpretation) was required in terms of the problem-solving strategies for the essay task. Finally, in terms of extrapolation, the teaching strategies (e.g. the lecture notes and case studies) provided the students with abstractions (e.g. stages and types of development, symptoms and diagnosis) with which the terminology could be reorganized.

Secondly, the cognitive ability and skill of application describes the correct abstractions that may be used to understand the terminology (Bloom et al., 1956). The students were required to solve problems by using familiar elements to restructure the problem. This cognitive ability and skill requires knowledge of specifics and knowledge of the ways and means of dealing with specifics. The ways and means of dealing with specifics, thus, constitute the elements by which the problem is restructured. Knowledge of conventions, trends and sequences, and classifications and categories are important elements that were provided to students in order to solve problems. Accordingly, in the case studies, students were provided with facts about an individual, and were given the elements (e.g. symptoms, emotional symptoms, behavioural symptoms and diagnosis) that could be used to deconstruct the example. In the instance of the essay task, the elements of argument formulation and the determination of the persuasiveness of evidence were provided to the students.

Thirdly, the cognitive ability and skill of analysis relates to the breakdown of material or texts into its constituent parts (Bloom et al., 1956). Analysis involves the analysis of elements, relationships and organizational principles (Bloom et al., 1956). In the taxonomy, a distinction is made between application and analysis. In application, categories are provided to the students. In contrast, analysis involves the generation of categories by the students. This is problematic because it does not clearly explain how students would be able to deconstruct information if they are not shown or taught explicitly how to do so. It should be noted that “cognitive functions required by formal schooling do not appear spontaneously” (Kozulin & Presseisen, 1995, p. 67). This would be a particular problem in the teaching of students who are in their first year of university education. Thus, in terms of the knowledge category, both application and analysis involve knowledge of conventions, trends and sequences, and

classifications and categories. Therefore, no distinction in the analysis of the teaching strategies was made between these two categories of cognitive abilities and skills. The examples provided in the previous paragraph for application may serve as examples for the cognitive ability and skill of analysis.

Fourthly, the cognitive ability and skill of synthesis requires the student to put ideas or abstractions together in order to form a whole (Bloom et al., 1956). In the taxonomy, the student is conceptualised as a producer, and not a consumer or critic of ideas in a discipline (Bloom et al., 1956). Synthesis requires knowledge of terminology, the ways and means of dealing with specifics and universals and abstractions (Bloom et al., 1956). This cognitive ability and skill has three constituent parts, namely the production of a plan or set of operations that result in the production of a unique communication, which is based on a set of abstract relations (Bloom et al., 1956). The analysis of the teaching strategies, once again, occurred according to a reorganisation of the taxonomic system. Bloom and his colleagues (1956) placed the production of a unique communication before the production of a plan or operations. They argue that a set of operations is required for a unique communication. It appears that the production of a plan would be a task that would be performed before the task of the production of a unique communication. In terms of the teaching strategy, the students were required to formulate two types of unique communications, namely, the construction of an essay, and in the interactions between the lecturer and the students in the large class.

Finally, evaluation is the most complex ability and skill and refers to the construction of an opinion concerning the value of ideas for a specific purpose (Bloom et al., 1956). Evaluation has two central components, namely judgments in terms of internal evidence and external criteria (Bloom et al., 1956). As in the instance of synthesis, the cognitive ability and skill of evaluation requires knowledge of specifics, the ways and means of dealing with specifics and universals and abstractions. The basis for evaluation, as in the cognitive ability and skill of analysis, was provided to students in their first years of higher education. Examples from the teaching strategies of this cognitive ability and skill include the learning outcomes and the lecture outlines and notes. Accordingly, the learning outcomes provided the criterion of judging knowledge in psychology in terms of its usefulness to health care practitioners, while

the lecture outlines and notes provided an evaluation of each theory of development, personality and pathology.

The classification of the teaching strategies according to the taxonomy of educational objectives (Bloom, et al., 1956) has been informed by an important distinction made by Vygotsky (1993). Vygotsky (1993) focussed on the role of instruction in human development. Central to his focus on instruction and development was the dialectical assumptions concerning instruction and development. Firstly, instruction and development are two distinct constructs. Secondly, it is the interplay between these two concepts that results in higher levels of mental functioning. Scientific, or nonspontaneous, concepts were "new concepts" that were taught to the students through direct instruction. In contrast, everyday or spontaneous concepts were the student's "own concepts, particularly those that have developed in the student prior to conscious instruction" (Vygotsky, 1987, p.172). The reader will recall that "scientific concepts begin with a verbal definition and are used in nonspontaneous operations" (Lee, 1987, p. 86), and exist in the external plane, while everyday concepts exist on the internal plane. Implicit in the teaching model is the assumption that knowledge and cognitive abilities and skills are new or scientific concepts that are taught to students through direct instruction. This Vygotskian distinction is important in the classification of the teaching strategies because it has informed the use of the taxonomy. Bloom and his colleagues (1956) do not adequately account for how cognitive abilities and skills are taught to the student through direct instruction. The students are assumed to already possess the cognitive abilities of analysis, synthesis and evaluation, rather than required to learn these abilities and skills through instruction. Therefore, the analysis of the teaching strategies has been informed by this Vygotskian distinction between instruction and development. Thus, the taxonomic structure has been altered accordingly to accommodate this interpretation.

The analysis thus far has centred on the relationship between Bloom et al.'s (1956) taxonomic structure and the teaching strategies. The current study has focussed on the development of these teaching strategies, rather than on the development of individual students. Because of this focus on the teaching strategies, the historical evolution of the strategies needs to be described. An analysis of the historical development of the

teaching strategies is important in any interpretation that adopts a Vygotskian approach.

4.4. Historical changes in the teaching model over the four-year period

The analysis of the historical development of the teaching strategies occurred through the separation and description of each strategy. Each separate aspect of the Resourcepack was presented, namely, learning outcomes, essay tasks, problem-solving strategies for the essay tasks, lecture outlines, case studies and challenge questions. An analysis of the lecture notes, which were not included in the Resourcepack, was also conducted. Each teaching strategy was discussed in terms of differences and similarities over the period in which it was utilised. There was a focus on the year in which the students' perceptions regarding the teaching strategy were collected.

4.4.1. *The Development of the Learning Outcomes*

The development of the teaching model reflects both similarities and differences over the four-year period of this study. Firstly, there was little difference between the learning outcomes over the four years. The task words "explain" (2000, 2001, 2003) and "describe", "integrate" and "define" (2002) were utilised for the knowledge outcomes. For the skills outcomes, the tasks words utilized here included "apply" (2000, 2001, 2003) and ""translate", "compare" and "contrast" (2002) and "self reflect" (2000, 2001, 2002, 2003). The values outcomes were presented in terms of the tasks words of "demonstrate that" and "demonstrate an understanding" (2000, 2001, 2003) and "critically evaluate", "extrapolate", "appreciate" and "conclude" (2002). Therefore, lower level tasks words were used in conjunction with a lower level cognitive ability and skill, middle order tasks words were utilised with middle order cognitive abilities and skills, and higher order tasks words were used for higher order cognitive abilities and skills.

A literacy practice present in all four years of investigation was the use of the words "at the end of the six week period you should be able to…" to preface the presentation of the learning outcomes in the Resourcepack. This introductory statement has two

distinct components. Firstly, the length of time of teaching and learning was emphasised. Thus, the duration of the lecturer's teaching and the students' learning or the amount of time allocated for the students' achievement of the outcomes was clearly specified. Secondly, the phrase "you should be able to…", the use of the second person pronoun (you) in conjunction with the auxiliary verb (should) implied that a direct instruction was being communicated to the students in the Resourcepack. The use of the pronoun "you" was an attempt to place the student at the forefront of the teaching and learning strategy. This student-centredness was, again, congruent with the outcomes-based education approach (Bitzer, 2001; Friedrich-Nel, de Jager & Nel, 2005; Goode & Thomen, 2000; Killen & Hattingh, 2004; Tisani, 2002).

4.4.2. *Changes in the Essay Tasks*

In terms of the essay task, the number of questions varied over the course of the four-year period. Firstly, three questions were asked (2000), increasing to four in 2001 and remaining static at two in both 2002 and 2003. In 2000, the students were provided with a choice between two questions. The negotiation of choice occurred *within* (and not between) questions from 2001 onwards, i.e. selection of one out of two case studies (2001), two out of eight developmental stages (2002) and three out of five assumptions (2003). A framework of scaffolding was utilized for the tasks words. Accordingly, the tasks words moved from the lower order- "discuss", "explain" (2000, 2003), "describe" (2001, 2002), "select" (2002, 2003) and "state" (2001) to "critically evaluate" (2002, 2003), "present an argument" (2000, 2001) and "provide evidence" (2001, 2003). The higher order tasks were weighted more heavily (2001), less heavily (2002) and equally (2003).

Each year a preamble or general points were given for the actual essay task. These were given before the actual topic (2000), after the topic (2001) and both before and after the topic (2002 and 2003). In all years, information presented concerned theoretical content, the highlighting of mark allocations or instructions concerning question completion, and the response page limit. In 2002 and 2003, brief overviews of the theoretical content were provided.

The theoretical content of the assignments concerned one area of Psychological knowledge, namely Personality theory (2000, 2002 and 2003). Kubler-Ross's theory of death and dying (Developmental Psychology) (2001), and the Personality theory of Erikson were required in both 2002 and 2003. All four assignments were firmly located within the contexts of South Africa and the Health Care profession – although issues within these contexts did differ, e.g. Health Care practice during the Apartheid era and HIV/Aids.

The learning outcomes for each of the assignments also remained similar. The tasks words for the knowledge outcomes were "understand" (2000, 2002, 2003) and "explain" (2000, 2001, 2003). The task word "apply" was used to delineate the skills outcomes from 2000 to 2002. This was altered in 2003 to "relate" and "extract meaning". In terms of the values outcomes, "demonstrate an understanding" was used from 2000 to 2003. Again in 2003, changes were made to include "appreciate the importance of" and "understand that".

The learning outcomes for the entire subcourse were compared to the learning outcomes for the essay in 2001, the year in which student perceptions were collected. Ideally, there should be a direct relationship between the two sets of learning outcomes, i.e. for the subcourse and the essay task. Firstly, the knowledge outcomes for the entire subcourse included "explain the process of development from conception to death" (Resourcepack, 2001, p.1), while the knowledge outcome for the essay task was "understand and explain Kubler-Ross's (1986) theory on death and dying" (Resourcepack, 2001, p.4). These outcomes refer directly to knowledge of specifics, terminology and the ways and means of dealing with specifics and to the cognitive ability and skill of comprehension in terms of translation, interpretation and extrapolation (Bloom et al., 1956). Secondly, the skills outcomes for the subcourse included "apply your knowledge of the developmental stages to the health care context" (Resourcepack, 2001, p.1). The essay task incorporated this outcome in the following way, "apply Kubler-Ross's (1986) theory to the issue of HIV/Aids in South Africa" (Resourcepack, 2001, p.4). This task required knowledge of specifics, terminology, specific facts, the ways and means of dealing with specifics, classifications and categories, criteria and universals and abstractions. The cognitive abilities and skills of comprehension, application and analysis of elements,

relationships and organizational principles were required for the essay task. Thirdly, the values outcomes for the subcourse included "demonstrate an understanding that patients in different development stages need to be treated differently in terms of conveying information about disease", "understand that each patient may be understood in different ways according to your own theoretical orientation to personality", and "demonstrate that an understanding of an individual's cultural and social background influences their development, how they think, and how they manifest both health and abnormality" (Resourcepack, 2001, p.1). The values outcome for the essay task was "demonstrate an understanding of the specific issues which Health Care Professionals (HCP's) face in a society in which HIV/Aids is an issue" (Resourcepack, 2001, p.4). These values outcomes relate to all of the knowledge and cognitive abilities and skills categories provided by Bloom et al. (1956). The cognitive ability and skill of synthesis included the production of a unique communication and a proposed set of operations, and the derivation of a set of abstract principles (Bloom et al., 1956). In addition, the cognitive ability and skill of evaluation in this instance included judgments in terms of both internal and external criteria (Bloom et al., 1956).

The central problem in the current study is that the learning outcomes for the essay task relates to only one of the learning outcomes for the subcourse. The essay task related to one developmental theory among many other theories of development, personality and abnormality discussed in the course. Other theoretical constructs in Psychology were assessed by a multiple-choice examination, but no student perceptions on the examination were recorded at the time of data collection. The differences between the learning outcomes for the subcourse and for the essay task are important because they relate to Biggs's (2001) notion of constructive alignment. Constructive alignment is the principle of teaching that states outcomes and assessment must be directly related to one another (Biggs, 1987). The evidence presented above suggests that there was constructive alignment between the learning outcomes for the subcourse and the essay task in the teaching model.

The required reading varied over the course of the four years according to the topic assigned. Every year, reading from the prescribed text and one article presenting a theoretical reading from a second-year level text were required. Students were also

given electronic publications from a local research institution and/or from global research institutions (e.g. the United Nations) in the Resourcepack in order to complete the assignment. Appendix I lists the readings provided in the Resourcepack. In 2001, the year in which student perceptions were collected, five additional readings were given to the students in the Resourcepack. The first reading one was a presentation of the theory by the original author. Reading two discussed social and economic problems of HIV and Aids in southern Africa and provided examples of "real life" people. Reading three provided an analysis, by the author of the original theory, of the relationship between the theory of death and dying and the issues of HIV and AIDS. Reading four was written specifically for health care professionals and concerned social and psychological aspects of caring for of patients suffering from HIV or AIDS. Finally, Reading five provided a Biopsychosocial perspective on death and death and dying and a critique of the primary theory.

Because student perceptions of the essay task were collected in 2001, an in-depth analysis of the assignment from 2001 was conducted. In 2001, the essay topic had four separate tasks, which together, constituted an academic argument. Accordingly the students were asked to (i) Describe one theory in Psychology (20 marks), (ii) Relate the theory to an example (20 marks), (iii) Evaluate the usefulness of the theory to Health Care Professionals (30 marks), and Reflect on the extent to which HIV and Aids with impact on your future work practice (30 marks). Each of these sections of the essay task is discussed below in order to provide a complete description of the essay task to which the students' perceptions related.

(i) Describe one theory in Psychology (20 marks)

This question required knowledge of specifics including specific information about the stages of human development. Secondly, examples of knowledge of terminology included the theoretical terms provided by Kubler-Ross, e.g. denial, bargaining, depression and acceptance. Thirdly, knowledge of specific facts related to the average age death and dying are important psychological considerations. The cognitive ability and skill of comprehension in terms of translation and interpretation were required for these knowledge tasks. Comprehension "represents the lowest level of understanding" (Bloom et al., 1956, p.204). This lowest level of understanding is defined as "apprehension such that the individual knows what is being communicated and can

make use of the material or idea being communicated without necessarily relating it to other material or seeing its fullest implications" (Bloom et al., 1956, p.204). Three forms of comprehension were discussed, namely translation, interpretation and extrapolation. Translation was comprehension, as evidenced by the care and accuracy with which the theory was paraphrased (Bloom et al., 1956). Secondly, interpretation referred to the explanation and summary of the theory, including a rearrangement of the theoretical material (Bloom et al., 1956).

(ii) Relate the theory to an example (20 marks)

This question required the students to have knowledge of specifics, terminology and specific facts as discussed above in (i). The cognitive ability and skill of application was required for this question because students were expected to relate this knowledge to case studies provided in prescribed readings. Therefore, this question required "(t)he use of abstractions in particular and concrete situations" (Bloom et al., 1956, p.205).

(iii) Evaluate the usefulness of the theory to Health Care Professionals (30 marks)

This question required knowledge of the ways and means of dealing with specifics, trends and sequences, classifications and categories, criteria, methodology and theories and structures. Firstly, knowledge of the ways and means of dealing with specifics included the way in which Kubler-Ross's theory constructed death and dying. Secondly, knowledge of trends and sequences incorporated how Kubler-Ross's theory related to other theories of death and dying. Thirdly, knowledge of classifications and categories related to Psychological divisions of human development, particularly late adulthood, but also other categories of adulthood and childhood and adolescence. Fourthly, knowledge of criteria encompassed the standards by which theories in Psychology are deemed to be acceptable. Thus, students were expected to understand how Kubler-Ross's theory was developed and whether or not this conformed to acceptable standards in Psychology. Fifthly, knowledge of methodology included the method of inquiry used in the development of the theory of death and dying. Finally, knowledge of theories and structures incorporated the theories or principles and generalizations together with their interrelations that present a clear, rounded, and systematic view of death and dying.

The cognitive ability and skill of analysis was required for this question (Bloom et al., 1956). Students were required to understand the "relative hierarchy of ideas" and "the relations between the ideas" (Bloom et al., 1956, p. 205). Firstly, in terms of the analysis of elements, students needed to "recognise unstated assumptions" and distinguish "facts from hypotheses" (Bloom et al., 1956, p. 205). Secondly, analysis of a set of abstract relationships included the identification of the "connections and interactions between elements and parts" the theory and comprehend "the interrelationships among the ideas" in the theory (Bloom et al., 1956, p. 206). Thirdly, analysis of organizational principles included an understanding of the "organization, systematic arrangement and structure" of Kubler-Ross's theory (Bloom et al., 1956, p. 206).

(iv) Reflect on the extent to which HIV and Aids with impact on your future work practice (30 marks)

This question required knowledge of categories discussed in (i) and (iii). The cognitive abilities and skills of synthesis and evaluation were required for this question. In terms of synthesis, the students were required to arrange and combine their everyday experiences and the theories of death and dying in a pattern or structure that was not previously present (Bloom et al., 1956). Students had to produce a unique communication in which their ideas and feeling were presented (Bloom et al., 1956). The essay had to display "excellent organization of ideas and statements" (Bloom et al., 1956, p. 206). Finally, the students were required to derive of a set of abstract relations "to classify or explain" Kubler-Ross's theory in relation to health care practice (Bloom et al., 1956, p. 207). In terms of evaluation, the students were required to make judgments based on both internal and external criteria. Accordingly, students had to assess both Kubler-Ross's (external criteria) and a particular disease (external criteria) in terms of their future health care practice (internal criteria) (Bloom et al., 1956).

In conclusion, the essay tasks contained in the Resourcepack had several features. These tasks were presented in a highly structured and scaffolded manner. The essay tasks had an introduction and conclusion, which contained brief guidelines concerning the tasks. All of the essay tasks were located within the particular sociohistorical context (social plane) of South Africa and the practice of Health Care. The essay tasks

consistently moved from the lower to the higher order within Bloom et al.'s (1956) framework. The learning outcomes were also scaffolded from the lower to the higher order, i.e. the learning outcomes become increasingly complex as they progress from the knowledge to the skills to the values outcomes. Finally, various sources of evidence (and required reading) were provided to the students. Therefore, there is evidence of constructive alignment between the learning outcomes and the essay tasks.

4.4.3. *Historical Developments in the Problem-Solving Strategies for the Essay Task*

The problem-solving strategies (PSS) for the essay task were introduced in the Resourcepack in 2001. In 2001 and 2003, all of these exercises related to the assignment. In 2002, an exercise relating to the examination was also included. In 2001 and 2002, four problem-solving strategies (PSS) were given for the essay task. This was reduced to three strategies in 2003. After the presentation of the essay task in the Resourcepack, scaffolded problem solving strategies were introduced to the students by stating their purpose, namely to help in the construction of the essay. The strategies were linked to the tutorial programme, although completion of the exercises was not compulsory. Each strategy was accompanied by a "hint" that gave the relevant reading for the completion of the exercise and the component of the essay to which it related.

The problem-solving strategies were analysed using Bloom et al.'s (1956) taxonomic categories. The cognitive abilities and skills required were the consolidation and comprehension of the theoretical material, the application of this theoretical material to a particular situation or circumstance, and the construction of the academic argument (analysis, synthesis and evaluation). Because argument construction was the most complex skill, this was differentiated into defining what academic arguments are, the construction of opinion, argument structure and the examination of the persuasiveness of evidence.

The first problem-solving strategy each year was designed to support the students in their consolidation of the theoretical material. Four knowledge categories were evident. These were knowledge of terminology (knowledge of the symbol/ theoretical

terms “denial” and its articulated, behavioural and affective referents); knowledge of the ways and means of dealing with specifics (the standard of judgments in Psychology); knowledge of classifications and categories (the classes/ arrangements that are fundamental to Psychology, e.g. the power accorded to an individual/ internal or external control); and knowledge of principles and generalizations (abstractions which have value in predicting, describing, explaining the importance of theoretical constructs/practices (Bloom et al., 1956). The first exercise also related to the cognitive ability and skill of comprehension in terms of translation (paraphrasing from the readings to the table), interpretation (summarization of one theory on Psychology), and extrapolation (extension of the original theory to affective, behavioural and articulated categories) (Bloom et al., 1956).

There were both similarities and differences in the facilitation of knowledge and the cognitive ability and skill of comprehension over the three-year period. In all the years, the facilitation of these skills was presented in the Resourcepack in the form of a table. In 2001, the correct terminology for the theoretical concepts was given (i.e. denial, anger, bargaining, depression and acceptance) and the headings of the table were located within a relatively complex discourse (e.g. “articulated response”). In 2002, similar support was provided as the names of each theoretical stage were provided in the table. However, the table was simplified and additional support was provided. This support was given in the form of solutions presented for the first theoretical stage. In 2003, less support was provided in the table. This problem-solving strategy did not list the assumptions present in developmental theory, but merely indicated that three assumptions were required for the completion of the essay task. Another difference between this exercise and those of previous years was that in 2003, this table contained headings that were constructed in the form of questions. Therefore, the support for the knowledge and comprehension skills required by the assessment task displayed both repetitions and refinements over the three-year period.

The second problem-solving strategy (also given in the form of a table) represented an attempt to operalizationalise to the cognitive task of application or the explanation of the relationship between the theoretical material and a particular situation. There were differences in how this was attempted over the three-year period, as the strategies were refined. In both 2001 and 2002, the theoretical stages were applied to issues

within the context of South Africa. In 2001, an additional table was used for this purpose. This table was a repetition of the table given in the first problem-solving strategy, with an additional column labelled "quality of evidence" in which students could place facts from the case study. This exercise was, therefore, also constructed to introduce the notion of critical evaluation.

An additional table was also utilized in 2002. This table introduced the notion of a paradigm (the Biopsychosocial model). Thus, the first table in 2002 included the headings "stage, age, basic questions, ideal social conditions, South African social conditions". This problem-solving strategy concluded with a series of general questions that were aimed at eliciting responses that compared both the theoretical stages, and the theoretical ideal and South African situations. The second table in 2002 was designed to facilitate the assessment (within the framework of the Biopsychosocial model) of the impact of issues that may arise in the South African context. Therefore, the refinement of this problem-solving strategy occurred in terms of the movement away from mere repetition (in 2001) to the continuation and formulation in more depth (in the final column of the table in 2002).

In 2003, the application of the theoretical material was not to the context of South Africa, but rather to a series of assumptions. In this year, the tasks of knowledge, comprehension and application were facilitated in a single table. This problem-solving strategy attempted to present a model of critical thought (or evaluation). Students were required to select three assumptions present in developmental theories. The table to be completed comprised an explanation of the assumption, a statement of why the assumption was important, whether or not the assumption was present in Erikson's theory, and how the assumption was present in the theory. This problem-solving strategy then concluded with a description of the meaning of "critically evaluate".

The facilitation of the construction of the argument was differentiated into three sections. In 2001 and 2003, six listed points concerning the task of "critically evaluate" were given. This was given in the form of "do's" (highlighting the importance of arguments and evidence) and "don't's" (differentiating between everyday understandings of the word "critical" and its location in academic

discourse). This list was written using the second pronoun “you”, thereby directly referring to the students. There is, thus, evidence of constructive alignment (Biggs, 1999) between the way framing statements were written for the learning outcomes and the essay task.

The words “argument” and “evidence” were consistently highlighted and located within academic discourse over the three-year period. In 2002, the argument was explained in terms of a statement of possible subject positions, i.e. “Erikson’s theory is relevant to South Africa” OR “Erikson’s theory is not relevant to South Africa”. When the problem-solving strategies were initially constructed (2001), an additional layer of scaffolding was included. This layer encompassed the construction of the individual student’s opinion. This problem-solving strategy was given in the form of a table containing five positions ranging from “every aspect” to “not any aspect” is helpful. These opposing ends of the continuum were written in the first person. This format was only used in 2001. Thereafter the refinement of this problem-solving strategy involved a more concise summary.

This more concise summary concerned the facilitation of the structure of the argument. In terms of the structure of the problem-solving strategy, the format of a table was used in 2001 and 2002. This was changed in 2003 to the format of full sentences and paragraphs. The first person “I” was used for all three years, as was the emphasis of the importance of evidence in the argument. For all three years, five points of evidence for each opposing position were required and students were provided with examples of sources of evidence (e.g. the prescribed text, Resourcepack readings, other books and journal articles). In all three years, further questions concerning the refinement of the argument were listed in this problem-solving strategy. In 2001 and 2002, three questions were given. These questions were – “What are the gaps and weaknesses in my argument? Where do I not have enough evidence? What do I need to do to make my argument stronger?”. In 2003, four questions were given under the heading “You need to have a think now!!!!!”. These questions were “Which assumption is the most important? Why do I think that this is the most important assumption? For which assumption do I have the most evidence? (and) How can I prioritise the importance of my three different assumptions?”.

Finally, an examination of the persuasiveness or strength of evidence was included in the construction of the argument. This problem-solving strategy remained largely unchanged over the three-year period. This exercise was presented in the form of a table. The first column presented the name of the source. The remaining columns were written in the form of questions and in the first person. These questions concerned the point made by the source, the reputability of the source, and which position the source supported. In 2003, the final column was amended and was framed in terms of how the source may have been best used in the formulation of the argument.

The problem-solving strategies included in the Resourcepack were designed to provide support for the development of academic writing skills. These exercises attempted to scaffold the cognitive tasks required for the construction of the students' essays or unique communications. This scaffolding was provided because the skills required were higher order and it was the students' first negotiation of these skills in the Psychology for the Health Sciences course. The strategies for the compulsory learning tasks were introduced in the second year of the period of investigation and changes in their formulation were seen. Differences in the format in which these strategies were constructed concern both refinement and summarization. However, the skills that they were attempting to facilitate remained constant and encompassed all the cognitive tasks of Bloom et al.'s (1956) taxonomy (knowledge, comprehension, application, analysis, synthesis and evaluation). The strategies for the essay task were discussed during the lecturer-students interaction time, although the students completed them, if they so chose, on an individual basis.

In conclusion, the strategies for the compulsory learning task may be conceptualised as examples of *how to* write the academic argument. The skills involved in the construction of the academic argument presented in these strategies included *how to* consolidate theoretical content, *how to* evaluate evidence and *how to* apply theoretical content to a particular contextual situation. In addition, definitions of how to "critically evaluate" were provided to the students. The strategies for the essay task provided the most support for the higher order tasks and the least support for the lower order tasks. This form of support for the construction of the academic argument assumed that the construction has three distinct, but cumulative aspects and required a

particular set of skills. The strategies for the compulsory learning task, like the compulsory learning task itself, were presented in a highly structured and scaffolded manner. The scaffolding occurred in the following manner (1) consolidation of theoretical content, (2) application of the theoretical content to a particular contextual situation (3) the definition of the tasks word "critically evaluate" (4) the formulation of the individual student's opinion (5) the emphasis of the importance of evidence and (5) further refinement of the argument or the interrogation of the process of argument construction.

4.4.4. *Changes in the General and Specific Lecture Outlines*

Two types of outlines for the lecturer-students interactions were given in the Resourcepack. These were the general lecture outlines and the specific lecture outlines. The general lecture outlines were presented immediately before the specific lecture outlines in the Resourcepack, and provided an outline of *all* the lecturer-students interactions in the learning process. The specific lecture outlines provided a more explicit framework of *each* lecturer-students interaction.

General lecture outlines were presented in the Resourcepack in all four years. These lecture outlines provided information about the number of lectures, theoretical topics and required reading for each lecture. The number of lectures presented was 29 (2000), 26 (2001), and 27 (2002 and 2003). The structure in which this information was presented was altered in 2002 and 2003, separating the lectures into seven weeks.

The general lecture outlines presented the broad theoretical areas in Psychology to be discussed in the sub-course. How these theoretical areas were presented depended upon the nature of the area. Accordingly, stages were presented for Developmental Psychology, theorists for Personality Psychology and Psychological disorders for Abnormal Behaviour. Only the number of Developmental Psychology lectures remained unchanged, with the number of Personality Psychology lectures decreasing by two in 2001 and the number of Abnormal Psychology lectures increasing by two in 2002 and 2003. These changes reflect the removal of theoretical content not presented in the prescribed text. Each year the set of lectures began with an Introduction and

Orientation lecture. A lecture slot was assigned for the discussion of the assignment from 2001 onwards. In 2000 only, a guest lecturer was used.

In addition, the general lecture outlines contained the required reading for each lecture (2000 – 2002). These page numbers in the prescribed text were given every year except in 2003 when the additional learning material of the lecture notes was introduced. The page numbers represent the complete chapters in the prescribed text and were identical to the required reading presented in the specific lecture outlines.

The central similarity between the general lecture outlines and specific lecture outlines was that they both provided a structure for the action/ activities in the lecturer-students interactions. Both forms of summary provided the theoretical topic of the lecture (2000- 2003) and the required reading (2000 – 2002). However, the specific lecture outlines contained additional teaching strategies. These teaching strategies concerned the skills of theoretical consolidation (a numbered outline of theoretical concepts and required reading), application (challenge questions and case studies) and critical evaluation (challenge questions).

Firstly, the topics and titles of the lectures did not alter significantly over the four-year period. However, in 2000, lectures on additional topics were presented. These included “Thought processes in Health Care settings” and “Personality and disease”. These lectures required the reading of articles provided in the Resourcepack rather than the prescribed text. The topics in the specific lecture outlines were structured into theoretical concepts using headings and sub-headings.

The presentation of the theoretical content in the lecture outlines did not alter in 2000, 2001 and 2002. Each theoretical section was presented in a different manner. For Developmental Psychology important and correct terminology (e.g. developmental stages and terms) and aspects of Development (e.g. cognitive development) were presented. Terminology, the introduction of central debates (e.g. nature versus nurture), theorists, the structure and development of personality and evaluation were presented in the lecture outlines for Personality Psychology. Finally, the lecture outlines for Abnormal Behaviour contained models for understanding abnormality, correct terminology, important differentiations (e.g. symptoms and diagnosis) and

evaluation. Thus, the structure for the negotiation of the theoretical content provided to the students altered depending on the nature of the content.

In 2003, the format of the specific lecture outlines changed significantly. Headings and sub-headings were not utilized and important theorists and concepts were presented in the form of a list. The specific lecture outlines presented the correct terminology from the theoretical content and provided a framework for how this terminology could be classified. This change occurred when the additional strategy of the lecture notes was introduced.

The second aspect of the consolidation of the theoretical material present in the specific lecture outlines was the presentation of the required reading of the sub-course in stages. The negotiation of the prescribed text was therefore scaffolded into smaller sections of the textbook chapter, rather than merely stating the entire chapter. In 2000, the highest number of prescribed text page numbers required as reading was seventeen – for Infancy and Childhood, and the fewest number of pages was two – for the Introductory lecture and the "Introduction to Personality theories". In 2001, the prescribed text was changed, and thereafter, issues concerning the prescribed text remained constant. In 2001, 2002 and 2003, the entire text chapter was prescribed reading for one lecture, namely "Conflicting theories of the nature, causes and treatment of Abnormal behaviour", the most amount of reading prescribed. The least amount of reading prescribed was two pages of the prescribed text for the lecture on Personality disorders.

Finally, in terms of the facilitation of the skills of application and evaluation, the challenge questions were presented after the consolidation of the theoretical material in the specific lecture outlines. These challenge questions are discussed in greater detail in Section 4.16. The case studies were presented after the challenge questions for the lectures on Abnormal Behaviour. These are discussed in Section 4.15.
The American, *The Farside* and the South African, *Madam and Eve* cartoons were included in the specific lecture outlines. These cartoons had no pedagological benefit, but were included merely to enhance the aesthetic qualities of the Resourcepack. The number of cartoons remained stable over the duration of the four-year period (2000-2003), and generally, one cartoon was presented for each lecture, with the exception

of the lectures on Abnormal Psychology. No cartoons were presented in the Resourcepack in 2003.

A broad overview of the learning process was presented first in the Resourcepack. These overviews provided information about the procedure of the learning process. These broad overviews, or general lecture outlines were followed by outlines that explicitly consolidated the theoretical material and included additional teaching/ mediation strategies, the specific lecture outlines. The specific lecture outlines provided the method or approach of the learning process. The specific lecture outlines for each lecture contained additional teaching strategies (the challenge questions and case studies) for the mediation of the cognitive tasks of knowledge, comprehension, application and critical evaluation.

4.4.5. *The Development of the Case Studies*

The case studies were printed in the Resourcepack that students received at the beginning of the sub-course. The case studies were presented in the specific lecture outlines (refer to Section 4.13.). Like the specific lecture outlines, the case studies were activities in the learning process. The number of case studies (23) remained unchanged over the four-year period. These case studies were adaptations of examples presented in various texts of Abnormal Psychology. The case studies varied in length according to the disorder that they concerned and one case study was presented for each psychological disorder discussed.

Initially, the case studies were presented merely as examples of theoretical content and no strategies for the negotiation of these examples was given. Accordingly, in 2000, the case studies were presented with the correct solution. From 2001 onwards, the case studies were presented in the Resourcepack with exercises that were activities in the learning process. The case studies presented five cognitive tasks in a scaffolded manner as they were designed to provide a temporary framework of support for the students in their negotiations of the theoretical content (Bruner, 1987). This framework of support contained five layers. The first layer required students to construct general distinctions between everyday facts and psychological issues in order to generate a solution (knowledge, comprehension and application cognitive

tasks). Students were given space to write important facts, symptoms and diagnoses (Mood Disorders). The second layer of scaffolding was more complex and required the students to contrast factors within the theoretical content (analysis tasks). Accordingly, they were required to differentiate between Behavioural and Emotional symptoms (Anxiety Disorders). Thirdly, the case studies required the students to demonstrate how the theoretical content related to the example provided (synthesis tasks). Therefore, only symptoms and diagnoses were required for Psychosomatic and Personality Disorders. The fourth layer of scaffolding served to reinforce the first layer. Therefore, for the Schizophrenic Disorders, the exercises were again given in the format of important facts, symptoms and diagnoses. The final layer of scaffolding did not provide a framework of support and no exercises were given for the case studies illustrating Problems of Childhood and Adolescence.

The case studies were designed to facilitate five of Bloom et al.'s (1956) taxonomic categories. These were knowledge, comprehension, application, analysis and synthesis. Firstly, the case studies required the students to correctly use theoretical terminology (scaffolded layer one- knowledge tasks) The case studies facilitated the cognitive task of comprehension because the theoretical material was summarised and interpreted (scaffolded layer one). These interpretations related to the third task of application because the case studies required the students to explain how this theoretical material related to a specific example (scaffolded layer one). The case studies also attempted to facilitate the cognitive task of analysis because students were asked to deconstruct the theoretical material into distinct components (scaffolded layer two). Finally, the case studies were designed to facilitate the cognitive task of synthesis because the students were required to recognize the relationship between different components of the theoretical material (scaffolded layer three).

The case studies constituted both tools and tasks (Vygotsky, 1997b). The case studies were conceptualised as tools because they provided students with a mechanism for action in the learning process. Secondly, the case studies also contained activities that the students could complete in the construction of their understandings in the learning process. Thus, the purpose of the case studies was to provide relevant contextual examples as they linked aspects of the social plane, namely the theoretical content, Health Care Practice and the South African context. The case studies provided a

model for the students for *how to* deconstruct an example (relate the example to the relevant theory) and *how to* differentiate (between important facts and symptoms). The manner in which the case study examples were scaffolded is as follows (1) the maximum amount of support was provided to the students (knowledge, comprehension and application), (2) the most complex or refined task was presented to the students (analysis), (3) students were expected to perform the desired outcome of the case studies (identification of distinct theoretical concepts in an example and the generation of a solution- synthesis), (4) the maximum amount of support was repeated, and (5) the students were given no support.

Both the case studies and the problem-solving strategies (discussed in Section 4.10.) may be categorized as examples. Both teaching strategies concern *how to* perform (action) certain tasks or the skills required for the completion of these tasks (activity). The problem-solving strategies provide examples of *how to* construct the academic argument. The case studies are examples of *how to* deconstruct contextual examples that reflect situations that the students may be confronted with in their future health care practice.

4.4.6. *Historical Changes made to the Challenge Questions*

As in the instance of the case studies, the challenge questions were presented in the specific lecture outlines (refer to Section 4.4.4.) and were activities in the learning process. However, challenge questions were given for every theoretical section and not merely for the section on Abnormal Psychology. The responses to these challenge questions were not intended to be either correct or incorrect. Instead, the questions were designed to extend the thinking of the students beyond the presentation of the theoretical material in the prescribed text and served to both contextualise (in terms of the Health Care profession and South Africa) and to personalise this theoretical content. The discussion of the challenge questions in the lecturer-students interactions was aimed at achieving the criteria of representativeness or diversity of opinion and interpretation of the theoretical content (Murray, Giles, Lennon, Mercer & Robinson, 2000). As a general rule, at least one challenge question was discussed during class time. The remaining challenge questions were, therefore, available to the students to consider on an individual basis.

The challenge questions represented an attempt to facilitate four of Bloom et al.'s (1956) taxonomic classes, namely, application (relating the theoretical material to a new situation), analysis (the distinction between theoretical and contextual issues), synthesis (the relationship between theoretical, contextual and personal factors) and evaluation (the worth of the theoretical material in the contexts of the Health Care profession, South Africa and self-reflection).

Changes were seen in the challenge questions over the period of investigation. Each year more challenge questions were added and the challenge questions were refined, with the exception of 2003, in which they remained the same as those given in 2002. In 2000, more specific lecture outlines of the lecturer-students interactions only had one challenge question and four challenge questions per lecture were not given. In both 2000 and 2001, two challenge questions were given for the greatest number of lecturer-students interactions. However, in 2001, three challenge questions were presented for more lecturer-students interactions, and four challenge questions were given in a single lecturer-students interaction. In both 2002 and 2003, three challenge questions were given for the largest number of lecturer-students interactions and four challenge questions were asked for two lecturer-students interactions. The additions to and refinements of the challenge questions provided flexibility and diversity in terms of issues to be reviewed during the classroom discussions.

The challenge questions were presented in the specific lecture outlines for all sections of the theoretical content. The challenge questions were introduced in order to address issues of "over-support" raised by the Teaching and Learning Advisors, and these questions had a dual purpose. Firstly, they were designed to facilitate individual student reflection and consideration of the relationships between different aspects of the social plane, namely Psychological theory, the practice of Health Care and the wider South African context. Secondly, the challenge questions were important in the lecturer-student interactions, where they provided a tool or mechanism for facilitating representativeness and diversity of student opinion and diverse interpretations of the theoretical content, the practice of Health Care and the South African context.

4.5. University Literacy Practices: The Resourcepack as a "Learning Package"

The Resourcepacks were conceptualised as a macro-tool, which consisted of multiple micro-tools (teaching strategies). These micro-tools concerned the product of the learning process, the essay task and action/ activities (general and specific lecture outlines, case studies and challenge questions) in the learning process. The Resourcepacks had a specific structure was pervasive over the four-year duration of investigation. The construction of the Resourcepack was advocated by the Teaching and Learning Advisors for the Faculty of the Humanities at the University of the Witwatersrand, and thus represented a learning material that is specific to the University.

The Resourcepack was conceived as a "learning package" (de Groot & Dison, 1996, p. 29) that was developed according to the principles of distance education. While this may appear at first glance to be slightly incongruous, it is believed that the Resourcepack is a mediatory object that can be utilised to counter the disadvantages of large classes that are the reality of the McUniversity (de Boer et. al., 2001; McGill & Beaty, 1992; Nyamapfene & Letseka, 1995). Accordingly, in terms of student diversity, the Resourcepack provided both challenge and support to the students (de Groot & Dison, 1996). However, it must be acknowledged that the Resourcepack may have provided more support than challenge to the students. Accordingly, the general and specific lecture outlines provided "infrastructure for the topic" (de Groot & Dison, 1996, p. 29). The Resourcepack was also an attempt to ensure "that detailed information is accurately received" by the students (de Groot & Dison, 1996, p. 29). In addition, the Resourcepack directed the students "to alternative sources of information" (de Groot & Dison, 1996, p. 29), e.g. the additional sources for assignment reading. Finally, in terms of support, the Resourcepack provided a "framework for interaction" between the lecturer and the students (de Groot &Dison, 1996, p. 29). Secondly, in terms of challenging the students, the Resourcepack provided tasks that required "higher level cognitive skills of analysis, synthesis, problem-solving and evaluation" (de Groot & Dison, 1996, p. 29). Mediatory objects that attempted to facilitate these higher-level skills included the case studies, challenge questions, essay tasks and problem-solving strategies for the essay tasks.

4.6. The Lecture Notes

The lecture notes were not included in the Resourcepack, but were distributed to the students at the beginning of each lecture or start of a distinct theoretical section. This teaching strategy was the final form of the textual mediation of activities in the learning process. The lecture notes were related to the general and specific lecture outlines. The introduction of a new teaching strategy (lecture notes) resulted in changes being made to the existing teaching strategies (general and specific lecture outlines). Firstly, the general lecture outlines still provided a broad overview of all the lecturer-students interactions. The process of the lecturer-students interactions was defined in time and subject-specific terms (e.g. the hierarchical organization of Developmental Psychology, theorists/ approaches in Personality Psychology and categorization principles in Abnormal Psychology). However, no page numbers for the prescribed text were given. The general lecture outline was headed with the statement that "The relevant readings for each lecture are given in the lecture summaries" (Resourcepack, 2003, p.11). Secondly, the specific lecture outlines still provided a framework for each lecturer-students interaction and contained the additional teaching strategies of the challenge questions and the case studies. However, the specific lecture outlines comprised correct theoretical terminology and a framework for how the terminology could be classified only in 2003. Therefore, a less explicit or detailed subject-specific theoretical framework was utilised in comparison to the previous formulation of this teaching strategy. The general lecture outlines, the specific lecture outlines and the lecture notes were viewed as three parts (broad overview, framework for how Psychological terminology could be classified and the correct terminology) of the same activity (learning process in Psychology). The textual teaching strategies that were designed to facilitate widespread and diverse student participation in the lecturer-students interactions included the general and specific outlines, the case studies, the challenge questions and the lecture notes.

These A4 pages were not intended to be a complete set of notes for each lecturer-students interaction, but rather constituted a framework from which notes, in their entirety, from the lecturer- student interaction could be constructed by the students. Space for the completion of the notes of this lecturer- student interaction was not consistently left on the lecture notes themselves. However, signals were provided in

the lecture notes to indicate that an important point that was discussed should be noted. Examples of these signals included “example=” and “gender differences=”. Therefore, the lecturer-student and student-student interactions were conceptualised as pivotal in terms of the mediation of the students’ understanding. In addition, the Resourcepack was utilized to advance the lecturer-student and student-student dialogue.

The lecture notes provided the students with the relevant references to the prescribed text. In addition, the lecture notes contained important definitions from the prescribed textbook. Therefore, this aspect of the teaching model concerned Bloom et al.’s (1956) knowledge of specifics, primarily knowledge of terminology. The lecture notes constituted the presentation of scientific concepts, or a precise verbal definition of a theoretical concept in Psychology (Vygotsky, 1997b).

It is important to discuss whether providing structure to the learning process, in terms of the general and specific lecture outlines and lecture notes, constituted what Thomas et al. (1991) have called supports or compensations. Firstly, supports are “teacher- or text-provided aids that serve to prompt or sustain students’ engagement in particular demand-responsive study activities” (Thomas et al., 1991, p. 277). Arguably, the general and specific lecture outlines and the lecture notes may serve to prompt the students’ engagement with the material. The textbook page numbers may have served to sustain study behaviour. It should also be noted at this point that the textbook page numbers included the entire prescribed chapter. Thus, by providing the textbook page numbers, the reading workload required of the students was not reduced, but merely divided into smaller parts.

On the other hand, compensations “reduce the effect of that demand, thus reducing the need for students to engage in the appropriate study behaviour” (Thomas et al., 1991, p 277- 278). Examples that are provided by these authors include the lecturer discussing assessment in a verbatim manner, i.e. telling the students exactly what questions will appear in a test. The central problem with Thomas et al.’s (1991) description is that there is no clear distinction between their concepts of supports and compensations. In the current study, no verbatim discussion of the assessment responses occurred, although the lecture notes did constitute a verbatim presentation

of definitions from prescribed text. It may be argued, however, that these two mediatory objects were not perceived by the students as compensations, but rather as supports. One student expressed this in the following manner, “The outlines for the lectures and the required reading for each day help you to prepare for lectures and to keep up to date with the work. It breaks it down into ‘bite-sized’ chunks” (Resourcepack Questionnaire 77).

4.7. The Students’ Perceptions: an Introduction

The cognitive and affective perceptions of the students concerning all aspects of textual or printed mediatory objects were collected. These aspects include the learning outcomes, the essay task, the problem-solving strategies for the essay task, the general and specific lecture outlines, the case studies, the challenge questions (all contained in the Resourcepack) and the lecture notes. The analysis of the learning tasks and tools contained in the Resourcepack (learning outcomes, the essay task, the problem-solving strategies for the essay task, lecture outlines, case studies and challenge questions) focussed on cognitive aspects of the students’ perceptions. These cognitive aspects were elicited by asking the students to “consider whether or not the following aspects of the reading Pack (RP) contributed to your understanding” (Usefulness of the Resourcepack Questionnaire, 2001, p.1). The contribution to the students’ understanding was defined in terms of whether or not the aspects were helpful or not to the student. In the context, the word “helpful” was construed as assisting the student to go or develop in a specified direction (Hawker, 2001).

In terms of affective aspects of the students’ perceptions concerning the Resourcepack, two questions were asked, namely, “What did you like best about the reading pack” and “What did you like the least about the reading pack?”(Usefulness of the Resourcepack Questionnaire, 2001, p.5). In the analysis the verb “like” was construed as finding agreeable (finding pleasant or acceptable) or satisfactory (fulfilling expectations or needs). Thus, while the contribution to the student’s understanding of each separate cultural tool was assessed (cognitive), the student’s affective response was measured in terms of the Resourcepack as whole unit.

Using the non-parametric Kruskal-Wallis test, no statistically significant differences were found between the gender, race and degree groups regarding the aspects of the teaching model that were textual in nature. These include all teaching strategies contained in the Resourcepack and the lecture notes. However, gender and racial differences were found in large class participation (See Section 4.2.). In addition, no relationship between the Matric score and the student perceptions of all the teaching strategies was found. This lack of correlation between Matric score and university performance has been found in other South African studies (e.g. Yeld & Haeck, 1997).

4.8. The Students' Perceptions of the Learning Outcomes

In 2001, a questionnaire concerning the Resourcepack was given to the students. The analysis of these questionnaires yielded students' perceptions of the learning outcomes of the entire sub-course and for the essay task. No statistically significant differences were found between the perceptions of the different races, genders or professional degrees using the non-parametric Kruskal-Wallis test. See Table 4.6. for the results of the students' perceptions of the learning outcomes of the sub-course, Table 4.7. for perceptions of the essay task learning outcomes and Table 4.8. for a comparison between the sub-course and essay task learning outcomes.

Table 4.6.

The positive and negative ratings of the Learning Outcomes for the course

Learning Outcomes	Positive	Neutral	Negative
Learning Outcomes generally	89%	9%	2%
Knowledge Outcomes	87%	13%	-
Skills Outcomes	75%	23%	2%
Values Outcomes	77%	22%	1%
Average	82%	17%	1%

Students rated the learning outcomes generally in a more positive light than any of the outcomes individually. The rating of the learning outcomes appears to reflect the

perceptions of the knowledge outcomes as the students focussed predominantly on these knowledge outcomes. Therefore, the students believed that the lower knowledge and cognitive abilities were of primary importance.

Similar patterns were found in the items concerning the learning outcomes of the essay tasks. The knowledge outcomes (69%), which are likely to be reflected in the positive perception of the outcomes generally (also 69%), values outcomes (61%) were again perceived as being slightly more helpful than the skills outcomes (60%). See Table 4.7.

Table 4.7.

The positive and negative ratings of the Learning Outcomes for the Essay Task

Learning Outcomes	Positive	Neutral	Negative
Outcomes generally	69%	26%	5%
Knowledge outcomes	69%	28%	3%
Skills outcomes	60%	33%	7%
Values outcomes	61%	36%	4%
Average	65%	31%	4%

Students appeared to perceive the learning outcomes more favourably when they did not specifically relate to an assessment. It should be noted that while the learning outcomes for the subcourse and essay topic were similar, they were not identical. In addition, the students' perceptions concerning the different learning outcomes were collected on two separate occasions. The perceptions regarding the essay task were collected after the perceptions regarding the subcourse, and occurred during the final week of the teaching See Table 4.8. for a comparison of the ratings between the learning outcomes for the sub-course as a whole and for the essay task.

Table 4.8.

Positive ratings of the Learning Outcomes for the course and the Essay Task

	Sub-course	Assessment
Outcomes Generally	89%	69%
Knowledge Outcomes	87%	69%
Skills Outcomes	75%	60%
Values Outcomes	77%	61%

In conclusion, the learning outcomes received the highest ratings when the students were asked to comment generally. The students perceived the knowledge outcomes (concerning the reproduction of theoretical content or lower order outcomes) as being the most helpful type of learning outcome, and the skills outcomes (application to Health Care) as the least helpful learning outcome. They perceived the values outcomes (South African context) as being more helpful than the skills outcomes (Health Care context). This may relate to the prior experiences of the students, who have had exposure to the South African context, but were in the early stages of their studies of Health Care. This pattern of the rating of the knowledge, values and skills outcomes was found for both the learning outcomes of the sub-course and the essay tasks.

4.9. The Perceptions of the Students of the Essay Task

These perceptions concerned the questions (mark allocation, wording and general points) and each of the required readings. See Table 4.9. for the students perceptions of the essay task. Using the non-parametric Kruskal-Wallis test, no statistically significant differences were found between the gender, racial and degree groups.

Table 4.9.

The positive and negative ratings for the questions and required readings of the Essay Tasks

Item	Positive	Neutral	Negative
	The Questions		
Mark allocation	75%	6%	19%
Wording of the question	81%	10%	11%
General points	74%	4%	22%
Average	77%	6%	17%
	Required reading		
Theory	98%	0%	2%
Case studies	95%	1%	4%
Issue from the case studies (i.e. AIDS) by primary theorist	63%	17%	20%
Profession specific theory	57%	18%	25%
Criticisms of original theory	82%	7%	12%
Average	79%	8%	13%

The highest positive ratings concerned the required reading (79%), followed by the Questions (77%). Firstly, the readings that presented theoretical content (98%) and the case studies (95%) received the most positive ratings of all the facets of the essay tasks. This was followed by the reading that presented the criticisms of the theoretical content (88%). Readings in which theoretical links to the assessment questions were more complex received lower positive ratings (63% and 57% respectively).

Secondly, in terms of the questions, the wording of the questions (81%) was rated as more helpful than the mark allocation (75%) and the general points (74%). The mark allocation item (75%), which specifically referred to assessment in this questionnaire, received a lower rating than the mark allocation item of the previous questionnaire

(85%), which was contextualised in terms of the general instructions for the sub-course.

Therefore, the students identified the readings as being the most helpful aspect of the essay task. The readings concerning aspects of the social plane (e.g. the South African and Health Care contexts) were not perceived as being as helpful as the readings concerning the theoretical content. Accordingly, the students placed Psychological theory, the South African context and lastly, the context of the Health Care as important considerations in the completion of the essay. This finding is similar to the findings for the learning outcomes. The manner in which the questions were worded was perceived as being more helpful than the mark allocation. Finally, the general points were perceived as being the least helpful aspect of the questions.

4.10. The Perceptions of the Students regarding the Problem-Solving Strategies for the Essay Task

The students were required to provided their perceptions of the instructions, generally and for each exercise, the reading hints, the exercises generally and each individual exercise. See Table 4.10. for the percentages of these items. No statistically significant gender, race and degree differences were found using the Kruskal-Wallis test.

Table 4.10.

Positive, negative and neutral frequency percentages for each item of the Problem-Solving Strategies questionnaire

Problem-solving strategies	Positive	Neutral	Negative
General instructions for PSS	70%	25%	5%
Instructions for each PSS	70%	24%	6%
Reading hints for PSS	81%	15%	4%
PSS in general	81%	14%	5%
Content PSS	88%	9%	3%
Content and case study PSS	77%	17%	6%

Problem-solving strategies	Positive	Neutral	Negative
Do's and Don't's' of critically evaluate	61%	30%	9%
Beginning to formulate an argument	56%	32%	12%
Persuasiveness of evidence	40%	43%	17%
Own examples as evidence	36%	46%	18%
Formulating own opinion	50%	38%	12%
Average	65%	27%	8%

Firstly, the findings of the most positive ratings for the learning outcomes and the essay tasks were confirmed in the findings for the strategies for the completion of the essay task (problem-solving strategies). Accordingly, the consolidation of the theoretical content problem-solving strategy was the most positively rated item in this section (88%). This was followed by the direct reading hints (81%) and possibly inflates the positive finding for the problem-solving strategies in general (81%). The second most positively rated problem-solving strategy was the one designed to match the theoretical content with the facts from the case study (77%). The general instructions for the problem-solving strategies (70%) and the instructions for each problem-solving strategy (70%) constituted the third cluster of positive responses. The problem-solving strategies concerning skills reflect the lower rating of the skills outcomes (see Section 4.8.). The general formulation of the argument problem-solving strategies were rated more positively than those concerning evidence specifically, i.e. beginning to formulate an argument (56%), formulating your own opinion (50%), the persuasiveness of evidence (40%) and using your own examples as evidence (36%).

The problem-solving strategies were designed for independent completion, which was reflected in the responses to the item presented in Table 4.11. Thus, 84% percent of the students stated that they had completed the problem-solving strategies by themselves. While the problem-solving strategies were discussed, but not completed, 6% of the students reported that the problem-solving strategies had been "done" in lectures and 2% in tutorials. It would seem that, when the students did make use of the

teaching strategy, they did so in the way in which the lecturer intended, i.e. independently.

Table 4.11.

The location of completion of the Problem-Solving Strategies

Did you do the PSS:	N	Percentage
By yourself	158	84%
In lectures	11	6%
In tutorials	3	2%
Not at all	17	9%

The previous findings that the students tended to focus on the theoretical content aspects of the teaching strategies were reinforced again, in terms of which problem-solving strategies the students actually completed. Eighty-eight percent of the students completed the content problem-solving strategy and 72% completed the theoretical content and case study problem-solving strategies. The formulation of arguments problem-solving strategy (58%) was, again, more often completed than the problem-solving strategy concerning evidence (34%). (See Table 4.12).

Table 4.12.

The type of Problem-Solving Strategy completed

Problem-solving Strategy Completed	N	Percentage
Content only	167	88%
Content with case study	137	72%
Formulating arguments	109	58%
Own examples as evidence	64	34%

The questionnaire included an open-ended item in which the students were asked to provide reasons for either their completion or non-completion of the problem-solving strategies. Reasons provided for the completion of the problem-solving strategies included that they provided a foundation/ guide for answers (79 responses) by

enabling the student to understand what each question required (25 responses), provided an understanding of content and application (37 responses) and helped to order student's thinking (11 responses). Examples of student comments for each category are:

(i) the problem-solving strategies provided a foundation for the construction of the essay: "Gave me guideline of where to start and how to formulate an answer, helped me to stick to the question and not include irrelevant things. Without the exercises I would not have managed! They helped determine the key points for each question" (PSS 10), "I felt like I wasn't just thrown in the deep end and I had a guideline to work from. Also, it's a good place to start, it was essential for the planning and mapping of the essay" (PSS 116) and "They helped me a bit because they were not actually giving me answers but leading me to the answer" (PSS 167).

(ii) the problem-solving strategies provided an understanding of the application of content: "For the first two questions they were very helpful because you knew what was wanted and what wasn't important. With question three it probably was, but I couldn't find strong enough evidence to support my statements" (PSS 8) and "For the first two exercises it was helpful in putting the info together. The third exercise looked like too much of a mission, so unuseful. Took too much time and didn't really need them. Wasn't motivated to attempt them" (PSS 22).

(iii) the problem-solving strategies helped to order the student's thinking: "The exercises helped organise my thoughts and information and thus made it easier to put the answer to each question together. Exercise three was particularly useful as it forced me to evaluate evidence" (PSS 129) and "They helped me with my thought pattern and helped me string the info together" (PSS 20).

Three reasons were provided for the non-completion of the problem-solving exercises. Firstly, thirty-eight students believed that the problem-solving strategies were too difficult. The students expressed this as, "The exercises on the whole were quite helpful in terms of understanding what was required for a particular questions. Although the exercises were a bit difficult to complete, e.g. question three gave me a lot of trouble…I also found it quite difficult to actually answer these questions, i.e. I didn't have an accurate interpretation of what was needed" (PSS 15) and "exercises one and two were very helpful as they gave you basis to start the question and give you direction. Exercises three and four very confusing. I battled forming an

argument" (PSS 138). Secondly, nineteen students believed that the problem-solving strategies provided too much support. Examples of student responses included, "It isn't really useful to help someone formulate an argument. It is something personal and individualistic. I would rather have no help with that" (PSS 115), "I felt as if I had a limited scope of saying and correlating info to answer the question" (PSS 43) and "To a certain degree, yes, they did help when I just read through them to get an idea of what was expected. However, attempting to do some of them got me confused and at times left me in a worse position when actually answering the questions" (PSS 88). Thirdly, seventeen students believed that the problem-solving strategies were too time-consuming, e.g. "Exercises were lengthy, resulting in the answers automatically being long as well. It was very difficult to compress the answers and answer the questions properly. They took a lot of time to do" (PSS 39) and "The exercises gave me a guideline on how to answer the questions fully and with complete understanding of the task at hand. However, the exercises were often too long and time-consuming" (PSS 32).

The students predominantly focussed on the theoretical content, rather than the skills required for the construction of the argument. They did not acknowledge the role of evidence in the construction of the academic argument. The more general exercises, framed in terms of the argument, were perceived more positively than the exercises that were designed to facilitate the specific determination of the persuasiveness of evidence.

The majority of students, who did complete the exercises, did so independently. The problem-solving strategies that were completed were those that concerned the understanding of theoretical content and the application of this theoretical content to the case study from the readings. Reasons provided for the completion of these problem-solving strategies concerned the notions that they provided a foundation for the assessment response and the facilitation of the skills of application and subsequent understanding. The dichotomy of challenge and support was apparent in the reasons for the non-completion of the problem-solving strategies, with some students perceiving the problem-solving strategies as being too difficult and other students perceiving that they provided too much support. There is, thus, evidence to suggest that different students required different levels of support. This finding is congruent

with the notion that, in large classes, students will display different levels of abilities, and the lecturer has to use a model of teaching that both challenges and supports students (Claxton, 1990; de Groot & Dison, 1996; Dison et al., 2000; Dison & Pinto, 1995; Dison & Rule, 1996; Dunstan & Frescura, 2000; Granville, 2002; Gravett & Henning, 1998; Hardman & Ng'ambi, 2003; Niven, 2005).

The students' ratings of the aspects of the social plane that the problem-solving strategies involved included, firstly, the theoretical content (the *what*), secondly, the South African and Health Care contexts (the *where*), and thirdly skills (the *how*). The students reported that they had completed the problem-solving strategies that involved (1) theoretical content (2) contextual examples (South Africa and Health Care) (3) formulating arguments generally and (4) specific exercises about evidence. The first three types of problem-solving strategies were completed by more than half of the sample. Those students who did complete the problem-solving strategies valued the structure that they provided and the support for the completion of the higher order tasks. However, the students did not acknowledge all the aspects of academic argument construction. Instead they focussed on the theoretical content. This is a similar finding to those for both the product of the learning process (learning outcomes) and essay task. The students did not demonstrate a comprehensive understanding of the role of evidence in the construction of the academic argument. The students had opinions about whether or not they wanted or needed the support provided by the problem-solving strategies. Thus, how this teaching strategy (social plane) was understood or represented on an individual plane differed amongst the students.

4.11. A Mismatch between the Lecturer and Students in the Knowledge-Skills Dialectic

The lecturer's construction of the learning outcomes is congruent with the objectives first approach outlined by Nunan (1988) in which there is constructive alignment between the learning outcomes, the tasks and activities in a learning process. All the learning products centred on the outputs of the students, rather than inputs made by the lecturer (Nunan, 1988). In terms of the cognitive activity involved in the process of learning, the entire taxonomy presented by Bloom et al. (1956) was utilised.

Accordingly, both lower level (knowledge and comprehension tasks), middle order (application and analysis) and higher order (synthesis and evaluation) activity was required for the completion of the learning process. There is, thus, evidence that there was "specification of the kinds of processes" required in the learning situation (Bruner, 1987, p.23). This specification is a necessary condition for learning (Bruner, 1987). The products of learning (learning outcomes) demonstrated the principles of outcomes-based education (OBE). These were clarity of focus in the learning process and "direct and explicit links between all planning, teaching and assessment decisions" (Killen & Hattingh, 2004, p.72).

The specific use of dialectic, in which two separate entities (knowledge and skills), dynamically interplay in order to create understanding has not been fully described before. In addition, it appears that it is not expedient to explicitly utilise Marx's method in teaching and learning research (according to Wertsch and the neo-Vygotskians). Jacobs and Gravett (1998) are South African theorists who position themselves as utilising the Vygotskian approach, yet the dialectic between knowledge and skills is absent from their work. For Jacobs and Gravett (1998, p. 54), "knowledge points to the ability to use information for a specific means and to evaluate its value". In their interpretation of Vygotsky's ideas, knowledge and skills are terms that are used interchangeably.

There are authors who separate knowledge and skills, however, they do not explicitly account for the dynamic interplay between the two. For example, Dart and Clarke (1991, p.323) use the concept of "metacognitive thinking" which has "two important elements…(1) declarative, procedural and conditional knowledge and (2) evaluation, planning and regulation". Nunan (1988) also separates knowledge and skills, but his conceptualisation is somewhat confusing. Accordingly a "subject-centred view…(is) the mastering of a body of knowledge", while a "learner-centred view…(is) the process of acquiring skills" (Nunan, 1988, p. 21). It is unclear how a body of knowledge can be mastered without a set of skills and why a learner-centred view would not involved the acquisition of knowledge. Knowledge and skills have also been conceptualised the relationship between theory and practice (Wierstra et al., 1999) and between teaching and research (Neuman, 1994). However, the relationship between the two elements is not clearly explained in the above conceptualisations, but

merely assumed to occur. The assumption that skills will develop in congruence with knowledge is not supported by the findings in the current study as explained below.

The current study attempted to account for the dynamic interplay between knowledge and skills by framing these to entities as "the what" (knowledge) and "the how" (skills). This is a similar conceptualisation to what Meyer and Muller (1990) and what Lau (2001) labels as "learning to know" and learning to do". The relationship between the two separate elements of knowledge and skills may be described as follows, "the content (knowledge) can be seen as the vehicle for teaching skills and processes (skills)" (Jack, 1996, p.70). This relationship is therefore characterised by an integration of knowledge and skills (Dison & Pinto, 1995) in which "skills should not be developed independently of course content (knowledge) (and) must be associated in the learning process with the acquisition of course-related information" (Ryan, 1993, p.55).

However, even though the teaching strategies attempted to provide the students with a dynamic interplay between knowledge and skills, the students focussed almost exclusively on knowledge. Therefore, the cultural artefacts, namely the learning outcomes, the essay task and the problem-solving strategies did not "fundamentally shape and transform" the students thinking (Cole & Wertsch, 1996, p. 3). This finding mirrors other findings in diverse contexts. For example, Health Care students at the University of the Western Cape also held less positive perceptions about teaching strategies designed to facilitate academic literacy (Frescure, 2002). First Year Nurses in Australia had difficulty in conceptualising notions of critical thinking, even when support was provided (Butler & Collins, 2000). The notion that students require support for critical thinking skills is accepted in the United States (Thomas et al., 1991), Australia (Dart & Clarke, 1991) and the United Kingdom (Entwistle & Entwistle, 1991). The lecturer and the student have (as the evidence in the study suggests) different conceptualisations of the importance of tasks in the learning process. Accordingly, "there is a disjunction between the formal requirements of academic departments – thought, creativity, competence, independent thinking, critical thinking – and the actual requirements as perceived by students-memorization, fact-gathering, conformity, rote-learning" (Sheppard & Gilbert, 1999, p. 231). In addition, how strategies for support are internalised by the students does

not necessarily reflect the intention of the lecturer. Thus, the students do not always understand the "language of their teachers" (Bourdieu et al., 1996, p.316). The findings support Matusov's (2001, 386) notion that "the object of activity cannot and should not be completely the same for the lecturer and the learners (and probably never is)" because practices of academic literacy are both complex and contested and "fundamental concepts such as 'argument' and 'evidence' are often highly opaque to students" (Haggis, 2003, p. 101). The findings regarding the cultural tasks and tools of argument and evidence, thus, emphasize Cole's (2005) notion that word meanings may be constructed differently, not only by students and lecturers, but also by different lecturers.

The mismatch in the perceptions of the knowledge-skills dialectic between the lecturer and the students has important implications for Vygotsky's notion of potential development (Vygotsky, 1987). The evidence from all the teaching strategies suggests that "potential development" cannot de defined without a foundation in, or reference to, a sociohistorical context. The sociohistorical context will determine what knowledge basis and critical thinking skills are in the process of development. Therefore, this study has as its primary assumption, the primacy of the social plane. The knowledge basis and critical thinking skills are secondary to this. The knowledge basis and critical thinking skills are equally important and cannot exist without one another (i.e. the student had to do something with a particular set of knowledge). The understanding of potential development present in the teaching strategies is represented in Figure 4.

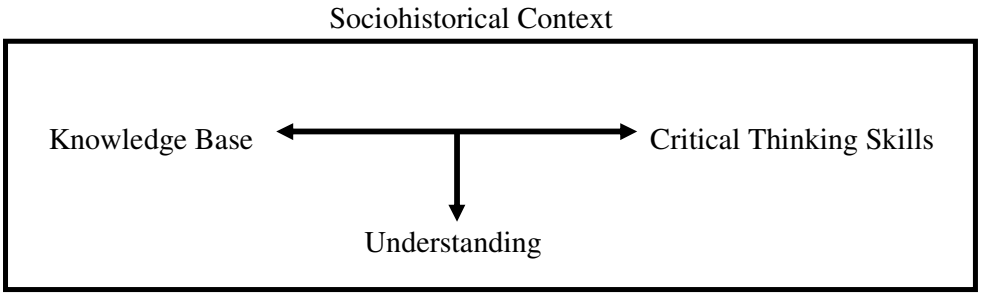

Figure 4. The Lecturer's construction of understanding

Killen and Spady's (1999) ideas concerning the incorporation of the South African government's critical outcomes into the curricula include incorporating non-technical

skills into the curricula through the identification of enabling abilities. The teaching strategy required that all of the knowledge, skills, understanding, values and attitudes necessary to perform the critical outcomes be identified and incorporated into appropriate courses. These 'building blocks' are referred to as the "'enabling abilities'…a more appropriate term for the enabling abilities within the context of (non-technical skills) is the 'supportive cognitive skills' " (p. 80). This model is congruent with the proposed model of teaching and learning, as skills and knowledge cannot be viewed in isolation both from one another and the sociohistorical context. There is, thus, evidence in the current study that instruction is related to potential, rather than to actual development (Wertsch & Tulviste, 1992).

However, the students defined potential development differently from the lecturer. The knowledge basis was primary for the students. There was very little difference between their positive ratings of the roles of skills and the sociohistorical context. Large differences (9-10%) were found between the students' perceptions of the knowledge basis and critical thinking skills/ sociohistorical context. Ten percent of the class did not perceive an understanding of potential development as helpful at all. This percentage was even higher (31%) when potential development was contextualised in the essay task. The students' understanding of potential development is represented in Figure 5. Cole (2005) accounts for such a difference between lecturers and students as involving affective (i.e. unwillingness or lack of motivation) and not cognitive (i.e. inability) factors. However, a unity of affective and cognitive factors (Vygotsky, 1998) implies that these factors dynamically interact.

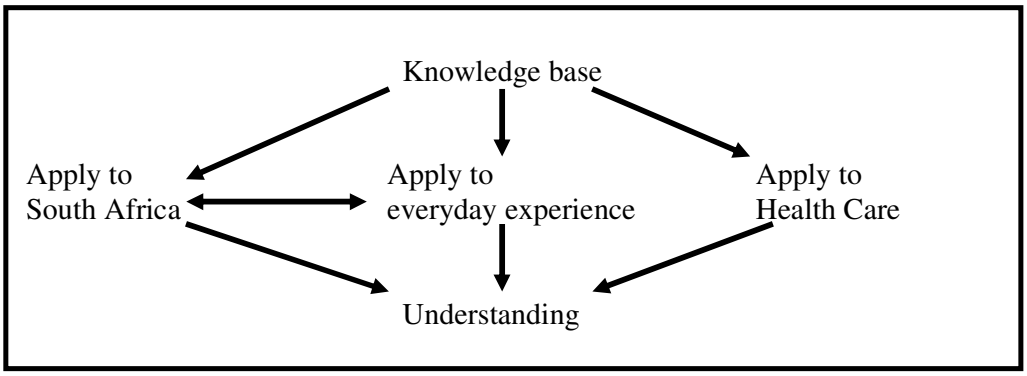

Figure 5. The Students' construction of understanding

Therefore, intersubjectivity between the lecturer and the students concerning the potential level of development was not achieved. Two problems arise from this lack of intersubjectivity. It is questionable whether or not the students will actually achieve the potential level of development as defined by the lecturer. To put it more simply, the students may not reach the potential level of development if they do not know what it is or means. Perhaps the lecturer's construction of potential development was a level that the students could not comprehend. Thus, both the tasks and tools were not set just above the students' current level of ability or the level of conflict between the students' current level of ability and the demands of the course were too great (Vygotsky, 1997a, 1997b). Other studies have only utilised knowledge, comprehension and application tasks in First Year Health Sciences students (Lake, 2001). Secondly, the evidence raises the question of how the teaching strategies could have constructed the potential level of development (learning outcomes) to ensure that there was intersubjectivity between the lecturer and the students. The finding that students have been found to have more negative perceptions about teaching activities when they are required to take a more active role may be important here (Lake, 2001).

The external demand placed on the students by the lecturer involved the development of both lower and higher order skills in a framework of specific knowledge within a particular sociohistorical context. The evidence from the students' perceptions of the learning outcomes suggests that there was conflict between the internal possibilities created by the students and the external demand of the lecturer. Accordingly, the students constructed this external demand primarily as the correct use of terminology and the explanation and summarization of the theory. The sociohistorical context was acknowledged by the students to be part of the external demand. However, the evidence from the perceptions of the teaching and learning strategy in general (2003) suggests that it is doubtful that the students would have mentioned this vital aspect of the learning task if they had not be prompted to do so. The most important differences between the constructions of the external demand by the lecturer and the students concerns the relationship between critical thinking skills and the knowledge basis. The students constructed the critical thinking skills as being divorced and decontextualized from the knowledge basis or theory.

> There is little use in defining the outcomes of a programme, if you cannot design a structured set of learning experiences to help the students achieve those outcomes. This cannot be done unless you describe the ways in students typically construct the understanding and develop the skills that will ultimately enable them to achieve the programme outcomes (Killen and Spady, 1999, p. 206).

However, even when support was consistently provided to the students and pivotal concepts were explained (e.g. critically evaluate), the students did not necessarily understand these concepts. The evidence suggests that the students did not grasp the importance of these concepts. A particular example of this was the problem-solving strategies for the essay task. The problem-solving strategies supported all six of the critical thinking tasks required in the use of the knowledge. Implicit in the relationship between the problem-solving strategies and potential development is the understanding of the construction of the academic argument held by the lecturer. The construction of the academic argument requires higher order critical thinking skills needed to evaluate evidence. However, the students focussed on lower order critical thinking skills. Evidence for this is derived from the problem-solving strategies that were actually completed by the students and the problem-solving strategies that provided tools for the higher order critical thinking skills received the most negative ratings. The focus of the students was also general, rather than specific in nature. Accordingly, more positive ratings were received for the problem-solving strategies that presented the general construction of the academic argument than for the problem-solving strategies that provided tools specifically for the evaluation of evidence. The evidence suggests that the students understood the formulation of the argument as involving a knowledge basis and lower order skills only (application).

The lecturer's formulation of the academic argument demonstrated a movement from the social plane to the individual plane. Thus, the external world (evidence) was utilized as a reference or starting point for the development of the argument (see Figure 6). This approach is congruent with the notion that "all writing is located in the wider socio-political context" (Thomson, 2005, p. 23) or is an ideological literacy practice (Gee, 1999; Street, 2004).

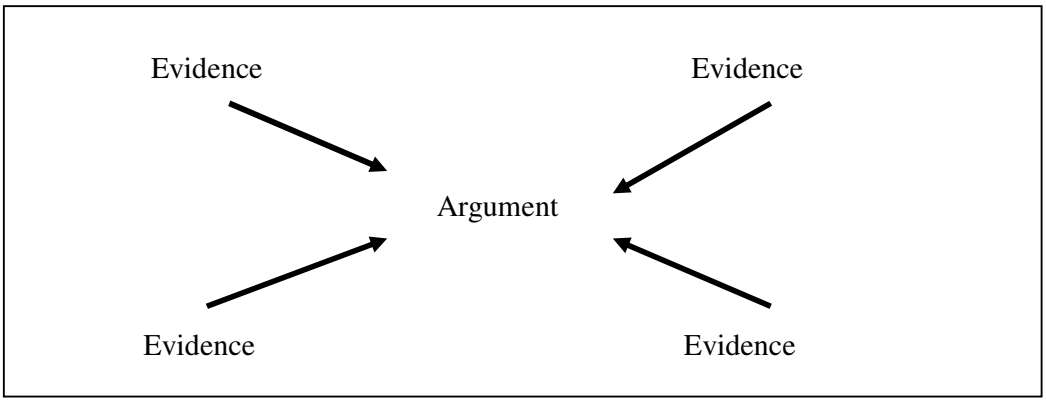

Figure 6. The Lecturer's understanding of argument formulation.

In contrast, the students' understandings of the academic argument illustrated a movement from the individual plane to the social plane. The students used their internal planes (the self) as a reference point. This is congruent with Maunder and Harrop's (2003) finding that lecturers and students have disparate ideas about what constitutes a good essay. The relationship between the internal and external planes of the students in terms of the construction of the academic argument is conceptualised in Figure 7.

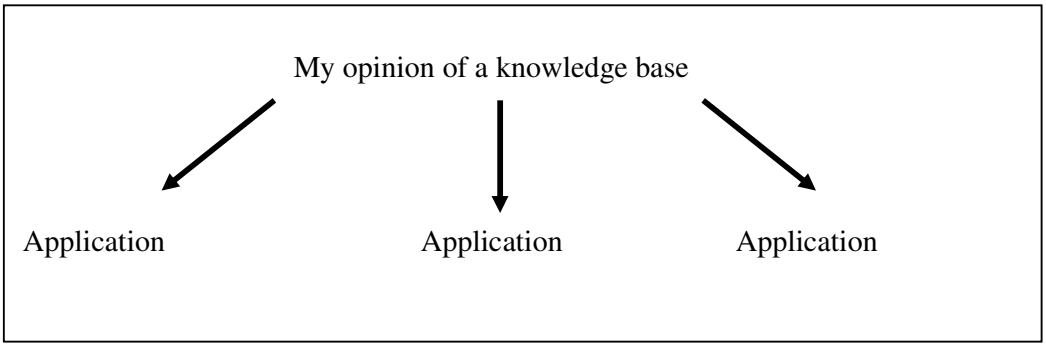

Figure 7. The Students' understanding of argument formulation

4.12. Reasons for the Mismatch between the Lecturer's and the Students' Perceptions

The reasons for the mismatch between the lecturer and the students concerning the knowledge-skills dialectic have been conceptualised as those internal to the students and those external to the student. Firstly, in terms of the factors that are internal to the

students, the dominant perspective in teaching and learning, namely, the approaches to learning model, is discussed. In addition, problems with this internal account are discussed. Secondly, the factors that are external to the students include the school to university transition. This transition characterised the model as offering a developmental perspective in Higher Education. Contextual factors and the characteristics of the academic argument are also utilised to explain the mismatch. An important aspect of these factors is Vygotsky's (1997b) notion of the difference between scientific and everyday concepts.

4.12.1. *The Individual Planes of the Students*

The approaches to learning perspective is the dominant approach to teaching and learning in Higher education in both the United Kingdom and Australia (Biggs, 1999; Bowden & Marton, 1999; Cole & Chan, 1994; Entwistle, 1991; Prosser & Trigwell, 1999) and has also been utilised in South Africa (Meyer & Muller, 1990; Wessels, 2001). This perspective categorizes the students as adopting either a surface, deep or achieving approach to learning. A surface approach to learning tends to be prevalent in students in secondary school and in their First Year of Higher Education (Gibbs, 1992). The surface approach is characterised by the "intention to simply reproduce parts of the content…accepting ideas and information passively… concentrating only on assessment requirements… not reflecting on purpose or strategies… memorizing facts and procedures… failure to distinguish guiding principles or patterns" (Entwistle & Entwistle, 1991, 76). These characteristics may account for the similarities in the perceptions of the lecturer and the students. Accordingly, the general and specific lecture outlines and the lecture notes may encourage the reproduction of content and the passive acceptance of information. However, part of the assessment requirements involved the problem-solving strategies, and argument construction was not perceived as a helpful tool in the construction of the assessment response. Students also tend to adopt a surface approach if they perceive the nature of the assessment response as involving memorization and recall (Trigwell et al., 1999). The construction of the argument certainly does not centre on these lower order tasks (Haggis, 2003).

A more cohesive explanation may be the reproducing orientation to learning, which is related to an adoption of the surface approach (Sheppard & Gilbert, 1991). A

reproducing orientation is related to the conception that "university is a means to another end" (Main, 1980, p. 13). This may certainly be part of the perceptions of a group of students who are pursuing a professional qualification in a course that is not a compulsory component of that qualification. Once again, the matches between the lecturer and the students may indicate that these students had a reproducing orientation to learning. The structure provided by the lecturer may have actually encouraged the reproducing orientation. Accordingly, students who have a reproducing orientation to learning "wanted lecturers who told them what to put in their notes… they wanted courses which indicated exactly which books to read" (Entwistle et al., 1991, pp 248-249).

The reproducing orientation is related to a lack of choice in terms of the content of the learning process and a heavy workload (Meyer & Muller, 1990). The heavy workload of Health Sciences courses had been documented before (Bligh et al., 2000). The careful structuring of the theoretical content and the carefully planned lecturer-students interactions do not foster freedom of choice on the part of the students. In addition, those students who perceived the problem-solving strategies as being helpful in completing the essay task valued the structure that they provided, as indicated in some of their responses. For example, "I felt like I wasn't just thrown in the deep end and I had I guideline to work from. Also, it's a good place to start. It was essential for planning and mapping of the essay" (Usefulness of the Problem-Solving Strategies, 116), "It helped formulate my answers. It was sort of helpful as it was a breakdown and plan of the answer. It enabled me to see what was required in my answer"(Usefulness of the Problem-Solving Strategies, 68) and "It helped me to put my thoughts and ideas into order" "(Usefulness of the Problem-Solving Strategies, 53).

The lack of freedom of choice in learning does not encourage a deep approach to learning, even though other factors conducive to a deep approach to learning were present in the teaching tools (Entwistle & Entwistle, 1999; Meyer & Muller, 1990; Trigwell et al., 2001). These included clearly presenting the goals and standards required in the course (Trigwell et al., 2001), critical interaction with theoretical content, utilising a variety of sources (Dart & Clarke, 1991), "relating ideas to previous knowledge and experience… integrating components through organizing

principles… relating evidence to conclusions… examining the logic of the argument" Entwistle & Entwistle, 1991, p. 206). Some students were clear in their rejection of the structure provided for the formulation of the argument exercises, for example,

> Your exercises are restricting us too much. It is as if you want us to write the assignment in your own style. We want freedom to use our own style. We don't want a dictator who tells us what to do. Just give us the questions, we will struggle along the way, this is what learning is all about. I felt like I was writing the assignment using your ideas and style of putting points together (Usefulness of the Problem-Solving Strategies, 179).

Utilising the approaches to learning perspective in order to explain the mismatch between the lecturer and the students concerning the knowledge and skills dialectic leads one to the conclusion that all of the teaching tools encouraged a surface approach to learning that was already present in the students. This presents a fundamental problem to the approaches to learning perspective because the teaching strategies that were evaluated, apart from a lack of freedom of choice, met all the criteria that are thought to foster a deep approach to learning. Haggis (2003, p. 89) may be correct in her criticism that there has been "a surprising lack of critique in the pedagological literature of higher education in relation to the use of ideas surrounding deep and surface approaches to learning". The evidence from the current study did not support the fundamental assumptions of the perspective, that the aims of lecturers and students are identical, that students are able to understand the aims of the lecturer through teaching practice, and that upon exiting secondary school, students have the skills to engage at a level expected by tertiary educators (Haggis, 2003). In addition, the approaches to learning perspective locates any teaching and learning model within a deficit conception of the student. It has been documented that students are labelled as pathological within this framework (Haggis, 2003). Although essay forms of assessment are thought to encourage a deep approach (Biggs, 1999), this was not found in the current study.

Thus, the fundamental assumptions of the approaches to learning perspective were not upheld in the current study. Haggis's (2003) further criticisms of the perspective may account for the findings. Thus, the initial empirical application of the approaches to learning perspective, when attempting to foster a deep approach to learning in

students, had the opposite effect of increasing surface approaches to learning (Kember & Wong, 2000). However, despite these unsuccessful attempts (of which the current study is a further example), this central problem with the perspective went largely ignored. What was concluded was that students are resistant to change or that "changing approaches is extremely difficult" (Haggis, 2003, p. 92) and "it is almost impossible to 'induce' a deep approach, if it is not already there" (Haggis, 2003, p. 94). With these conclusions the approaches to learning theory merely identifies a deficit in the students, and absolves lecturers from altering their methods of teaching. What is more alarming is that when findings have contradicted the central terms of the theory, these have merely been altered, e.g. Biggs's "Chinese paradox" (Haggis, 2003). This certainly does not meet the criteria of what is considered to be adequate in theory generation.

This raises the question why the approaches to learning perspective, which cannot adequately account for developmental change, continues to be the dominant framework in Higher Education research. Kuhn (1970, p. 23) accounts for the ascendancy of paradigms when "they are more successful than their competitors in solving a few problems that a group of practitioners have come to regard as acute". The "problems" that the approaches to learning perspective addresses merely served to bolster the egos of academics, i.e. that the problem lies in the students and not in teaching methods utilized. Haggis (2003, p.101) attributes the dominance of the paradigm to the fact that most of its practitioners are psychologists and the "restricted nature of this particular approach to the study of higher education learning and the way in which its construction of 'the student' avoids any real engagement with the complexities of location and context". What her criticism ignores is that there are diverse models of teaching and learning in Psychology, of which Vygotsky's conception of learning is but one. The dialectic between the social and the historical provides a more comprehensive account of the mismatches between the lecturer and the students in terms of knowledge and skills.

4.12.2. *The Social-Individual Dialectic of Development*

The current study proposes that the mismatch between the lecturer and the students may be accounted for by the dialectic between social and historical factors. This is

congruent with the fundamental premise of the dialectical method, which stresses an interplay between two separate and opposing elements. Thus, neither the teaching tools, nor the individual perceptions of the students may account for the mismatches. Rather, the interaction of the two is primary in order to construct a developmental model of the learning process in Higher Education.

Firstly, in terms of social factors, notions of critical thought, and the related academic argument, are pivotal. Definitions of critical thinking encompass the notion of the interaction between social and individual factors, or individual activity (synthesis and evaluation) with social artefacts (empirical evidence) (Ausubel & Robinson, 1969; Feuerstein, 1957; Gagne, 1965; Halpern, 1984; Hannah & Michaelis, 1977; Presseisen, 1991, all cited in Moseley et al., 2005; Anderson & Krathwohl, 2001; Baxter Magolda, 1987; Biggs, 1999; Bloom et al., 1956; Kuhn, 1999; Marzarno, 1998; Paul, 1993; Perry, 1970; Perkins & Simmons, 1988; Quellmartz & Hoskyn, 1988). The following quotation illustrates this notion, critical thinking involves

> a variety of interacting cognitive activities which include solving problems and making informed decisions, discussing subjects in an organized way, developing evidence and arguments to support views, critically evaluating the logic and validity of information, applying knowledge to various contexts and new circumstances and exploring issues from multiple perspectives (Chaffee, 1992, p. 3, cited in Van den Berg, 2000, p. 97).

Thus, evidence, and consequently the argument, needs to be actively constructed. This requires a particular set of critical thinking skills that move beyond mere description and application (Schauble, 2003).

The emphasis on critical thinking and the argument locate learning in Higher Education within a specific discourse, which is distinct from discourses that are present in secondary education (Butler & Collins, 2000). Consequently, “academic writing is different in style, complexity and structure from school writing” (Butler & Collins, 2000, p. 1). Argument construction at the Higher Education level involves “justification of claims, engagement with established knowledge… proof or defence of a position (and) principled and systematic analysis or investigation” (Slonimsky & Shalem, 2006, p. 4). Thus, the academic argument is a socially

constructed phenomenon found in a particular set of sociohistorical conditions, namely at tertiary education institutions.

The sociohistorical dialectic of development is involved in the transition between secondary and tertiary education. In terms of social factors, tertiary institutions are located within distinct sociohistorical circumstances and require distinct performances by the students (e.g. the construction of the academic argument). In terms of individual factors, the transition from school to university has been labelled as a "major life transition" (Sennett et al., 2003, p. 107). Students who enter tertiary institutions have been labelled as "underprepared" (Saumell et al., 1999; Thomas et al., 1991) for tertiary study and as having inappropriate expectations about university study (Sander et al., 2000). In South Africa, the disjunction between the skills expected for successful performance at school and those expected at university is so large that it has been recommended that even relatively advantaged students should undergo a foundational year before entering tertiary education (Jack, 1996). This is because, even though students may meet the academic requirements for entrance into tertiary education, they are "the products of authoritarian schooling" (Slonimsky & Shalem, 2005, p. 1).

This notion of authoritarian schooling is generally associated with the educational system under the Apartheid regime. However, the findings from the current study suggest that post-1994 students are still products of authoritarianism within the democratic educational system. Accordingly, the students in the current study perceived that good teaching included the lecturer dictating every aspect of the learning process, what to read, what to know, how to behave in class and how to write the assessment response. This is "adult dictatorship", rather than "adult guidance" and independent thinking was not considered by the students to have a place in tertiary education. The effects of the formal schooling system appear to be long- lasting, even when the lecturer explicitly mediates against them. This has important implications for how the students perceive the nature of critical thought and understanding in tertiary education.

While the lecturer constructed "understanding" of course material as the interplay between knowledge and critical thinking skills, the students had a set of

preconceptions (Pea, 1993) or "misunderstandings" (Saloman & Perkins, 1998) about understanding. For the students "understanding" was the reproduction of theoretical knowledge and only lower order cognitive skills (knowledge and comprehension) formed part of this. The middle order skill, application of the theoretical content to a specific sociohistorical condition, was considered to be the highest form of understanding possible for the students. The students' ideas about the skills required at a First Year level may be explained if one adopts a developmental approach to Higher Education, i.e. that it is a process, the final product of which is a critical thinker. There is evidence both from this study and others (Main, 1980; Schauble, 2003; Sharp, 1990; Sheppard & Gilbert, 1991) to suggest that critical thinking skills may take many years to develop and may only be present in the postgraduate years of study. Therefore, the forms of understanding that were achieved by the students may be developmentally appropriate. The students' understanding at a first year level may be distinct from, but a necessary developmental part of, the thinking that they may achieve by the time that they graduate.

Finally, an important component of the dialectic between the individual and the social is the relationship that Vygotsky proposed between instruction and development. Vygotsky proposed that, "(i)nstruction depends on processes that have not yet matured, processes that have just entered the first phase of their development" (Vygotsky, 1987, p. 205). For the majority of the students in the current study, the kernels or first phase of critical thought relate to the reproduction of theoretical content and the application of this theoretical content to an example. The higher cognitive abilities and skills of analysis, synthesis and evaluation may not yet be in existence. This is congruent with Vygotsky's position that "instruction always moves ahead of development… the processes never run in parallel" (Vygotsky, 1987, p. 206).

The discussion to this point has related to the differences between the perceptions of the lecturer and the students regarding the learning outcomes, essay tasks and problem-solving strategies for the essay tasks. The mismatch between the perceptions of the lecturer and the students was related to the interaction between social and individual factors. In the section that follows, similarities in the perceptions of the lecturer and the students will be discussed. These similarities relate to the role of

structure in learning and the relationship between theoretical content and the students' everyday experience.

4.13. Structuring the Process of Teaching and Learning

In 2001, a questionnaire concerning the Resourcepack was given to the students. Once again using the Kruskal-Wallis test, no statistically significant differences were found between the different gender, race and degree groups (See Table 4.13).

The general lecture outlines, specific lecture outlines and required readings were perceived positively by more than 90% of the sample. This finding may be explained by some of the comments of the students when asked about the best aspects of the Resourcepacks, "(t)he outline of the course and the lectures. It gives an idea what to expect from the lecture" (RP- Usefulness of the Resourcepack Questionnaire 149) and "(i)t was nice to be able to predict the order of the lectures. This also helps when making your own notes" (RP 216). The cartoons, which were included to improve the aesthetic quality of the learning material and had no direct impact on learning, were nevertheless perceived positively by 56% of the sample. The students selected the "Very Helpful" option more than any other one in this section of the questionnaire. Both the general and specific lecture outlines were rated positively by 95% of the sample.

Table 4.13.
Positive, neutral and negative percentage ratings for the General and Specific Lecture Outlines

Types of Lecture Outlines	Positive	Neutral	Negative
General Lecture Outlines	95%	4%	1%
Specific Lecture Outlines	95%	5%	2%
Textbook page numbers	93%	5%	2%
Cartoons	56%	37%	6%

Both the lecturer and the students placed value on the structuring of the learning process. The evidence for this finding is derived from two different mediatory objects, namely the general and specific lecture outlines (of which the scaffolded textbook reading is a part) and the lecture notes. Firstly, the 95% of the students viewed the general and specific lecture outlines in a positive manner, with the textbook page numbers were perceived positively by 93% of the students. The lecture notes were positively viewed by 91% of the students. These perceptions were among the most positive perceptions in the study and are congruent with other findings both internationally (Feldens & Duncan, 1986; Nuy, 1991) and in South Africa (Jacobs & Gravett, 1998).

Jacobs and Gravett (1998), working at an historically white university in the same geographical area as the current study, found that the "(t)he strongest category relating to their (the lecturers') conception of what students want and need, is 'students need structure'" (Jacobs & Gravett, 1998, p. 59). Therefore, the lecturer in the current study constructed the teaching task in a similar manner to other lecturers in a similar teaching context.

In terms of the students, the importance of structuring the learning process has also been found in Health Care students in Brazil (Feldens & Duncan, 1986) and in First Year students in the Netherlands (Nuy, 1991). Students in the current study highlighted the general and specific lecture outlines as the best aspects of the Resourcepack and provided the following reasons for their opinions:
"The outlines for each lecture. The specific page numbers for each section. It helped me to see where I was going" (Resourcepack Questionnaire, 102).
"The ability to give you a clear idea of what will be covered" (Resourcepack Questionnaire, 224).

In terms of scaffolding the textbook reading, Saumell et al. (1999), working in the United States, found that 'underprepared' students have difficulty completing the prescribed reading for a university course. Saumell et al. (1999) found that providing the textbook page numbers may assist these students in completing the reading. However, these authors also found that some students perceive reading as a passive process. Scaffolding the prescribed textbook may encourage a passive approach on

the part of the students. Therefore, this finding from the current study may not necessarily be a positive one.

The evidence concerning the general and specific lecture outlines, the scaffolded textbook reading and the lecture notes suggests that there was some intersubjectivity between the lecturer and the students (Wertsch, 1985). This intersubjectivity may have been found because it concerned lower level skills development on the part of the students. Accordingly, these mediation strategies supported the lower level skills of knowledge and comprehension. The findings concerning the knowledge-skills dialectic suggest that the students focussed almost exclusively on lower order skills. Thus, the general and specific lecture outlines and the lecture notes fulfilled the students' conceptualisations of the learning process.

4.14. The Reflections of the Students' about the Case Studies

In 2001, a lecturer-generated questionnaire concerning the Resourcepack was given to the students. The Likert-scale responses by the students for the case studies yielded the following results-

43% of the students perceived the CS as very helpful
40% of the students perceived the CS as helpful
8% of the students perceived the CS as slightly helpful
7% of the students perceived the CS in a neutral manner
1% of the students perceived the CS as slightly unhelpful
1% of the students perceived the CS as unhelpful.

Therefore, the case studies were perceived in a positive manner by 91% of the sample. Two percent of the sample perceived the case studies in a negative manner, and 7% were neutral in their perceptions.

4.14.1. *Reasons Why the Case Studies were Perceived as Helpful*

The reasons given by the students for their positive perception of the case studies were analysed in terms of three categories, namely those students who stated that the case studies were either Very Helpful, Helpful or Slightly Helpful. Students who perceived the case studies as Very Helpful stated that the case studies provided good

examples (49 responses); provided application (33 responses); contributed to the student's understanding (26 responses); the application helped the student to understand the theory (15 responses); and contributed to preparation for assessment (14 responses). Students who perceived the case studies as Helpful wrote that the case studies: contributed to their understanding (36 responses); provided "real life" examples (32 responses); facilitated understanding expressed in vague terms (18 responses); assisted in preparation for assessment (13 responses); and helped them student to understand the theory (9 responses). The students who perceived the case studies as Slightly Helpful believed that the case studies provided: "real life" examples (4 responses); the application helped them to understand the theory (2 responses); were interesting (3 responses); assisted in preparation for assessment (2 responses); and perceived the examples as intrinsically helpful (2 responses)

A comparison of the reasons provided in each of the three categories was conducted and collapsed into a single positive rating for the case studies and revealed two central categories, namely increased understanding and assessment. Firstly, the students defined understanding as relating or applying the theory to examples. The case studies thus provided the students with "real life" examples of the theoretical concepts (81 responses). The students described this in the following ways - "Examples always help understanding of theory" (RP – Resourcepack Questionnaire 29); "Not just theory, see how fits into real life" (RP 30); "'real' illustrations of theory" (RP 24) and "Because they give examples of what the theory says" (RP 15). Some students provided a complex description of the role of examples in their learning. For example, one student wrote, the "real life situation is often more complex than those theories discussed in the lecture or textbook. Thus these case studies let me think and reconsider" (RP 87). Some students provided specific comments about the relationship between the theory and examples and related this directly to an increase in understanding (62 responses). For example, some students wrote "They helped me to understand the difference between the symptoms and diagnosis by finding them in the case studies (RP 5), "made me to (sic) understand how to select important symptoms that may seem as normal. Could understand that in reality when a person look okay, may not really be okay" (RP 39) and "(the case studies) enabled me to assemble the facts and apply them instead of just viewing them in isolation" (RP 50). Fifty-one students expressed the benefit of the case studies as relating to application.

These students wrote, “Practice in application (RP 40), “it enabled me to apply what was learnt in lectures” (RP 45) and “Able to apply knowledge of symptoms to a real life situation” (RP 233). However, this application may also have somewhat sinister connotations as one student remarked, “Because they made me to be able (sic) to look for abnormal behaviour in people who are close to me” (RP 129). Twenty-four students directly linked the cognitive skill and ability of application to an increase in understanding. This was expressed in the following manner, “Application of theory helped me to understand” (RP 33) and as “understanding the disorder is easier when an example is provided” (RP 36). Thus, understanding in relation to the case studies was perceived by the students to relate primarily to the use of illustrative examples. A relationship between the theory and an example was also central to the students’ notion of understanding.

Secondly, the students focussed on the relationship between the case studies and assessment (27 responses). This theme presented evidence of the notion that, at least some of the students are goal-directed or assessment-focussed. Examples of student responses here included, “See the way the questions will be asked” (RP 182); “Basically it helped us prepare for similar questions that could appear in the exams and thus equipped us to answer them correctly” (RP 7); “preparation for exams – application-type questions” (RP 17) and “Because it help(ed) to apply the knowledge and further prepare us for the problem based questions in the exam” (RP47).

Reasons provided for a neutral perception of the case studies included that the students did not read the case studies (2 responses), had no time to complete the case studies (2 responses) and that the case studies were too difficult (1 response). One student, who perceived the case studies as “Unhelpful”, believed that there were too many case studies to complete and, as a result, the student lost interest in the task. The only students who perceived the case studies as “not at all helpful” stated that s/he had no time to complete them.

4.14.2. *Reasons for Completion of the Case Studies*

Only 45% of the students completed the case studies, with 52% admitting to not completing them, and 4% omitting this item. A thematic analysis of the reasons for

the completion or non-completion of the case studies was conducted. Reasons provided by the students for the completion of the case studies included the relationship between the completion of the case studies and increased understanding (45 responses), the relationship between the case studies and assessment (19 responses), a perception that the case studies were beneficial expressed in vague terms (17 responses), the student was able to complete the case studies (4 responses) and the case studies were completed in lectures (3 responses). In terms of the relationship between the completion of the case studies and increased understanding, the responses were written in both active, "so I could apply the work covered" (RP 216), and passive ways, "they clarified concepts covered in lectures" (RP 212). The students who linked the case studies to assessment wrote "Because I hope it will help me in the exam" (RP 219). The perceived, but vague, benefit of the case studies was expressed in the following ways, "Seeing to it that I will benefit a lot by answering those questions" (RP 70) and "I found them very interesting and helpful, that's why I thought it would be helpful to complete them" (RP 76). One student expressed the ability to complete the case studies in the following way – "because I was able to understand them and I was also able to get the good answers" (RP 82). Finally, an example of a student who completed the case studies in class wrote, "because most of the answers were discussed in the lecture, and even in tutorials/ ADP" (RP 83).

Reasons provided for the non-completion of the case studies included, firstly, that the student did not have time, which was related to workload pressure (59 responses), e.g. "Don't have much time as there was a large amount of work which had to be covered in Psych and other subjects" (RP 81). One rather heartfelt response was "I don't have time- don't even go to the loo anymore" (RP 206). Secondly, some students stated that they would complete the case studies before the exam (32 responses), when they have more time (15 responses). The students commented "Pre-exam I wish to learn the theory and then use the case studies as a test to determine the extent to which I understand" (RP 1), "If I had time I did them but I will do them as I study" (RP 131). "I was writing tests and I wasn't so interested" (RP 74) and "I haven't started preparing for the exam (RP 47). Thirdly, some students could perceive no value in completing the case studies (15 responses). The students related this reason for the non-completion of the case studies to a sense that the theory had already been understood, without the use of the example. Accordingly, one student wrote,

"Understood the content and did not feel it was necessary" (RP 181). Finally, twelve students, rather honestly, admitted that they were too lazy to complete the case studies - "I'm just too lazy" (RP 214).

The case studies were perceived positively by 91% of the sample. The students' belief that the case studies provided examples was the primary reason for them being perceived positively. The students recognized the importance of the skills of application and also acknowledged that the skill of application has a role to play in understanding in the learning process. In addition, the students perceived that the case studies were related to the cultural tasks, in this instance the multiple-choice examination, regardless of whether or not they completed the case studies. Those students that did complete the case studies believed that this had contributed to understanding in the learning process. However, less than half of the sample of students actually completed or performed the learning activity and some students (n=15) perceived the case studies as providing "over- support".

4.15. The Students' Perceptions of the Challenge Questions

In 2001, a questionnaire concerning the Resourcepack was given to the students. The Likert-scale responses by the students for the challenge questions (CQ) yielded the following results-

9% of the students perceived the CQ as very helpful
33% of the students perceived the CQ as helpful
26% of the students perceived the as CQ slightly helpful
25% of the students perceived the in a CQ neutral manner
2% of the students perceived the as CQ slightly unhelpful
3% of the students perceived the as CQ unhelpful.
2% of the students perceived the as CQ very unhelpful.

These results were considered in terms of positive, neutral and negative ratings. Sixty-eight percent of the students perceived the challenge questions in a positive manner. Twenty-six percent of the students held neither positive nor negative perceptions nor 6% rated the challenge questions in a negative light. The students perceived the

challenge questions as facilitating reflection on issues covered in class and application of the theoretical concepts to real life situations (see Table 4.14.).

Table 4.14.

Students' perceptions regarding the Challenge Questions

The CQ allowed the student to:	Percentage
Reflect on issues covered in class	83
Apply the theory to real life situations	81
Reconsider his/her own view	64
Participate in class	37
Prepare for lectures	28
Other	8

The majority of the class perceived the challenge questions in a positive manner. The students were able to identify notions of reflection or metacognition as being important in the process of learning. However, the students defined the purpose of the challenge questions as relating only to the individual plane and not to the social plane (i.e. interaction with other students and the lecturer). Other skills that the challenge questions enabled included facilitation of understanding (2 responses) and facilitation of deeper thought concerning the conceptualisation of the material (6 responses). These were phrased by the students as "realised aspects of life" (RP 23), "view matters holistically" (RP 56), "hear opinions of others" (RP 19); "facilitated greater enjoyment of the course" (RP 46) and "reinforcement of the material/ learning" (RP 33).

4.16. The Use of "Real Life" Examples

The use of "real" life examples constituted the second point of intersubjectivity between the lecturer and the students. This intersubjectivity was found in the perceptions of the case studies (perceived positively by 91% of the sample), the challenge questions (perceived positively by 68% of the sample) and the classroom discussions. The classroom discussions were discussed in detail in Section 4.2.

Once again, the lecturer's view is congruent with findings about lecturers' conceptualisations of the teaching process from another university in Johannesburg. Accordingly, Jacobs and Gravett (1998) found that "to make subject content relevant and applicable… seems to be a crucial teaching activity of university teachers" (Jacobs & Gravett, 1998, p. 55). In addition, the use of case studies is widely accepted in Health Care education (e.g. Breathnach, 2000; Dart & Clark, 1991) and the importance of a teaching tool such as the challenge questions has been highlighted by Slonimsky and Shalem (2006).

The use of 'real" life examples has been a teaching technique that has been constructed in several different ways and that students have found to be helpful in diverse contexts in South Africa. Firstly, Entwistle, Meyer and Tait (1991) found that First Year engineering students at the University of Cape Town "preferred lecturers who showed links between course material and the real world" (Entwistle et al., 1991, p249). Secondly, Wessels (2001), when investigating the role of printed material at the University of South Africa, believed that the literature supports the need for "relevancy" and "personal significance" (p. 219). Thirdly, Frescura (2002) upheld the importance of the South African context to Health Sciences students at the University of the Western Cape. Fourthly, Weil et al. (2001) provide a detailed discussion of the role of case studies in postgraduate Accounting education at the University of Cape Town and concluded that "students perceive the major benefit of the use of case studies to be exposure to real-world complexity" (p. 124). The students in the current study explained the value of the case studies most succinctly when asked what were the best aspects of the Resourcepack, "… case studies were interesting and reinforced the theory" (Resourcepack Questionnaire, 105); "the case studies – I got a lot of examples which helped with my understanding" (Resourcepack Questionnaire, 126); " It (the case studies) put theory to application and it also supplied an example" (Resourcepack Questionnaire, 69)

Therefore, the use of "real life" examples is an accepted practice in higher education, and it is also congruent with Vygotsky's discussion of the relationship between scientific and everyday concepts (Vygotsky, 1987). The evidence from the large class interactions (Section 4.2.), case studies (Section 4.15), challenge questions (Section

4.16) and lecture notes (Section 4.19) suggest that the students viewed the theories in Psychology and the examples that had been discussed in the large class and in the Resourcepack as two different entities. Although Vygotsky distinguished between scientific and everyday concepts, it was the interplay between these two forms of concepts that resulted in a higher level of mental processing. The students were consistently emphatic about the role of examples in the development of their understanding of the theoretical content.

Vygotsky (1987) held a further four assumptions concerning scientific and everyday concepts. The evaluation of the historical development of teaching and learning in a large First Year university class did not focus on the actual change that occurred in each individual student. Consequently, three of Vygotsky's assumptions could neither be confirmed nor disconfirmed. These assumptions include the relationship between the concepts and the child's experience, the path and mode of functioning of scientific and everyday concepts and the absence or presence of conscious awareness (Vygotsky, 1987). However, Vygotsky's assumption that scientific concepts are higher forms of thought than everyday concepts was confirmed by the perceptions of the students. Accordingly, examples, or everyday concepts, were perceived by the students to contribute to their understanding of the theories in Psychology (scientific concepts). Examples were provided by the lecturer, other students and the individual student. These examples demonstrated the relationship between the theoretical content and everyday experience. The students expressed the relationship between everyday and scientific concepts in the following ways, "Examples always help understanding of theory" (RP 29); "Not just theory, see how fits into real life" (RP 30); " (the case studies) enabled me to assemble the facts and apply them instead of just viewing them in isolation" (RP 50) and "realised aspects of life" (RP 23),

4.17. *The Relationships between the Students' Perceptions of the Objects in the Resourcepack*

The gender, race and degree characteristics of the students were not significantly correlated with any of the perceptions of the different aspects of the teaching strategies. In general, the students rated all of the facets of the Resourcepack as being helpful, or positively, with very small percentages (7% or less) holding negative

perceptions. Aspects of the Resourcepack that concerned the negotiation of the theoretical content were rated the most positively. These included the general and specific lecture outlines and the page numbers in the prescribed text. This focus on theoretical content was confirmed by the perceptions of the product of the learning process, in which knowledge products were rated as being more helpful than both the values and skills products. Students perceived the skills products as being the least helpful of all the learning products.

Students also valued the examples provided by the case studies (activities in the learning process). In this instance, the students perceived these examples in terms of the skills that they facilitated, and acknowledged the role of these skills in their understanding. However, less than half of the student constituency had actually completed these activities at the time that the research was conducted. Those students who had completed the activities perceived them as having made a contribution to their understanding. Reasons provided for the non-completion of the activities included time and workload pressures, and the perception that the completion of the case studies would be more beneficial immediately prior to the final assessment of the course.

The challenge questions were activities that were primarily perceived as facilitating reflection and application. However, these skills were perceived to relate to the theoretical content only and the students did not specifically mention other aspects of the social context (e.g. the practice of Health Care and the South African context). The students acknowledged the dual purpose of this activity, namely the facilitation of individual reflection and participation in classroom discussions.

The students perceived the Resourcepack as facilitating understanding of the content of the course (89%), the structure of the course (83%), and lastly how the course activities fit together (62%). Therefore, most of the students focussed on the theoretical content or knowledge tasks (Bloom et al., 1956). This evidence is, therefore, congruent with the findings concerning the learning outcomes (Section 4.8), the essay task (Section 4.9.) and the problem-solving strategies for the essay task (Section 4.10), i.e. students constructed the cultural tasks as the comprehension of knowledge only.

Even though the students identified different roles of the Resourcepack in promoting understanding, i.e. the structure of the course, the content of the course and how the activities fit together, the reasons that they presented for their perceptions were not markedly different. Four factors were described in terms of the relationship between the Resourcepack and understanding. These were the negotiation of the course, the relationship between the Resourcepack and the lectures (or lecturer-students interaction), assessment and the use of examples.

The idea that the Resourcepack assisted in the students' negotiation of the learning process constituted the central theme. The students' perceptions here are similar to what Bruner (1987, p. 32) called "a navigational instrument for operating in the zone of proximal development". Sixty-three students believed that the Resourcepack contributed to their understanding by facilitating the negotiation of the course. These students also believed that the Resourcepack had helped them to understand the structure of the course, how the activities fit together and the content of the course. The students who perceived that the Resourcepack assisted in understanding because it helped to understand the structure and the content of the course also stated that the Resourcepack made the negotiation of course content easier (26 responses). The students (2 responses) who believed that the Resourcepack contributed to understanding because it provided structure alone also stated course negotiation as important.

The negotiation of the course content included the notion that the Resourcepack provided direction to the students, "Able to see exactly where we were heading for and what was expected of us" (RP 185), "Everything is very clearly understood and outlined. Helps you to know exactly what is expected of you and where you are going" (RP 77), "We knew exactly what we were doing and exactly where we were" (RP 110) and "Could go thru work with an understanding of where the info come from and how it fitted together" (RP 33). For some students, the direction supplied by the Resourcepack did not result in self-direction- "When studying RP provided learning objectives that you know exactly what to study" (RP 181) and "I find it easier to work from structure as it gives me a starting point and end point and I know what I have to cover" (RP 81). However, other students did engage in self-directed

behaviour - “We knew what to expect and we can set our own goals based on the RP” (RP 222).

Fourteen students, who perceived that the Resourcepack assisted in the understanding of the structure and content of the course and how activities fit together, stated that the Resourcepack contributed to understanding because it provided some form of assistance to the student in the interactions between the lecturer and the large group of students. This theme also emerged from the responses from students (N=6) who believed that the Resourcepack facilitated an understanding of the structure and content of the course and course structure and activities (N=1). Finally, four students who believed that the Resourcepack had increased understanding through the structure of the course alone also identified the negotiation of the course as an important theme. For most of these students, this did not relate explicitly to the interaction with peers, but rather to the role of the self in lectures. For example, “one has been knowing (sic) exactly what is happening today, tomorrow etc” (RP 66) and “RP (Resourcepack) made it easy to plan for lectures and know what you are doing” (RP 167). The students also related the lecturer-students interactions to reading the prescribed textbook, namely, “The RP helped to outline all these aspects and you could read ahead and get more out of a lecture” (RP 142) and “It was very helpful to know what was covered in each lecture and where the appropriate reading was” (RP 13). However, two students believed that the reading for the course was reduced – “What was in the reading pack is appropriate to the lecture and helped one reduce the amount of work I have to read on the textbook” (RP 8) and “The RP helped because we went to our lectures knowing what we were going to do. The RP helped me to read only the relevant stuff and that helped me in terms of time” (RP 74). These students did not understand that they had actually read the entire textbook chapter (See the general and specific lecture outlines, Section 4.4.4). Thus, providing the reading from the textbook for each lecture, or dividing the entire textbook chapter into smaller parts appears to have made the reading load for the course appear less arduous for some students.

The second theme that emerged from the analysis related to assessment. Assessment was important to the students (44 responses) who believed that the Resourcepack contributed to understanding by presenting the structure and content of the course as

well as how the activities fit together. The relationship between the Resourcepack and assessment was also identified as contributing to understanding by students who thought that the Resourcepack was beneficial in terms of the structure and content of the course (3 responses); the content of the course (4 responses) and how the activities fit together (1 response). The majority of these students related the Resourcepack directly to the essay task. For example, "mainly for assignment- expanded on lectures" (RP 158) and "Gave me the relevant information pertaining to the essay/assignment" (RP 135). However, some of these students related the Resourcepack to the multiple-choice examination and perceived that the Resourcepack had reduced the learning burden – "It was very organised and it was easy to see what wasn't for exam purposes in a certain chapter" (RP 155).

Finally, the students emphasised the role of examples in generating understanding. Once again, this reason of the Resourcepack contributing to understanding was viewed by all groups of students. These groups include the students who viewed the Resourcepack as facilitating an understanding of the structure and content and how the activities fit together (6 responses), the structure and content of the course (2 responses), the content and activities of the course (1 response), the content of the course only (2 responses) and how the activities fit together (1 response). The students described the relationship between the examples provided in the Resourcepack and understanding in the following ways. For example, "The RP combined theory with daily life. Helped to understand theory better (the content) and easier to remember because of examples" (RP 141), "the RP also gives you e.g.'s which help to make the theory more understandable" (RP 168) and "It gave a layout on what approach we were going to use as well as giving real life situations" (RP 51).

The focus in the analysis of the Resourcepack was on the cognitive perceptions of students (see the discussions of each of the teaching strategies above). The students' affective perceptions concerning the Resourcepack were measured in terms of the aspects of the Resourcepack that were liked best and least. Five categories emerged from the analysis of the question, "What did you like best about the Resourcepack". Firstly, a number of students listed one of the teaching strategies in the Resourcepack. These teaching strategies included the general and specific lecture outlines (84 responses), the case studies (36 responses) and the challenge questions (8 responses).

Secondly, teaching strategies that related directly to assessment were emphasised (65 responses). This category included the problem- solving strategies for the assignment (19 responses), the characteristics of the problem-solving strategies (9 responses), the mark allocation of the essay task (2 responses) and the readings for the assessment (35 responses). Thirdly, related to the reading for the assignment was reading from the prescribed textbook. Forty-two students stated that the page numbers from the prescribed textbook were important. The students phrased the contribution of the Resourcepack as reducing their workloads (i.e. amount of reading), rather that engaging with issues related to the quality of their reading skills or depth of reading. Fourthly, six students commented vaguely on an increase in understanding. Finally, general characteristics of the Resourcepack were highlighted. These general characteristics included that the Resourcepack was easy to understand and use (21 responses); provided organization (1 response); the Resourcepack provides clarification and information (12 responses); the Resourcepack provided support (7 responses) and the information was not abstract/ was related to real life (2 responses) and a good amount of extra information and examples (3 responses).

In terms of what students liked the least about the learning material, 82 responses of none/ nothing/ not applicable were given, with 48 students omitting this question. The emergent categories for this question were collapsed into the continuum of challenge and support (de Groot & Dison, 1996; Dison, Granville, Delmont & Button, 2000; Dison & Pinto, 1996; Dison & Rule, 1996; Granville, 2002). Firstly, in terms of the challenge end of the continuum, few students perceived that they had not been sufficiently challenged. Responses here included providing more reading (2 responses) and that the problem-solving strategies were of no practical use (2 responses). In contrast, many students perceived that more support needed to be provided in the Resourcepack (81 responses). Initial categories that were collapsed into this theme included the problem-solving strategies were too difficult (10 responses); the reading for the assignment was too long or difficult (29 responses); the challenge questions (8 responses); the Resourcepack needed more links to the textbook (1 response); the students did not understand the Resourcepack in parts (2 responses); answers for the case studies should be provided (4 responses) and the Resourcepack was too long/ contained too much information/ too many readings (27 responses).

Finally, in terms of suggestions for improvement of the learning material, 65 students omitted this question, with 71 students writing no/ none/ nothing/ not applicable. The initial categories that emerged here may be classified into a dichotomy of more and less. The "more" category included the notion that the Resourcepack should include more examples (2 responses) questions (15 responses), cartoons (11 responses) and readings (7 responses). In addition, this category also included the notion that the answers for the case studies should be given (5 responses), and the inclusion of past examination papers (3 responses). Therefore, the "more" category is constituted by 43 responses. Secondly, the "less" category included that the Resourcepack should be reduced in length (13 responses, with 8 students making concrete suggestions about changes in formatting (including font size, binding etc); fewer case studies (2 responses); shorter problem-solving strategies (2 responses). Therefore, the "less" category represented 25 student opinions. In addition, a third category was constructed to represent seven students who had misinterpreted aspects of the Resourcepack. The responses here included the inclusion of learning outcomes (3 responses); the provision of the correct textbook page numbers (3 responses) and that the Resourcepack should be utilized in tutorials (1 response).

When presented with open-ended questions, students, again, focussed on the knowledge products of the learning process, rather than the skills and values products. An aspect of the learning materials that had no real benefit in terms of the product of the learning process, namely the cartoons, was regarded more highly than both examples and additional readings. The students who did comment on the aspects of the learning materials that they regarded negatively focussed on the difficulties that the learning materials presented, for example the length and conceptual difficulty of the learning material itself and the additional readings presented. Very few students were able to provide concrete suggestions as to how the learning materials could be improved.

In contrast to the philosophy of the "learning package" advocated by the Teaching and learning Advisors at the University of the Witwatersrand, Bertram (2003, p. 76) argues that a "materials-based pedagogy makes it more difficult to meet individual needs" and argues that only direct contact between the lecturer and the students will address the individual needs of each student. The evidence from the current study

would suggest that a Resourcepack could meet diverse needs (both support and challenge) from a diverse group of students in large classes. In addition, the evidence from the current study also suggests that direct contact, in the reality of large classes in the university, does not meet the needs of all students because students gain ascendancy or are marginalized in terms of participation in large classes (see Section 4.2).

In terms of extrapolating from literacy events to literacy practices (Gee, 2001; Street, 2004), the evidence from the current study presents a "paradigm shift from a more conventional teaching" framework that "fluctuates between class contact and learning resources as a dual mode of delivery" (Hay & Marais, 2004, p. 65). However, this does not suggest that in practice teaching technologies replace what Hay and Marais (2004, p. 65) refer to as "teaching and the library". In fact, the opposite is the case. The interaction between the lecturer and the students is pivotal to the dissemination of knowledge at contact universities. The several teaching strategies that were incorporated into the Resourcepack in order to facilitate the lecturer-students interactions (general and specific outlines, including the case studies and challenge questions) provide evidence of the importance of "teaching" or lecturer exposition (see Sections 4.2. and 4.19). In addition, the Resourcepack was in no way intended to replace the "library", since additional reading sources not provided in the Resourcepack were listed after the learning outcomes. It is also far from obvious why university lecturers would strive to encourage students not to read widely, and not to engage with the diversity of opinion that characterises the development of understanding.

Therefore, the evidence suggests that literacy practices at universities represent a dual model in the strictest sense. The dual mode of delivery (textual mediation and lecturer-students interactions) may be characterised as constituting a dialectical model of teaching and learning. Thus, both the textual mediation and the lecturer-students interactions constitute separate elements in the teaching strategy. Textual mediation and the lecturer-students interactions are elements in the Vygotskian (1987) sense of constituting the constituent parts of a whole.

4.18. Students' Perceptions of the Lecture Notes

In 2002, a questionnaire concerning the lecture notes was given to the students. One hundred and twenty-one students stated that they added additional information to the lecture notes. This additional information was written in different forms (see Table 4.15.).

Table 4.15.

The forms of additions to the Lecture Notes

	N	Percentage
How Students wrote:		
Key words only	59	48%
Whole sentences	82	67%
What Students wrote:		
Lecturer's examples	111	91%
Fellow students' examples	78	64%
Own examples	32	26%

Ninety-eight percent of the students who completed this questionnaire acknowledged that lecture notes did not provide a complete set of notes for the lecturer-students interactions. The students tended to write more (whole sentences) rather than less (key words only) on the lecture notes. Adult guidance (the examples given by the lecturer) was considered to be more valuable than peer collaboration (fellow students' examples). Very few students were either able to construct their own examples or valued them enough to write them down. The students perceived that it was sufficient merely to add to the lecture notes, rather than generate a completely new set of lecture notes. The students, who did generate their own separate lecture notes, did so in order to summarise the prescribed text or to feel a greater sense of responsibility and organization. Ninety-six percent of the students perceived peer collaboration as an important reason for a positive perception of the lecture notes. The perceived relationship between the teaching strategy and the students' understanding in the learning process was framed in terms of the time that the lecture notes allowed for

listening attentively and the discussion of issues. Therefore, participation on the part of the students was perceived by the students to have a role to play in understanding.

Sixty-nine percent (n= 84) of students stated that they did not make notes on a separate sheet of paper, with only 30% (n= 47) of the students doing this, and no response from 1% (n=5). The reasons given by the students for adding to the lecture notes included the characteristics of the lecture notes (30 responses), the construction of notes that summarised the prescribed textbook (17 responses) and a preference for individually constructing lecture notes (8 responses). Seventy-one students did not provide any reasons for making their own lecture notes.

Firstly, in terms of the characteristics of the lecture notes, the students acknowledged that the lecture notes were not a complete set of notes that could be generated from the lecturer-students interactions. The students also recognised the role that the class discussions, in terms of examples and explanations, had to play in both the construction of notes and understanding. The students were quite explicit in this regard –

(i) "The handouts are a skeleton. I make my own notes when I have a better understanding after a class discussion has taken place for a few minutes. I also add examples. The lecture notes free you from frantic copying down and allow for discussion" (LN- Lecture Note Questionnaire 3).

(ii) "Completes notes… Examples help understand the concepts" (LN 10).

(iii) "Cause the lecture handouts aren't enough, they lack examples and (are) just basically incomplete. Supplement them with class discussions" (LN 105).

(iv) "It gives a clearer understanding of the key words presented on the handouts. Examples and explanations brought up in class provide more valuable info and makes topics comprehendible" (LN 35).

These students' perceptions of the lecture notes provide evidence for the notion that the students had some notion that understanding involves more than the reproduction of theoretical terms.

Secondly, some students made additional notes in order to summarise the textbook. The students, thus, acknowledged that the notes were not intended to replace reading the prescribed textbook. Examples of students' comments regarding this include,

(i) “Integrate (the lecturer’s) handouts with the textbook stuff. The textbook adds more explanation and the handouts are only guidelines on what is important” (LN 110).
(ii) “I want to gain extra knowledge from the textbook as I do in any other subject. (The lecturer) does a good job on lecture notes, but I always do additional summaries from the textbook” (LN 99).
(iii) “ I read from the textbook and then read from the lecture notes. Everything made sense. It doesn’t when I make my own notes” (LN 67).

Thirdly, some students had a preference for constructing their own notes. Reasons provided for this preference included that a greater sense of understanding is present when notes are individually constructed. Thus, some students believed that the presentation of the lecture notes actually resulted in a greater sense of confusion. Illustrative student comments of this theme include “because sometimes I don’t understand the word that was used in the class and feel more responsible if I do my own notes” (LN 6), “Things are more understandable when written by one’s own understanding” (LN 73) and “It’s easier for me to understand notes when I make my own” (LN 93). One student believed that individual organization of the lecture material resulted in better understanding – “I prefer having my own, separate notes. It’s easier for me when studying and I hate being unorganised. I don’t like my handouts to be full of tiny notes all over it. Only simple keywords on the handout” (LN 7).

The value placed on the contributions of fellow students was reinforced by the finding that 39% (n=47) of the students perceived that these contributions helped their understanding to a great extent, 57% (n=69) perceived that they helped to some extent. Therefore, a positive perception of fellow students’ contributions was held by 96% of the students. Only 4% (n=5) of the students perceived that these contributions did not contribute to their understanding at all. This finding, relating to the lecture notes in 2002, is congruent with the findings from the use and non-use of peer collaboration in 2000 (See Section 4.2.).

Ninety-one percent of the students perceived the learning material to have helped their learning, with 3% stating that they only helped to some extent. Three percent of the

students did not perceive the learning material as contributing to their learning. Reasons for the agreement with the statement that the learning material helped learning included that lecture notes allowed for time to listen and absorb information, rather than merely focusing on copying down notes (51 responses). The students expressed this notion in the following ways - “they give me time to listen instead of just writing things that I don’t understand” (LN 16) and “I am able to listen and contribute, or think about it for myself, instead of hurriedly trying to copy down the notes” (LN 39). This theme highlights a tension that is present when students encounter new knowledge. There is a tension between presenting the scientific concept, or the verbal definition (Vygotsky, 1997b) and explicating its relationship to the everyday world. The presentation of the scientific concept, or theoretical definition is only the first step in understanding the concept. The students appear to have grasped this relationship between scientific and everyday concepts.

Related to the reason that the lecture notes assisted learning because they allowed for more time to think about the theoretical concepts, is the second theme, the notion that the time in class is then used for discussion, which improves understanding. Twenty-seven students provided this reason and described the process in terms of the dialogue between the lecturer and students – “With the handouts being given to us, there is extra time in which the class can engage in discussion, agreeing and criticising that which has been put forward. This greatly enhances our understanding of a subject” (LN 8). Other students focussed on the perceived important role of examples in understanding - “the handouts cover the basic definitions. With this there is more time for participation and you can listen more effectively and so you understand more and have time to add examples that would increase your understanding” (LN 112) and “the lecture notes provide a summary. Students can listen more in lectures to help with their understanding of a subject as well as make their own notes. These notes include examples from Gill as well as peers. If no lecture notes. No time to write examples” (LN 109).

The students also perceived that the lecture notes provided emphasis or illustrated the importance of concepts (28 responses). Some students expressed this in general terms – “if I had to take notes from the overhead or informally (as lecturer speaks) I may misinterpret the importance of some of the points” (LN 24), “They put things and

sections into perspective- they show the 'big picture' and make note taking easier" (LN 95); "Points out important facts and allows more time for additional reading and studying" (LN 31) and "the notes provides an outline and helps following the lecture. It works as a guide" (LN 121). Other students emphasised the relationship between highlighting theoretical concepts and assessment – "The lecture notes help me to identify the points that need to be emphasised while studying" (LN 24), "they have helped as a rough guide of what I need to know for the exams" (LN 22) and "in this way I can see what is the most important facts and issues that we need to know" (LN 117).

Finally, in terms of the relationship between the lecture notes and the prescribed textbook, forty-nine students believed that the lecture notes allowed for a greater understanding when the textbook was read. Thus, at least for some students, the lecture notes did not replace textbook reading. Students described the relationship between the lecture notes and prescribed text in the following ways – "The lecture notes provide structure to the learning material. They combine and help make sense of different ideas. It brings greater understanding and provides a good outline when reading in the textbook" (LN 96) and "it is easier to keep up with the section of work in the lecture because the handout gives a brief, clear outline on it and it is helpful when studying and using the textbook" (LN 7).

Only four students believed that the lecture notes did not help their learning. Because this was such a small group of students, each student's reasons are presented. One student believed that the lecture notes had made the learning tasks more difficult, "They made my work more disorganised and make working very difficult and untidy" (LN 30). One student believed that the lecture notes only related to the lectures and not to his/her learning. This student seemingly did not relate lectures to learning – "They don't make the learning easier, they just make it easier to follow in the lecture" (LN 68). One student had difficulty in adapting to the use of the lecture notes instead of writing from data projector or blackboard – "Because I was not used to handout, which makes it difficult fro me to add some e.g. or comment in sequential from, unlike direct from the projector" (LN 82). Finally, one student succinctly commented, "They haven't made much of a difference to me" (LN 93). .

An analysis of five of the students' notes constructed from the overhead transparency (i.e. pre-lecture notes) revealed that the students generally wrote information that was contained on the transparency only. Very few explanatory or supplementary notes were included. In contrast, notes added to the lecture notes included supplementary and explanatory information. It would appear (from this limited number of students) that the students are only able to write down or note a theoretical definition from an overhead transparency. By giving the students each theoretical definition in the lecture notes, the students were able to note points that explained or supplemented the theoretical definition.

Additional notes were added more often than not when cues had been provided in the Lecture Notes. An example of a cue given in the lecture notes is:
"Critical evaluation:
Strengths:
Weaknesses:"
However, the five students who volunteered their notes for the sub-course had not consistently added additional information when cues were given in the lecture notes. Thus, some students did not complete the lecture notes when the lecturer had deliberately left them incomplete.

Cues in the lecture notes that were consistently completed were the ones given for examples (e.g. =). Examples given by the lecturer, and not other students, were most often noted. Noted examples were often written in the first person, (e.g. for high self-efficacy = "If I go to the library, I am capable of learning, therefore, I will get a good mark"). This use of the first person may reflect the verbatim presentation of the example. However, this appears to be an insufficient explanation of this finding as some students wrote examples in the first person when they had not been presented as such during the lecturer-student interaction. Therefore, the use of the first person may reflect the individual student's personalisation of the content of discussion.

The lecture notes also appeared to facilitate the noting of class discussions. The entire set of submitted lecture notes contained the questions that had been considered in the class discussion and a summary of the points made in the discussion. All the students

had added the information presented on the blackboard and OHT. Finally, students who submitted their notes had noted any reference made by the lecturer to the exam. The lecture notes were also a mediatory object that was designed to support the students. The introduction of the lecture notes was an attempt to counter "problems inherent in situations where students spend most of the lecture struggling to keep up with the pace, while noting down reams of detailed information" (de Groot & Dison, 1996, p. 28). Almost all of the students understood that the lecture notes provided structure to the learning process. Accordingly, "(t)hey're …organised (Lecture Notes Questionnaire 52); " because it gives you a good guideline to making notes, therefore giving a good starting point. Thus, you know where you're going in the course" (Lecture Notes Questionnaire 38); and "They put things and sections into perspective – they show the 'Big picture' and make note taking easier, and allow for more time for interaction and examples – thus allowing for understanding and not just scribbling down all our own notes" (Lecture Notes Questionnaire 95).

4.19. The Open-ended Method of Eliciting the Students' Perceptions

The investigation to this point into the students' perceptions has occurred using questionnaires that were designed to provide comment on specific aspects of the teaching strategy. In 2003, a more open-ended questioning approach was used in order to determine what students would consider being worthy of comment with no prompting from the lecturer. Therefore, in an attempt to investigate the responses of the students that were not constrained by the lecturer, the students were presented with an opportunity to self-select and reflect on teaching and learning issues in the learning process. The focus of this aspect of the research was, therefore, neither participation, nor the learning materials. Four open-ended, non-specific questions were asked. Ninety-four students responded to this questionnaire, representing 36% of the total number of students registered for the course. This questionnaire, therefore, had the lowest response rate from the students.

The aspects of the teaching that were perceived as the most helpful by the students were:

1. The use of examples of the theoretical content (48 responses), while 13 students specifically mentioned the case studies, giving a total of 61 responses.

2. The lecture notes (47 responses)
3. Class discussion (24 responses) and lecturer's willingness to respect student opinion (20 responses). These have been combined to form the category lecturer-students interaction or participation (44 responses).
4. Characteristics of the lecturer include presentation style and personality variables (21 responses) and preparation and enthusiasm (20 responses), therefore totalling 41 responses.
5. Explanations of theoretical content (23 responses)
6. The Resourcepack (8 responses)
7. Content-based responses (n=8), e.g. the student stated specific areas of content, e.g. personality disorders.

These aspects of the teaching strategy least liked by the students generated 46 no responses. Because the students mentioned differing aspects of the teaching strategy, all categories of responses were considered for this question. The responses provided included:
1. Lecturer's presentation style and personality variables (14 responses)
2. Lecturer reacted negatively to health Professions (other than Medicine), especially Occupational Therapy (9 responses).
3. Content-based responses (6 responses).
4. The pace of the lectures was too fast (5 responses)
5. Too much student opinion, leading to perceived wasting of time (5 responses)
6. Tutorials (5 responses)
7. Specific lecture times (3 responses)
8. Lecture Notes (3 responses)
9. Lecturer disciplining of students (3 responses)
10. Lectures running over the allotted time (3 responses)
11. More compulsory learning tasks, e.g. a test, wanted (1 response)
12. More relating to the prescribed textbook (1 response)
13. Important points were not repeated or emphasised (1 response)
14. More interaction in class (1 response).

Once again, all responses were considered in terms of the improvement of the teaching strategy, the following suggestions were made:

1. Fifty-seven no responses (48 responses) or not applicable (9 responses)
2. More visual aids and guest lecturers (8 responses)
3. Lecturer's presentation style (4 responses)
4. Assessment-related (3 responses)
5. Handout-related (3 responses)
6. Slow down pace of lecture (3 responses)
7. More emphasis on important concepts (2 responses)
8. More discussion (2 responses)
9. Less discussion (1 response)
10. More Case Studies discussed in lectures (1 response)

Further comments made included 41 responses concerning positive comments or thanks and 4 negative comments concerning the tutorials.

Students perceived the examples provided by both the lecturer and fellow students as being the most helpful tool in terms of their understanding. Students continued to focus on the negotiation of knowledge learning products by valuing the role of the lecture notes. However, they did acknowledge the part that the lecture notes had to play in increasing participation in the classroom discussions. The students, yet again emphasising the importance of peer collaboration, valued these discussions.

Students also commented that adult guidance contributed to their understanding, more so if the lecturer is well-prepared and enthusiastic. The lecturer's presentation style and personality variables were perceived both positively and negatively. Students were able to provide more positive than negative aspects of the course. In conformation of findings from the previous questionnaire, very few students were able to provide concrete suggestions about the improvement of the course.

4.20. Comparison between the Close-ended and Open-ended Student Responses

In 2003, the open-ended form of questioning did not elicit student opinion concerning the learning outcomes, the essay task, the problem-solving strategies for the essay task and general lecture outlines. The students did comment on the use of examples (the case studies in particular), the lecture notes, classroom discussions (the use of the small group method in the large class) and lecturer characteristics.

The students identified the use of examples as the aspect of the teaching that was most helpful in their learning. Many students stated that the case studies served as good examples. When specifically asked to rate the helpfulness of the case studies (in 2001), 91% of the students rated the case studies positively. In terms of the best aspects of the Resourcepack, the students rated the case studies third. The second most helpful aspect of the teaching was the lecture notes. However, three students stated that the lecture notes were the least liked aspect of the teaching model and made suggestions for how the lecture notes could be improved. The close-ended methodology (2002) may reveal how the students utilized the lecture notes (see Section 4.19).

The use of discussion in the large class was rated as the third most helpful aspect of the teaching strategy. The close-ended methodology used in 2000 found differences in the preferences of the dominant and marginalized gender and racial groups regarding discussion in small groups and in the large class (see Section 4.2). The evidence from the close-ended questions concerning the lecture notes (in 2002) is also related to the role of discussion in the model. The students believed that the lecture notes allowed more time for discussion, which they related to their understanding. This discussion, and understanding, included the contributions of their peers. The primary reason given for why the lecture notes contributed to learning was that they allowed the students to listen to, and absorb information.

In conclusion, the evidence from both the open and closed-ended methodologies would suggest that the students valued the highly structured nature of the teaching strategies. Perhaps this valuing of structure is also related to how they should be asked about their perceptions of the process of teaching and learning. Providing little direction to the students (open-ended, 2003) was the questionnaire that had the lowest student response rate and the students also gave vague responses. While information about specific aspects of the teaching strategy may be elicited, the close-ended methodology constrained the students' responses dramatically. Thus, while the close-ended methodology allowed for clearly defined, rather than vague responses, there may be differences between the lecturer and students, and between students, in how terms (e.g. "helpful", "reflect", "apply" and "reconsider") are understood.

CONCLUSION

A South African Interpretation of Vygotsky's Ideas in Higher Education

The interpretation of Vygotsky's ideas has been characterised by historical schisms in both the epistemological and ontological frameworks of Soviet and Western writers. The historical schism of epistemological interpretation has centred on the relative importance of Marx's dialectical historical materialism. Wertsch, the most dominant English neo-Vygotskian, uses the Vygotskian statement of "the first problem of psychology is to show how the individual response emerges from the forms of collective life" (Vygotsky, 1981, p.165 in Wertsch, 1985, p.10) to argue that Vygotsky's theory of development is Marxist. Wertsch discusses the influence of Marx on Vygotsky's thinking in ontological terms. The central site of ontological disagreement in historical interpretations of Vygotsky's work has related to a focus on either activity, in which the individual learner engages, or the semiotic system, through which learning occurs. In the tradition of diverse interpretation of Vygotsky's work and in an attempt include the epistemological framework of dialectical historical materialism, the current study offered an analysis of Vygotskian concepts that emphasised the relationship between the social and the historical in the development of critical thinking skills. This South African interpretation has provided an analysis of both the activity and semiotic system of teaching and learning in order to provide a more comprehensive analysis of Vygotsky's central ideas. The analysis is also unique because it included a large number of students. Other neo-Vygotskian studies have generally focussed on learning in groups of two or classes of school pupils.

A pivotal distinction between this South African interpretation and both Soviet and Western neo-Vygotskian work is that other neo-Vygotskian interpretations have focussed on the learning, or development, of the individual learner. This focus on individual learning has often resulted in the absence of an account of both the nature of the culture that is to be learned and the sociohistorical circumstances that create the culture. There is, thus, a lack of critical engagement with the relations of power between the adult and the child in terms of the patterns of dominance and marginalization in which the culture is created and in which the learning of this culture occurs. The work of Wertsch, is a particular example of this, and, consequently, of most Western neo-Vygotskian interpretations. The current interpretation sought to analyse the concept of the "cultured adult" and the child in a particular set of sociohistorical circumstances.

The study was not a conventional quantitative pre-and post-test measure of the students' ability as is majority of Vygotskian and neo-Vygotskian work. Accordingly, the evaluation of teaching and learning did not involve an assessment of the students' current levels of ability, instruction in problem-solving or the provision of tools for the solution of the task, then a reassessment of the students' levels of ability. This pre-test and post-test structure is what is most commonly meant by the adoption of a Vygotskian approach and has been influential in the practice of assessment (e.g. dynamic assessment, formative assessment). The scaffolding approach (Bruner, 1987), or the notion of assisting students to learn has also been prevalent in the understanding of learning at universities. The test-teach-test structure and ascribing a benevolent attitude to teachers or lecturers results in investigations that do not centre on the analysis of these cultural ways of thinking, which are ideological in nature. The danger of this approach is that there is little critical engagement with the ideologies that are supported or subordinated by the practice of education. This lack of critical engagement with the researcher's ideological educational practices has a long history, which begins in Vygotsky's own writings and is related to Vygotsky's search for a method in which an objective observer could investigate the development of mind. The notion of education in Vygotskian work is closely aligned to the ideologies of colonialism in which the Communist state under Stalin, the new Communist "emperor" engaged in the practice of acquiring control over the Russian peasant population and the satellite states and exploiting them economically under the guise of their increased participation in the "social life" of the Soviet State.

The current investigation does not adopt the dominant interpretation of Vygotsky's work. Instead, the measurement of development centres on the development of the lecturer in terms of the disseminative or teaching practice at one university. The development of the students is described in terms their constructions of the literacy practices utilized by the lecturer. There is no measure of actual change in students. Rather, the researcher has attempted to investigate how students respond (cognitively and affectively) to large class interaction, and the cultural tasks and tools of university teaching and learning. This culture is defined as "critical thinking in a university in South Africa". This contextualised critical thinking involves discrete learning processes in which both knowledge and cognitive skills and abilities are developed through both the lecturer's creation of both tasks and the tools for the accomplishment

of these tasks. Thus, the focus is on instruction, particularly the nature and purpose of the instruction in a particular sociohistorical context. Because of this historical materialist epistemological position, student categories such as gender and race reflect a distinct set of sociohistorical circumstances. Using the ideological literacy practices of ascribing students to the sociohistorical categories of gender and race, and the valuing of critical evaluation over other forms of thinking reflects, a stance that is not neutral.

The current study offers a unique interpretation of the "social", which may be categorised as being "historical" in nature. The concepts of the "social" and the "historical" have many distinct parts. These parts are identified, explained and the relationships between these constructions of the sociohistorical are described in order to create a unified account of the concept of sociohistorical development.

The concept of "social" includes the context of South Africa, which has a history of racial marginalization in education. The decade following the first election of the democratic state has been characterised by the state's attempts, with its available resources, to ensure that all its citizens live in circumstances which conform to acceptable human rights standards in housing, health care, employment and education. In Russia in the 1920's, Vygotsky commented "(t)he Revolution… redesigned our schools from top to bottom" (1993, p. 65). This statement may be appropriately used to describe South Africa in the 1990s and early twenty-first century. The democratically-elected government has legislated an open access policy to education and the "transformation" of educational institutions. "Transformation" is an ideological practice, and thus, is "…neither neutral nor technical, but is a social practice that is "always contested, both its meanings and its practices, hence particular versions of it are always 'ideological', they are rooted in a particular world-view and a desire for that view of (of transformation) to dominate and to marginalize others" (Gee, 2001, p. 112). Political transformation of South Africa was merely the first step in the transformation of South African society. The transformation of education in order to ensure equality and redress is practiced by the South African government in technicist and bureaucratic ways and focuses on increasing the number of academic staff and students from previously marginalized groups. Intersecting with an agenda of equality and transformation in education is the capitalistic economic system in

South Africa. The capitalist view of education has resulted in the state's need to receive a return on its investment in higher education and for universities to account for the funding that is received. The system of higher education in South Africa, as in the international arena, is highly regulated by the state. Universities are no longer "ivory towers" that are divorced from the social circumstances in which they are located.

The construction of the "social" as instruction serves to position the study as distinctly "Vygotskian" in nature. Vygotsky was primarily concerned with the role of education in preparing individuals for their participation in social life (Daniels, 2001; Moll, 1990). However, it is not the purpose of the current study to understand how learning occurs in "the social world" (Wenger, 1999). A generalist understanding of learning that may be used in a diverse array of social situations is not sought. Instruction is considered to be active mediation that is distinct from the forms of learning that occur in other social forms of life. The central difference between instruction and learning in the wider social world relates to the role of the capitalist system of relations and exchange of capital. Accordingly, in the world of work, employees receive payment for the tasks that they perform. While it is acknowledged that employers may seek to acculturate their employees into the corporate or work culture, this form of learning is distinct from acculturating students into higher education. The distinction rests on the fact that those who are expected to perform cultural tasks in higher education pay for the right to do so. This complicates the notion of the degree as a commodity. The awarding of degrees is about more that payment, although students do not receive their degrees unless their fees are fully paid. There is, thus, a tension between payment and the adequate performance of cultural tasks. Consequently, instruction in higher education has a distinct nature and purpose.

The nature and purpose of instruction relates to four further constructions of "social" in the current study. Instruction is also related to the differences between secondary and higher education, the health care profession and Psychology as an academic discipline. Firstly, instruction in higher education in South Africa is complicated by the increasing disjunction between school and university. Thus, university lecturers have to incorporate the notion of the "current level of ability" as being far below what they may conceptualise as the "potential development" of critical thinking skills. The

cultural tasks that students are expected to perform may not be set just above the student's current level of ability. Students have become proficient at the reproduction of knowledge in the school system. However, the cultural tasks of university require a new set of knowledge and skills in order for critical thinking to develop. There is, thus, articulation between what is meant by "the social" and "the historical" in this instance. Secondly, the students, whose perceptions of the cultural tasks and tools of the first year of higher education were analysed, were registered for degrees in the Faculty of the Health Sciences. It may be appropriate to assume that these students would display no further interest in Psychology as a profession. Thus, their levels of motivation and interest may have been limited in a subcourse that was not a central component of their professional health care degrees. Thirdly, the academic discipline of Psychology is a so-called social, or "soft" science, which stands in strong contrast to the ontological and epistemological frameworks of the so-called "hard" sciences of Physics, Chemistry and Biology. An elective of Psychology in the Health Sciences degrees was one of the few courses that require the writing of an academic essay that these students complete. Therefore, understanding the students' perceptions of the cultural tasks and tools in a specific seven week subcourse requires an analysis of the relative importance of that subcourse to the students' degrees. Accordingly, the perceptions of the students may have reflected their lack of interest in a relatively unimportant seven-week subcourse in their Health Sciences degrees. In addition, the cultural tasks and tools in the subcourse may have been distinct from the cultural tasks and tools present in the pivotal courses in their degrees.

Finally, in the articulation between instruction and "the social", the large numbers of students in the "stack 'em cheap" ideological practice in universities functions to complicate social activity or interaction. This resulted in a massified construction of the adult-child dyad, in which one lecturer and three hundred students were part of the concept of social activity. The large number of fellow students in a lecture serves to constrain the students' participation in this social activity. In addition, relationships of dominance and marginalization among students emerged in both gendered and racialized ways. The above serves to incorporate the notion of activity within the Vygotskian framework. The current study also investigated the role of semiotic mediation in development.

Conflict is the central, unifying principle in Vygotsky's concept of sociohistorical development. This unifying principle of conflict was supported by the current study because there were two primary examples of "a collision of forces" that emerged from the analysis (Wertsch, 1985, p.7). Firstly, in terms of cultural tasks and tools, there were vast disparities between the lecturer and students' constructions of the "real state of affairs" of teaching and learning. Students defined the cultural tasks in terms of the reproduction of knowledge and the application of that knowledge to their everyday concepts. In contrast, the lecturer constructed the cultural tasks and tools in terms of evaluative, or critical thinking skills. There was, therefore, conflict between how the students historically construct the tasks and tools of learning, and the tasks and tools of learning that are developed in the social or cultural context of higher education. Secondly, the social activity, or the large class interactions, was ideological, in the sense that patterns of domination and marginalization emerge between those present. Thus, social activity is not divorced from relations of power between people and groups. Relations of power are, by nature, characterised by conflict. Vygotsky did not critically reflect on the ideological practices of the "adult". Indeed, the adult is tasked with the role of marginalizing thinking practices that the child may have already developed.

The current interpretation sought to analyse the ideological practices of teaching and learning that emerged in a particular sociohistorical circumstance. The "cultured adult" in a South African university at the turn of the Twenty-First Century has two essential functions. Members of the academic staff at universities are researchers, or generators of knowledge, and teachers, disseminators of knowledge to large groups of students. This dual role was reflected in the constructions of the lecturer-researcher. The lecturer is placed before the researcher because of the manner in which the investigation occurred historically. The student questionnaires were historically designed with a disseminative, rather than generative purpose in mind.

The sociohistorical development of the lecturer was described in terms of her development as an employee in the Department of Psychology. This employment was described in terms of the lecturer's generative role, but more importantly, emphasised the lecturer's development of the disseminative role of academic staff. This development was described in terms of the teaching, learning and research practices

in which the novice lecturer engaged over a four-year period. At the start of the lecturer's attempt to find points of articulation between teaching and learning and research practice, the negotiation of large class teaching was identified as a particular problem for her. Accordingly, in 2000, strategies (small group in the large class and use of questions) for managing large classes of students, patterns of dominance and marginalization of the student constituency and the students' cognitive and affective perceptions of participation in the large class were investigated. The analysis of large class teaching was only the beginning of the lecturer's attempt to understand teaching and learning. The subsequent three years of research investigation focussed on the development of appropriate tasks and tools in the first year of higher education. In 2001, the lecturer assessed the students' constructions of the helpfulness of the Resourcepack and its component parts. These parts included the learning outcomes, academic essay practices, the structural framework for knowledge or theoretical content, and tools for relating scientific concepts to everyday experiences, namely the challenge questions and case studies. The Resourcepack was constructed as a learning package or navigational tool and is aligned with a distance, and not contact, model of teaching and learning in higher education. The large numbers of students in the study made this point of articulation between distant and contact models of teaching and learning apparent. The third year of data collection, 2002, was characterised by the integration of the large class interactions and the structural framework of knowledge. The investigation of the lecture notes centred on the relationships between knowledge of Psychology (the prescribed textbook and theoretical terms), everyday experience in the form of examples that illustrated the operalization of Psychological knowledge, the dominant or marginalized examples discussed in the large class and the ways in which the students utilized the teaching and learning tool. Finally, in 2003, the lecturer attempted to investigate how students independently, i.e. without being prompted to focus on the specific aspects of the lecturer's teaching strategy, constructed the teaching and learning practices in the first year of higher education

The disseminative role of the "cultured adult" or lecturer was also investigated in terms of the purpose and nature of higher education. This purpose was defined in terms of the development of critical thinking in students. The concept of critical thinking was considered to be a higher form mental processing that reflects a cumulative understanding of knowledge and skills. Analyses occurred of the

knowledge and skills that each form of textual mediation was designed to develop. Thus, the disseminative role of the lecturer was fully explored. However, the relationship between the disseminative and generative roles of lecturers requires further explanation.

Universities in South Africa receive funding from the government for every article that they produce for journals that are accredited by the South African Department of Education (DoE). Publication in accredited journals is more highly rewarded that any other form of writing practice in universities and is one of the ways in which the generative functions of academic staff is communicated. The American Psychological Association (APA) is a body of psychologists that have produced a set of writing conventions for the presentation of knowledge in the academic discipline of Psychology. The APA's *Publication Manual* has a long history that began in 1928 with a meeting of "… editors and business managers of anthropological and psychological journals… to discuss the form of journal manuscripts and to write instructions for their preparation" (American Psychological Association, 2001, p.xix). In 1929, *Psychological Bulletin*, an APA journal published a seven-page article describing the "standard of procedures" ("Instructions", 1929, p. 57, cited in American Psychological Association, 2001, p. xix) for the publication of knowledge in Psychology. The *Publication Manual* has been revised five times since then, in 1952, 1974, 1983, 1994 and 2001, with each edition increasing in size (60, 136, 208, 368 and 439 pages respectively) and complexity. There has, thus, been a massification, or increase in the number, of rules to which an increasing larger group of individuals must conform in order to perform their generative function in universities. In addition, there are twenty-seven primary APA journals and over one thousand other journals in Psychology that utilize the *Publication Manual* as their style guide (APA, 2001). The American Psychological Association is, therefore, the dominant group in terms of the production of knowledge in Psychology.

Bloom and his colleagues developed their taxonomic structure of educational objectives under the auspices of the APA. The development of the classification system occurred in relation to the university subject, or academic discipline of Psychology as "(t)he idea for (the) development of a classification system was formed at an informal meeting of college examiners attending the 1948 American

Psychological Association Convention in Boston" (Bloom et al., 1956, p. 4). The authors of the cognitive taxonomic structure locate themselves within a social (university and APA) and historical (1948) context. Therefore, the current study, which focussed on the disseminative function of the university, was specifically located within the dominant generative practice of Psychology.

In the current study, the cumulative structure of knowledge and skills developed by Bloom and his colleagues was used in order to analyse the cultural tasks and tools utilized in the practice of teaching and learning over the four-year period of investigation. Four primary problems have been identified in the taxonomy by the original authors. Firstly, Bloom and his colleagues (1956) questioned whether or not educational objectives should be categorised. However, the evidence from the current study suggests that the categories of knowledge and skills can be a useful framework to uncover the differences in the perceptions of the lecturer-researcher and students regarding the cultural tasks, or educational objectives in a unit of teaching and learning. Secondly, there is the question of the relevance of the taxonomic classification structure to academic disciplines that are not located within the so-called "hard" sciences of Physics and Biology. While the use of taxonomic categories is both well-established and well-developed in these sciences, the current study has demonstrated that it is possible to utilise the taxonomic classification system to categorise teaching and learning practices that are ideological in nature. Thirdly, "…the availability of the taxonomy might tend to abort the thinking and planning of teachers with regard to curricula" (Bloom et al., 1956, p.5). The taxonomy was utilised in the current study in order to analyse the teaching and learning practices of a lecturer-researcher. The taxonomic structure provided a framework for thinking about these practices. Finally, the taxonomy of educational objectives "might lead to fragmentation and atomisation of educational purposes such that the parts and pieces finally placed into the classification might be very different from the more complete objectives with which one started" (Bloom et al., 1956, pp.5-6). The post-hoc nature of the present study allowed for an investigation of the component parts of the teaching and learning practices, but, importantly, allowed for instruction in knowledge and skills to be analysed in a unified way.

The primary form of dissemination at contact universities, namely lectures, was investigated in terms of the participation by students. The nature of both adult guidance and peer collaboration was also explored as a hierarchical framework of dialogues between the lecturer and the students was presented.

The interpretation, therefore, included a full analysis of the "cultured adult" in a particular set of sociohistorical circumstances. Thus, a full description of the analytic unit of teaching was presented. In terms of the analytic unit of learning, the students' cognitive and affective responses to both large class interactions and textual mediation were discussed. Vygotsky and the approaches to learning in higher education of Biggs and Ramsden highlighted the important relationship between cognitive and affective factors. Student responses were contextualised in terms of the development of critical thinking in these students in their first year of university education.

In the Vygotskian framework, the students' historically developed ways of thinking (indicated by the arrow, Figure 8) were historical in the sense that they were automatic, or in existence before instruction, and occurred at particular points in the process of development (Vygotsky, 1929; 1997b). Cultural tasks and tools present students with new functions and processes that revolutionise their current ways of responding to cultural tasks (indicated by the triangle). The students' historically developed ways of thinking and responding are re-created and re-organised by cultural ideological practices (Vygotsky, 1987). The new cultural tools fundamentally alter the process of responding to the new cultural tasks. Cultural tasks and cultural tools form a dynamic, unified whole, which is ideological in nature because the students' historically developed ways of responding represent lower levels of functioning than the higher level that are developed by culturally-embedded tasks and tools.

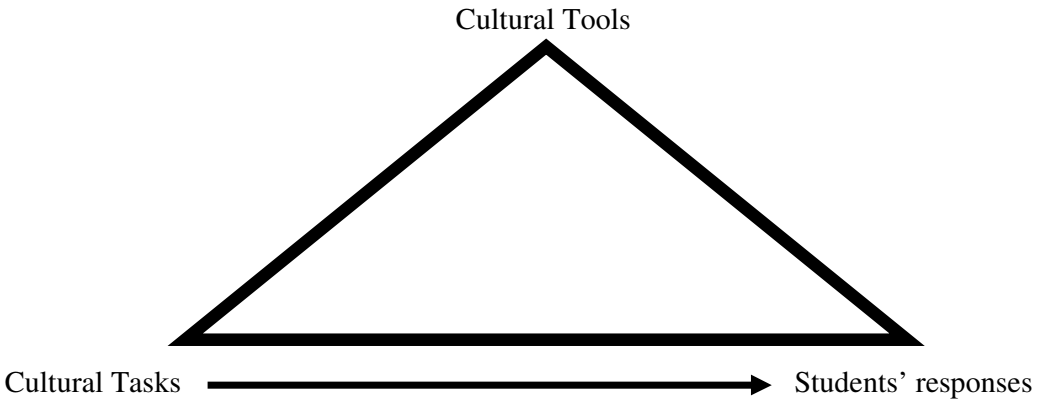

Figure 8. The unified whole of cultural tasks and cultural tools

The students' responses to the textual mediation were structured in terms of tasks and tools. The relationship between the lecturer and the students' perceptions was considered important for an investigation that attempted to utilise Vygotsky's epistemological, and consequently Marxist, framework of analysis. The current study, therefore, did not attempt to obscure the influence of Marxist thinking on Vygotsky's work, a criticism that is levelled at Western neo-Vygotskian interpretations. The lecturer constructed the cultural tasks as requiring a dynamic interplay between ontological material / concepts, knowledge base (theoretical content) and critical thinking (e.g. higher order tasks analysis, synthesis and evaluation). On the other hand, the students consistently focussed on lower order tasks or cognitive abilities and skills of recall, comprehension and application. This central difference between the lecturer and the students was explained in terms of a dynamic interplay of individual (historical) and social (cultural) factors in the students' development of cultural tasks and tools.

The description of an individual's use of tools allowed Vygotsky to link the notion of cultural tools to development and he believed that the use of cultural tools developed over four stages. Firstly, Vygotsky's (1929) first stage of development is "primitive behaviour or natural psychology" (Vygotsky, 1929, p. 424) in which the child is not aware of, and does not make use of cultural tools. In the present study, this "primitive behaviour" was rooted in the sociohistorical circumstances of the transition from school to university. The evidence supporting a disjunction between school and university education is extensive. Both the approaches to learning and the academic

literacies perspectives incorporate a notion of "primitive behaviour", although in different ways. In the approaches to learning perspective "primitive behaviour" involves a surface motive, "to meet requirements minimally: a balance between working too hard and failing", and a surface strategy "reproductive: limit target behaviour to bare essentials and reproduce through rote learning" (Biggs. 1987, p. 11). This behaviour is also conceptualised as a reproducing orientation (Dart & Clark, 1991; Entwistle, Meyer & Tait, 1991; Main, 1980; Meyer & Muller, 1990; Wessels, 2001). The academic literacies theorists have criticised the approaches to learning perspective for locating students within a deficit model (Haggis, 2003). However, the notion of ideological literacy incorporates the idea that particular forms of literacy dominate others. Anthropologists position those who do not utilise the literacy form as "primitive" in terms of culture, and literacy is both restricted and ritualised (Goody, 1968, 1977, cited in Street, 2006, p.3-4). Studies in universities that have utilised the academic literacies model have also conceptualised a master-apprentice relationship between lecturers and students. This is particularly apparent in studies involving postgraduate students (Charlesworth et al., 2006; Holtzhausen, 2005; le Grange & Newmark, 2002; Lessing & Schulze, 2002; Naidoo & Tshivhase, 2003; Rochford, 2003; Thomson, 2005), although the approach has also been utilised in undergraduate teaching and learning (Hugo, 2003; Koch & Foxcroft, 2003; Narsee, 2001). The current study utilised a notion of ideological literacy in which the form of literacy which marginalizes other forms is critical thinking. Critical thinking is "the intellectually disciplined process of actively and skilfully conceptualising, applying, analysing, synthesising and for evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action" (Paul, 1993, p. 22). School-leavers in South Africa, who are new to the culture of higher education, are assumed not to possess this higher form of thinking (Beishuizen et al., 2001; de Boer, Steyn and du Toit, 2001; Entwistle et al., 1991; Gravett & Henning, 1998; Lourens & Smit, 2003; Nyamapfene & Letseka, 1995; Steyn and Killen, 2000).

Secondly, in the stage of "naïve psychology" (Vygotsky, 1929, p. 425), the child makes use of the tool, but is unaware of how the tool functions. Thus, "(t)he child grasps very quickly the method which we suggested, but does not usually know by what means the (tool) helped him" (to perform the task) (Vygotsky, 1929, p.425).

This stage marks the start of the process of tool use. The evidence from the current study suggests that if the students used a cultural tool then they were generally aware of how the tool functioned. The students did not utilise tools whose functioning they did not understand or were not aware of. An example of this was the problem-solving strategies. The students generally only completed the problem-solving strategies that related to the integration of theoretical content and the case studies. Many students emphasized that they did not complete the problem-solving strategies for evaluating evidence and constructing the argument because they could see not value in completing them, or perceived them as being too difficult. Therefore, for older learners, this Vygotskian stage of tool development needs to be further explored because of the role that both cognitive and affective factors may play.

Thirdly, in the stage of external sign and external operation, the child is able to use a tool and have an understanding of how the tool helps to complete the task. However, this understanding and use of the tool occurs on the external or social plane only. Thus, the child "solves the internal mental task on the basis of an external sign…e.g. counting on fingers" (Vygotsky, 1929, p.426). The findings from the current study suggest that if the students utilised a cultural tool, then they were able to state how the tool assisted in the construction of understanding. The students valued the structure that the lecture outlines and lecture notes gave to their learning experience. The students discussed the function of the case studies and challenge questions as negotiating the relationship between the theoretical content and "real life" examples. The high percentages of students who believed that these cultural tools were helpful would suggest that the students required external tools in their development of understanding. Thus, there were very few students who thought that they were able to negotiate the course without these external aids.

Finally, in the fourth, or rooting stage, the tool is both internal and external in nature and this stage is "characterised by the movement of the external operation to the internal plane, by the transformation of the external operation into an internal operation" (Vygotsky, 1929, p.426). Vygotsky argued that adult functioning would be a more developed state because the tool would operate on an internal level only (Vygotsky, 1929). The evidence generated in the present study suggests that, at least some, students had already internalised some of the cultural tools. These students are

the ones who believed that they were able to construct an academic argument without the assistance of the problem-solving strategies. There were also students who preferred to construct their own lecture notes.

There was, therefore, evidence of some development in the cultural tasks and cultural tools by some students. The historical development of cultural tasks and tools articulated with a unity of cognitive and affective student responses. This unified analysis of cognitive and affective student responses is discussed in terms of the cultural tasks and tools that were present in the lecturer-students interactions (social activity) and the textual materials (semiotic mediation).

In terms of the large class interactions, the affective component of learning was found to be pivotal. Students did not feel comfortable discussing their ideas in front of three hundred other students and affective benefits of the use of the small peer group were found. The use of the small peer group method in a group of three hundred students represents a unique "massification" of the notion of peer collaboration. In terms of student participation in the large class lecturer-student interactions, gender and racial marginalization was reduced when the small peer group method was used and was related to particular roles of the other and the self. While the students responded more positively to discussion in the small peer group than to individual participation, they did not relate the peer group discussion to an overall increase in understanding.

The cognitive benefits of the cultural tasks and tools were viewed predominantly in the context of the Resourcepack. Students appeared to have had a positive affective response to a cultural tool if it was perceived as contributing to understanding in some way. Each cultural task and tool was investigated in terms of how the students perceived these tasks and tools to assist in the development of their understandings. The learning outcomes contributed because they stated what knowledge had to be reproduced. Learning outcomes were perceived as contributing more to understanding when they were not directly related to assessment. The readings for the essay task were found to have both an affective and cognitive component. Readings that presented the primary theory and the criticisms of the primary theory were perceived as being the most helpful in terms of the completion of the essay task. Some students found the reading to be too long and too difficult. These readings also had an affective

component for some students who stated that the readings were the aspect of the Resourcepack that they liked the best. In terms of the problem-solving strategies for the essay tasks, the strategies for the lower order tasks of knowledge and application contributed more to understanding than the strategies for the higher order tasks of argument formulation. Some students believed that the problem-solving strategies were too long, too difficult and had no practical use. However, there were some students who had the highest positive affective response to this tool of all the tools in the Resourcepack.

In terms of cognitive responses to the case studies, the students perceived that they had contributed to understanding by proving examples. These examples were believed to facilitate the cognitive ability and skill of application. Again, many students responded in a positive affective way to the case studies. In addition, the case studies were related to assessment and were perceived positively because the students believed that the case studies would ease the burden of assessment. The challenge questions were related to the construction of understanding because they facilitated the student's reflection on issues discussed in class. The challenge questions, like the case studies, were related to the application of the theoretical constructs to "real life" situations. A small group of students had a positive affective response, while a small group had a negative affective response to the challenge questions.

The lecture outlines elicited both a cognitive and a strong affective aspect. The students believed that the lecture outlines structured the knowledge tasks, or textbook reading, and the lecturer-students interactions. In addition, the majority of students had a positive affective response to the lecture outlines and many students listed the page numbers for the prescribed reading as the most positive affective aspect of the Resourcepack. The analysis of the lecture notes focussed on cognitive aspects of the tool. The ways in which the students were utilising this tool included the noting of examples, either given by the lecturer, fellow students or the self. The majority of students believed that the lecture notes contributed to understanding because they allowed time in class to listen to and absorb information.

Therefore, it is clear that for the students, a positive affective response to a cultural tool was related to a positive cognitive consequence of the tool. These findings

confirm Vygotsky's ideas about the relationship between the interests of the child and learning (1998). The question of whether or not the current study has presented "a dynamically meaningful system that constitutes *a unity of affective and intellectual processes*"[25] (Vygotsky, 1987, p. 50) remains to be addressed. The academic socialization view of higher education (Biggs, 1987; Ramsden, 1979) does present a unity of affective and cognitive responses. However, these theorists describe only internal processes within individual students or lecturers, in the reductionistic manner of "motive" and "strategy", where the underlying causes of these interests, or motives, and cultural tools, or strategies, are not subject to investigation. The academic socialization view is both epistemologically and ontologically divorced from any "real state of affairs". It is almost as though "the student" is divorced from any sociohistorical circumstances, and any reference to the historical is located within a deficit model of students, The current study also views students in terms of "deficit" ideological practices because students, being in the first year of higher education, are assumed not to possess the knowledge and cognitive skills and abilities, or cultural tools, that are to be developed before they are awarded degrees. The current study attempted to provide a description of how students construct the tasks and tools of the first year of university in South Africa in a manner that is not limited to a score on a psychometric test that is then used to categorise students. Accordingly, Health Sciences students studying Psychology believed that the cultural tasks and tools in the first year of higher education are the reproduction of specifics, which is made easier by the provision of a structural framework, and the application of those specifics to aspects of their everyday experiences, and to examples provided by the lecturer. The current study may serve as a response to Haggis's (2003) call for critical reflection on "the theories in use" in higher education, and provide an analysis of teaching and learning in the first year of higher education in South Africa based on an ideological interpretation of the work of Vygotsky and Bloom.

The greatest correspondence between the understandings of the lecturer and students was found in the notion of structure. Theoretical content and classroom interactions were carefully organised to create a highly structured teaching and learning process, which was perceived by both the lecturer and the students as important. There was

[25] Italics appear in the original.

also a large degree of correspondence between the lecturer and the students regarding examples as a tool for understanding. The role of examples in understanding was related to Vygotsky's ideas about the relationship between scientific and everyday concepts. Finally, there was intersubjectivity between the lecturer and students concerning the Resourcepack as an important learning package in higher education.

The current study, unlike other neo-Vygotskian interpretations, has emphasised the ideological nature of education, particularly university education. The practices of educators in particular, but also of any individual who attempts to develop the thinking or speech of another individual, are firmly rooted in the belief in that one form of literacy should marginalize others. The interpretation focussed on the ideological practices of one lecturer and on how the students constructed the ideological nature of education at a historically white university in South Africa

The current interpretation stood in stark contrast to previous interpretations for a number of reasons. Other interpretations of Vygotsky's work have focussed on the presentation of Vygotskian principles by James Wertsch (1985). In contrast, the present study focussed on the reading of the *Collected Works* (1987- 1999), a translation, not interpretation, of Vygotsky's entire opus. The *Collected Works* is not free of the problems of translation, namely, some organization of Vygotsky's papers was required and there were also difficulties of Russian to English translations (Daniels, 2001). However, there is epistemological consistency between *Thinking and Speech* (1987), *The Fundamentals of Defectology* (1993), *Problems of the Theory and History of Psychology* (1997a), *The History of the Development of Higher Mental Functions* (1997b), *Child Psychology* (1998) and *Scientific Legacy* (1999) regarding the presentation of Vygotsky's ontological concept of sociohistorical development. The interpretation of sociohistorical development presented in the current study did not emphasise the development of the individual, but the individual's understanding of the tasks and tools of the sociohistorical situation. This stands in stark contrast to both Soviet (Davydov, 1985; Karpov, 2006) and Western interpretations (Bruner, 1987; Cole, 2005; Daniels, 2001; Engestrom, 1996; Kozulin, 1996; Lave, 1993; Moll, 1990; Wenger, 1993). What these theorists have in common is that there is a narrow conceptualisation of the "social", e.g. the adult-child dyad, the classroom, the school, the community. However, these dyads, schools and communities in which

development occurs, are divorced from any examination of the wider sociohistorical context. The current interpretation has emphasised Vygotsky's notion that, "If the doctrine that in certain spheres *the behaviour of the individual is a function of the behaviour of the social whole to which he belongs* is valid at all, it is precisely to the *cultural sphere* that it must be applied."[26] (Vygotsky, 1929, p. 424). The current study has presented this "social whole" as the lecture in which a lecturer and a group of three hundred students are present (classroom), the university in which a specific set of cultural tasks and tools, or knowledge and skills, are developed (the community), the health care context (future work practice). All of these aspects are grounded within the context of South Africa, which has particular historical relations of domination and marginalization.

An unanticipated finding in the current study was that no significant differences were found between students who were ascribed the sociohistorical descriptors of gender, race and degree, regarding all the cultural tasks and cultural tools. Thus, in terms of cultural tasks and tools that were textual in nature, all students, regardless of their gender and racial categorizations, perceived the cultural tasks and cultural tools presented by the lecturer in the same ways.

Firstly, the findings concerning gender appear to be congruent will other findings. Dukes and Victoria (1989), working with Political Science and Sociology students in the United States found no significant differences between males and female students when lecturers were evaluated. In the South African context, Weil et al. (2001) did find differences between the perceptions of male and female students regarding the use of case studies. However, these differences were not significant and the students were postgraduate Accounting students. Saunders (2005), at a private institution of higher education in South Africa found no significant differences between the genders concerning the "arrangement of lectures and material" (Saunders, 2005, p. 149). Therefore, it is apparent that gender may not be a significant factor in the perceptions of university, or cultural, tasks and tools. This finding does not account for the differences in the throughput rates between the two genders, i.e. males were found to have a significantly lower throughput rate that females (Preliminary Report of the

[26] Italics appear in the original.

Working Group on Retention and Throughput, 2003). Therefore, the differences in throughput rates between the genders may be due to others factors, and not to understandings of the tasks and tools of university. Further investigation is required in order to account for these gender differences.

The findings concerning race stand in strong contradiction to the existing literature of Academic Development in South Africa in which constructions of educational advantage and disadvantage has been founded on racial grounds. This has been the dominant perspective at the University of the Witwatersrand (e.g. de Groot & Dison, 1996; Dison, Granville, Delmont and Button, 2000; Dison & Pinto, 1996; Dison & Rule, 1996; Granville, 2002; Stein & Janks, 1996), and at other South African universities (e.g. Dunstan & Frescura, 2000; Gravett and Henning, 1998; Hardman and Ng'ambi, 2003). Racial differences have primarily been construed (in politically correct discourse) in South Africa as based upon language issues. Accordingly, labels describing race have not been used. Rather, race has been euphemistically referred to as "English Second Language". Thus, racial differences have been described in terms of language differences (de Groot & Dison, 1996; Dison, Granville, Delmont & Button, 2000; Dison & Pinto, 1996; Dison & Rule, 1996; Granville, 2002).

The concept of "race as language" has not been utilised in other countries, yet differences between the different races exist (e.g. Claxton, 1990; den Brok, Levy, Rodriguex & Wubbels, 2002; Thomas, Bol & Warkenten, 1991). Pollard (1993), in an investigation of the schooling system in the United States, found inconclusive differences between the races in terms of academic achievement. She ascribed these racial differences in terms of such internal factors as motivation and self-esteem. Loo and Rolinson (1986), also working in the United States and examining differences between American-Hispanic and African-American university students, ascribed differences to internal feelings of alienation, academic difficulties, and academic satisfaction. External factors utilised included support provided by the university and ethnic representation at the university (Loo & Rolinson, 1986). However, both of these fairly dated studies did not specifically examine student perceptions of the ideological tasks and tools of university.

What the South African studies (de Groot & Dison, 1996; Dison, Granville, Delmont & Button, 2000; Dison & Pinto, 1996; Dison & Rule, 1996; Dunstan & Frescura, 2000; Granville, 2002; Gravett & Henning, 1998; Hardman & Ng'ambi, 2003; Stein & Janks, 1996) have in common is the failure to empirically examine the students' actual perceptions of cultural tasks and tools. Evidence presented describes teaching strategies alone, is anecdotal and may be accused of lacking scientific rigor. These studies are based on the belief that there is a need for foundational courses (usually only for Black students) at the university level. Thus, Black students, even though they are labelled as "English Second Language" (ESL) students have been assumed to be at a disadvantage. Teaching and Learning Advisors may, therefore, be located within a multicultural approach, which does reject racism. However, this approach may not necessarily be free of racist notions. Accordingly,

> (i)n South Africa, there is perhaps understandably a great reluctance to engage with anti-racist education. As one educationalist put it, the issue of race can only get onto the educational agenda through the multicultural backdoor. At the same time, multicultural education is often criticised for trivialising culture and because of this it may unwittingly enforce stereotypes (Narsee, 2004, pp. 87-88).

The current study does not in any way deny that Black students have been, and in some cases continue to be, the recipients of secondary school education that is inferior to that of both White and Indian students (Chisholm, 2005). However, race does not account for differences in the perceptions of the students concerning the language-based, textual cultural tasks and tools.

It also has to be remembered that the Health Sciences students represent students who have achieved in their secondary school educations in order to be accepted into such "prestigious" programmes. The ideas of Academic Development practitioners were not centred on this type of student. Thus, secondary school achievement may serve to unify these students beyond the parameters of race. The findings concerning the dialectic of knowledge and skills (see Section 4.11.) suggest that the students focus almost exclusively on the knowledge side of the dialectic. Thus, all students are underprepared in terms of skills development when in their First Year of university education. Perhaps the dialectic between knowledge and skills (which is language-based or located within a particular discourse) may account for differences between

the students and provides a more coherent explanation than any discourses about racial differences.

Willie and Cunnigen (1981) provide a review of studies conducted in the United States between 1965 and 1981 when political necessity dictated that Black students were to have greater access to the university system. While changes were not on the scale of the process of transformation in South Africa, the issues of equity and redress became more of a priority, and thus the situation has similarities to the current one in South Africa. The authors concluded, "Black students in white colleges and universities exhibit a range of interests, ideologies and attitudes" (Willie & Cunnigen, 1981, p. 186). Arguably, a range is displayed by all racial groupings. Therefore, the lack of significant differences between the races is a positive finding. It is a positive one because it avoids the stereotyping of characteristics of racial groups (e.g. English Second Language or underprepared) and allows for differences between individuals within a certain racial group.

The problem of fixed categorical properties of individuals (e.g. race and gender) may be a difficulty for both Academic Development practitioners and the current study. While race may be a helpful tool for analysis, its categories are "assumed to be mutually exclusive" and "do not capture the dynamic nature of the cultural transactions of human life" (Rogoff & Angelillo, 2002, p. 215). These authors argue that racial categorizations may not necessarily be independent of each other and may vary across different circumstances. Thus, each category is "a cultural construction nestled in the historical circumstances and values of particular communities" (Rogoff & Angelillo, 2002, p. 215). This may be particularly the case in South Africa in which race has been both highly politicised and contested. The students in the current study were divided into racial categories provided by the administration of the University. Whether or not the students would ascribe the same label to themselves and whether individuals in these groups share similarities is certainly debatable.

The findings concerning race and gender have to be considered in relation to the importance placed on the sociohistorical circumstances in the study. A focus on sociohistorical circumstances would dictate that the labels of "gender' and "race" demarcate important social and economic differences between individuals,

particularly in South Africa (Stevens, Swart & Franchi, 2006). In terms of future generative practice regarding the disseminative function of universities, the experiences of Black lecturers at historically White universities may provide an essential counterpoint to the current study. The numbers of Black lecturers and students at historically White universities in South Africa is gradually increasing. In the slowly transforming university, there are opportunities for researchers to understand the new dynamics of gender and racial power relations.

A finding that contradicted historical empirical evidence relating to race and higher education was that there were no racial differences found between the students' perceptions of textual mediation. The similarities in the perceptions of the students concerning textual mediation have implications for traditional notions of Academic Development. The few years have been characterised by a lack of interest on the part of the students in attending of Academic Development tutorials (additional, skills-based sessions) in the Department of Psychology. The findings in the current study may account for this. In the "new" South Africa, Black students are no longer "special cases" that need more help than that provided by the mediation that occurs in the normal course of teaching. This is not to deny that the students require active mediation of skills development (see the findings regarding the knowledge-skills dialectic). What it does mean is that the genders and races in particular, are equal in their lack of the skills necessary for learning in Higher Education.

An interesting legacy of the Apartheid era relates to the students willingness (or lack thereof) to provide the researcher with racial information. The Black students were less willing to provide racial information when specifically asked to do so. Many more Black students provided their student numbers when asked than other race groups. The student registration number (although providing all information that the university possesses about the individual student) did not make race as apparent to the students. Perhaps the Black students are more willing to be judged according to their performance and school information than on race alone. This is a further rejection of the notion that Black students should be viewed as "special cases" that need additional help.

All of this may be considered to be a positive finding for the “new” South Africa. It marks a move away from the “disadvantaged” conceptualisation of Black students. Black students perceive the benefits of textual mediation in the same manner as White students. There is no longer a need for a deficit model in terms of Black students alone. The study has demonstrated that even the students who are the highest achievers in school are not adept in the culture of critical thinking. First Year students, of all races and genders, emphasize knowledge tasks and the cognitive abilities and skills of comprehension and application in developing understanding. Perhaps equality, the fundamental tenet of the South African democracy, has been achieved, albeit in a manner that functions to further challenge the academic staff of universities.

REFERENCE LIST

Alexander, P.M. (2004). Diversity at a dual-medium university: factors affecting first-year students' attitudes. *South African Journal of Higher Education*, *18*(1), 202-220.

Allers, N.J. & Vreken, N.J. (2005). Active learning in Physiology practical work. *South African Journal of Higher Education*, *19*(5), 853-863.

Altman, M. (2005). Black empowerment and corporate capital. In J. Daniel, R Southall & J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp.36-52). Cape Town: HSRC Press.

Anderson, L.W. & Krathwohl, D.R. (2001). *A Taxonomy for Learning, Teaching and Assessing: a revision of Bloom's taxonomy of education objectives*. New York: Longman.

Baker, D.S., Bauer, W.I., Hamann, D.L. & McAllister, P.A. (2000). Factors Affecting University Music Students' Perceptions of Lesson Quality and Teaching Effectiveness. *Journal of Research in Music Education*, *48*(2), 102-113.

Ball, A.F. (2000). Preparing teachers for diversity: lessons learned from the US and South Africa. *Teaching and Teacher Education*, *16*, 491-509.

Barton, D. & Hamilton, M. (1998). *Local Literacies: Reading and writing in one community.* London : Routledge.

Baxter Magolda, M.B. (1987). The affective dimension of learning: faculty-student relationships that enhance intellectual development. *College Student Journal*, *21*, 46-58.

Bayer, A.S. (1996). Orchestrating a Text Mediational View of Vygotsky in a College Classroom. *Mind, Culture and Activity*, *3*(3), 165- 184.

Beard, R. M. & Hartley, J. (1984). *Teaching and Learning in Higher Education.* London: Harper and Row Publishers.

Beishuizen, J.J., Hof, E., VanPutten, C.M., Bouwmeester, S. & Asscher, J.J. (2001). Students'and teachers'cognitions about good teachers. *British Journal of Educational Psychology*, *71*, 185- 201.

Belmont, J.M. (1995). Discussion: A view From an Empiricist's Window. *Educational Psychologist*, *30*(2), 99-102.

Berg, B.L. (1995). *Qualitative research methods for the social sciences*. 2nd Edition. Boston: Allyn and Bacon.

Bertram, C. (2003). Moving towards massification: reflections on a mixed-mode teacher education programme. *Perspectives in Education*, *21*(2), 71-82.

Besozzi,E. (1999). Social Sciences, Reflective Practice and Educational Context. *Pedagogy, Culture and Society*, *7*(2), 22-37.

Beylefeld, A.A. & Jama, M.P. (2002). Incorporating transferable skills in an undergraduate medical curriculum: learning from experience. *South African Journal of Higher Education*, *16*(1), 113- 121.

Biggs, J. (1987). *Student Approaches to Learning and Studying*. Melbourne: Australian Council for Educational Research.

Biggs, J. (1999). *Teaching for Quality Learning at University: What the Student Does*. Buckingham: Open University Press and the Society for Research Into Higher Education.

Biggs, J. (2001a). The revised two-factor Study Process Questionnaire:R-SPQ-2F. B*ritish Journal of Higher Educational Psychology*, *71*, 133-149.

Biggs, J. (2001b). The Reflective Institution: Assuring and Enhancing the Quality of Teaching and Learning. *Higher Education*, *41*(3), 221-238.

Bisschoff, T.C. & Nkoe, M.N. (2005). The merging of further education and training colleges: Challenging factors in three provinces of South African. *South African Journal of Higher Education*, *19*(3), 611-625.

Bitzer,E. (2001). Understanding co-operative learning: a case study in tracing relationships to social constructivism and South African socio-educational thought. *South African Journal of Higher Education*, *15*(2), 98- 104.

Bitzer, E. (2002). South African legislation on limiting private and foreign higher education: protecting the public or ignoring globalisation? *South African Journal of Higher Education*, *16*(1), 22-28.

Bitzer, E. (2005). First-year students' perceptions of generic skills competence and academic performance: A case study at one university. *South African Journal of Higher Education*, *19*(3), 580-595.

Blank, M. & White, S.J. (1999). Activating the zones of proximal development in school: obstacles and solutions. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 331-352). London: Routledge.

Bligh, J., Llloyd-Jones,G. & Smith, G. (2000). Early effects of a new problem-based clinically oriented curriculum on students' perceptions of teaching. *Medical Education*, *34*, 487-489.

Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H. & Krathwohl, D.R. (1957). *Taxonomy of Educational Objectives. The Classification of Educational Goals. Handbook 1, Cognitive Domain*. New York: David McKay Company Inc.

Bloome, D. & Golden, C. Literacy Learning, Classroom Processes, and Race. A Microanalytic Study of Two Desegragated Classrooms. *Journal of Black Studies*, *13*(2), 207-226.

Blunt, R.J.S. & Cunningham, P.W. (2002). Theoretical underpinnings of transformation: a case study. *South African Journal of Higher Education*, *16*(3), 127-138.

Bogoiavlenski, D.N. & Menchinskaia, N.A. (1959). The Relation between Learning and Mental Development in Schoolchildren. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.50-67) London: Routledge and Kegan Paul.

Bogoiavlenski, D.N. & Menchinskaia, N.A. (1960). The Psychology of Learning 1900-1960 . In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.101-164) London: Routledge and Kegan Paul.

Bonetti, S. (1994). On the use of student questionnaires. *Higher Education Review*, *26*(3), 57-64.

Bourdieu, P, Passeron, J. & de Saint Martin, M. (1996). Students and the Language of Teaching. In P. Bourdieu, J. Passeron & M. de Saint Martin (eds). *Academic Discourse* (pp 35-79). Cambridge: Polity Press.

Bowden, J. & Marton, F. (1999). *The University of Learning. Beyond Quality and Competence in Higher Education*. London: Kogan Page.

Boyd, L.G. & Fresen, J.W. (2004). Quality promotion and capacity development – could they come to the aid of weary South African academics. *South African Journal of Higher Education*, *18*(2), 5-15.

Brandt, D. & Clinton, K. (2002). Limits of the local: Expanding perspectives on literacy as a social practice. *Journal of Literacy Research*, *34*(3), 337-357.

Bronfenbrenner, U. (1979). *Towards the ecology of human development*. Cambridge, Mass: Harvard University Press.

Brown, A.L. & Ferrara, R.A. (1999). Diagnosing zones of proximal development. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 225-258). London: Routledge.

Brown, G. & Atkins, M. (1988), *Effective Teaching in Higher Education*. London: Methuen.

Brown, R.A.J. & Renshaw, P.D. (2000). Collective Argumentation: A Sociocultural Approach to Reframing Classroom teaching and Learning. In H. Cowie & G. van der Aalsvoort (eds). *Social Interaction in Learning and Instruction. The Meaning of Discourse for the Construction of Knowledge* (pp 35-51). Amsterdam: Pergamon.

Brown, T. (1999). The role of social interaction in constructing knowledge. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 57-66). London: Routledge.

Bruner, J.S. (1987). Prologue to the English Edition. In R.W. Rieber & A.S. Carton (eds) and N. Minick (translator). *The Collected Works of L.S. Vygotsky. Volume One. Problems of General Psychology*. New York: Plenum Press.

Butler, M. & Collins, D. (2000). Teaching Thinking and Writing to First Year Nurses. *The Proceedings of the Fourth Annual Pacific Rim First Year in Higher Education Conference*, Brisbane, Australia.

Cameron, D., Frazer, E., Harvey, P., Rampton, B. & Richardson, K. (2002). Power/ Knowledge: The Politics of Social Science. In A. Jaworski & N. Coupland (Eds). *The Discourse Reader*. London: Routledge.

Cassim, S. (2005). Reflections on equity and diversity in higher education institutions in South Africa. *South African Journal of Higher Education*, *19*(4), 653-665.

Castle, J., Crewe, M., Gordon, A., Mahomed, H., Mahammed, N., Motala, E., Subottzky, G., Modiba, M., Motala, S., Vally, S. & Tshoane, M. (1999). *"A Call to Action". A Review of Minister Kader Asmal's Educational Priorites.* Education Policy Unit, University of the Witwatersrand.

Cele, N. (2005). The absence of a 'norms and standards' legislative framework for institutional accreditation in private higher education: A disconnection between policy, expectations and quality assurance practices. *South African Journal of Higher Education*, *19*(3), 596-610.

Charlesworth, G., Grossman, E., Hadingham, J., Janks, H., Mycock, D. & Scholes, M. (2006). *Strategies for Successful Postgraduate Supervision*. Johannesburg: Wits University Press.

Chisholm, L. (2005). The state of South Africa's schools. In J. Daniel, R Southall & J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp. 53-71) Cape Town: HSRC Press.

Claxton, G. (1990). *Teaching to Learn. A Direction for Education*. London: Cassell.

Clay, M.M., & Cazden, C.B. (1999). A Vygotskian interpretation of Reading Recovery. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 353-372). London: Routledge.

Coats, M. (2002). Compliance or creativity? Using learning outcomes to enhance student autonomy. In M. Mostert & A. Dison (eds), *Academic Development: Changes and Challenges* (pp. 65-89). Grahamstown: Rhodes University Press.

Cohen, G.A. *Karl Marx's Theory of History. A Defence*. Oxford: Clarendon Press.

Cole, M. (2001). Remembering History in Sociocultural Research. *Human Development*, *44*, 166-169.

Cole, M. (2005a). Cross-Cultural and Historical Perspectives on the Developmental Consequences of Education. *Human Development*, *48*, 195-216.

Cole, M. (2005b). Methodological Challenges and Continuing Social Concerns. *Human Development*, *48*, 227-231.

Cole, M. & Wertsch, J.V. (1996). Beyond the Individual-Social Antimony in Discussions of Piaget and Vygotsky. *Human Development*, Prometheus.org.uk.

Cole, M. & Scribner, S. (1978). Introduction. In M. Cole, V. John-Steiner, S. Scribner & E. Souberman (eds). *Mind in Society. The Development of Higher Psychological Processes*. Cambridge, Massachusetts: Harvard University Press.

Cole, P.G. & Chan, L. (1994). *Teaching Principles and Practice*. New York: Prentice Hall.

Conrad, C. & Julian, G.S. (2006). Investigating student diversity in the wildlife and fisheries curriculums at universities in the United States. G.SanJulian @cnr.usu.edu. Retrieved on 28 March 2006.

Cordeiro, P. (1999). Vygotsky in the classroom: an Interactionist literacy framework in mathematics. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 383-413). London: Routledge.

Craig, A.P. & Kernoff, R.J. (1995). Development of textual interpretation by underprepared students. *South African Journal of Higher Education*, 9,1, 23-30.

Cronje, M, Jacobs, G.J. & Murdoch, N. (2002). Rewarding quality reaching in higher education: the evading dream? *South African Journal of Higher Education*, *16*(2), 32- 40.

Crook, C. (1999). Computers in the zone of proximal development: implications for evaluation. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 414-429). London: Routledge.

Czerniewicz, L. & Brown, C. (2005). Access to ICT for teaching and learning: from single artefact to inter-related sources. *International Journal of Education and Development using ICT*, *1*(2), retrieved from http://ijedict.dec. uwi/viewarticle.php ?id=38 on 26 September 2006.

Daniels, H. (1996). Introduction: Psychology in a social world. In H. Daniels (ed). *An Introduction to Vygotsky*. London: Routledge.

Daniels, H. (2001). *Vygotsky and Pedagogy*. London: Routledge.

Dart, B.C. & Clarke, J.A. (1991). Helping students become better learners: a case study in teacher education. *Higher Education*, *22*, 317-335.

Das, J.P. (1995). Some Thoughts on Two Aspects of Vygotsky's Work. *Educational Psychologist*, *30*(2), 93-97.

Davydov, V.V. (1988). Problems of developmental teaching: The experience of theoretical and experimental psychological research. *Soviet Education*, *30*, 8-10.

Davydov, V.V. & Radzikhovskii, L.A. (1985). The concept of activity in Soviet psychology. In J.V. Wertsch (ed). *Culture, communication and cognition: Vygotskian perspectives*, (pp. 35-65). New York: Cambridge University Press.

de Boer, A-L, Steyn, T. & du Toit, P.H. (2001). A whole brain approach to learning in higher education. *South African Journal of Higher Education*, *15*(3), 185-193.

Deem, R. (1998). 'New Mangerialism' and Higher Education: the management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education*, *8*(1), 47-70.

de Groot, M. & Dison, L. (1996). Responding to Diversity in University Teaching: A case study. *Academic Development*, *2*(1), 25- 36.

den Brok, P.J., Levy, J., Rodriguez, R. & Wubbels, T. (2002). Perceptions of Asian-American and Hispanic-American teachers and their students on teacher interpersonal communication style. *Teaching and Teacher Education*, *18*, 447-467.

Delafield, B. (1999). Lessons: philosophy for children. In I. Parker & the Bolton Discourse Network (editor). *Critical textwork. An introduction to varieties of discourse and analysis*. Buckingham: Open University Press.

Department of Arts, Culture, Science and Technology (DACST). (1996). White Paper on Science and Technology: Preparing for the Twenty-First Century.

Department of Education (DOE). (1996). The South African Qualifications Authority Act.

Dippelhofer-Stiem, B. (1986). How to measure university environment? Methodological implications and some empirical findings. *Higher Education*, *15*, 475-495.

Dison, L., Granville, S. Delmont, L. & Button, A. (2002). The Long and Short of It: the Role of Short-answer Questions in Scaffolding Higher-order Thinking. *SAAD Conference: Student Centred Learning: Challenges and Opportunities for Knowledge in South Africa*. Johannesburg, 2-3 December 2002.

Dison, L. & Pinto, D. (1995). Collaboratively developed discipline-based materials for academic development practice. *South African Journal of Higher Education, 9*(2), 160-163.

Dison, L. & Rule, P. (1996). Bridging the Subject-Student Divide: An Integrated Approach to Developing Foundational Curricula. *Academic Development*, 2(2), 83- 97.

Downs, C.T., (2005). Is a year-long access course into university helping previously disadvantaged black students in biology. *South African Journal of Higher Education*, *19*(4), 665-683.

Drever, J. (1978). *The Penguin Dictionary of Psychology*. Middlesex: Penguin.

Dukes, R.L. & Victoria, G. (1989). The Effects of Gender, Status, and Effective Teaching on the Evaluation of College Instruction. *Teaching Sociology*, *17*, 447-457.

Dunstan, L. & Frescura, M. (2002). Academic Difficulties Experienced By First-Year Psychology Students at the University of the Western Cape. In M. Mostert &

A. Dison (Eds.), *Academic Development: Changes and Challenges* (pp171-178). Grahamstown: Rhodes University Press.

du Plessis, A., Muller, H., & Prinsloo, P. (2005). Determining the profile of the successful first-year accounting student. *South African Journal of Higher Education*, *19*(4), 684-698.

Du Plessis, L.A., Janse van Rensburg, G. & van Staden, C.J. (2005). Realities of a foundation programme implemented as a vehicle to align learners cognitively for entry into a National Diploma in information and communication technology. *South African Journal of Higher Education*, *19*(5), 863-879.

Elbers, E. & Streefland, L. (2000). "Shall we be Researchers Again?" Identity and Social Interaction in a Community of Inquiry. In H. Cowie & G. van der Aalsvoort (Eds.). *Social Interaction in Learning and Instruction. The Meaning of Discourse for the Construction of Knowledge* (pp 35-51). Amsterdam: Pergamon.

Elhammoumi, M. (2002). To Create Psychology's Own Capital. *Journal for the Theory of Social Behaviour*, *32*(1), 89-104.

Elkonin, D.B. (1959).The Psychology of mastering the Elements of Reading. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.165-179) London: Routledge and Kegan Paul.

Engels, F. (1978). Letters on Historical Materialism. In R.C. Tucker (ed). *The Marx-Engels Reader* (2nd Edition). New York : W.W. Norton and Company Inc.

Engestrom, Y. (1996). Non scolae sed vitae discimus: towards avoiding encapsulation in school learning. In H. Daniels (ed). *An Introduction to Vygotsky* (pp.151-170). London: Routledge.

Entwistle, N.J (1991). Approaches to learning and perceptions of the learning environment. *Higher Education*, *22*, 201-204.

Entwistle, N.J. & Entwistle, A. (1991). Contrasting forms of understanding for degree examinations: the student experience and implications. *Higher Education*, *22*, 205-227.

Entwistle, N.J., Meyer, J.H.F. & Tait, H. (1991). Student failure: disintegrated patterns of study strategies and perceptions of the learning environment. *Higher Education*, *21*, 249-261.

Ertmer, P.A. & Dillon, D.R. (1998). 'Shooting in the dark' versus 'breaking it down': Understanding student approaches to case-based instruction. *International Journal of Qualitative Studies in Education*, *11*(4), 605-624.

Fataar, A. (2003). Higher education policy discourse in South Africa: a struggle for alignment with macro development policy. *South African Journal of Higher Education*, *17*(2), 31-39.

Feldens, M.D.F. & Duncan, J.K. (1986). Improving university teaching: what Brazilian students say about their teachers. *Higher Education*, *15*, 641-649.

Felder, R. & Brent, L. (1994). Survival Kit for New Engineering Educators. *ASEE Prism*, *4*(2), pp30-34.

Felder, R.M. & Brent, R. (2004). The Intellectual Development of Science and Engineering Students. Teaching to Promote Growth. *Journal of Engineering Education*, *93*(4), 279-291.

Feldman, R.S. (1985). Nonverbal Behaviour, Race, and the Classroom Teacher. *Theory into Practice*, *2*4, 1, 44-49.

Fenwick, T.J. (2000). Expanding conceptions of experiential learning: A review of the five contemporary perspectives on cognition. *Adult Education Quarterly*, *50*(4), 243-272.

Fleshner, E.A. (1958). Psychology of the Mastery and Application by Schoolchildren of some Concepts in Physics. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.198-213). London: Routledge and Kegan Paul.

Fourie, C.M. (2001). The development of a student rating of teaching effectiveness questionnaire. *South African Journal of Higher Education*, *15*(1), 84-91.

Fraser, W.J., van Ede, D., Hislop-Esterhuysen, N. & Owen, R. (2004). Robert Sternberg's mental self-government theory and its contribution to our understanding of first-year distance learners' multiple thinking style preferences. *South African Journal of Higher Education*, *18*(2), 206-232.

Frescura, M. (2002). The Evaluation of an Interdisciplinary Foundation Course in the Faculty of Community and health Sciences at the University of the Western Cape. *Academic Development*, *2*(1), 90-100.

Friedrich-Nel, H.S., de Jager, L. & Nel, M.N. (2005). An assessment model in outcomes-based education and training (OBET) for health sciences and technology in South Africa. *South African Journal of Higher Education*, *19*(5), 880-899.

Frith, V., Jaftha, J. & Prince, R. (2004). Evaluating the effectiveness of interactive computer tutorials for an undergraduate mathematical literacy course. *British Journal of Educational Technology*, *35*(2), 159-171.

Furst, E.J. (1981). Bloom's Taxonomy of Educational Objectives for the Cognitive Domain: Philosophical and Educational Issues. *Review of Educational Research*, *51(*4), 441-453.

Gallimore, R. & Tharp, R. (1999). Teaching mind in society: teaching, schooling, and literate discourse. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 296-330). London: Routledge.

Gee, J.P. (1999). Review of the "Learning Paradox" Manuscript. *American Educational Research Journal*, *36*(1), 87-95.

Gee, J. P. (2001). Identity as an Analytic Lens for Research in Education. *Journal of Research in Education*, *25*, 99-125.

Geertz, C. (1973). *The Interpretation of Cultures*. New York: Basic Books.

Gelb, S. (2005) An overview of the South African economy. In J. Daniel, R Southall J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*.(pp.120-142) Cape Town: HSRC Press.

Gibbs, G. (1992). *Improving the Quality of Student Learning*. Oxford Brooks University: Oxford.

Giddens, A. (1995). *A Contemporary Critique of Historical Materialism* (2nd edition). Houndmills: Macmillan Press Ltd.

Giddens, A. (1999).Modernity and Self-identity: Tribulations of the Self. In A. Jaworski & N. Coupland (Eds). *The Discourse Reader*. London: Routledge.

Gindis, B. (1995). The Social/ Cultural Implications of Disability: Vygotsky's Paradigm for Special Education. *Educational Psychologist*, *30*(2), 77-82.

Glick, J. (1997). Prologue to *The Collected Works of L.S. Vygotsky. Volume4, The History of the Development of Higher Mental* Functions. New York: Plenum Press.

Goddard, J.T. & Foster, R.Y. (2001). The experiences of neophyte teachers: a critical constructivist assessment. *Teaching and Teacher Education*, *17*, 349- 365.

Goode, H. & Thomen, C. (2001). Implementing an outcomes-based approach to university essay writing. *South African Journal of Higher Education*,*15*(3), 194- 201.

Goodley, D. (1999). Action: self-advocacy and change. In I. Parker & the Bolton Discourse Network (Eds). Critical textwork. An introduction to varieties of discourse and analysis. (pp. 47-63). Buckingham: Open University Press.

Goolam, F. (1997). A stakeholder evaluation on the impact of action research on teaching practice. *South African Journal of Higher Education*, *11*(1), 106-113.

Govender, K. (2006). "It's not us, they're spreading AIDS": Race, schoolboy masculinities and perception of personal risk in relation to HIV/AIDS among male youth in post-apartheid South Africa. In G. Stevens, T. Swart and V. Franchi (eds), *A Race Against Time* (pp. 107-152). Pretoria: UNISA Press.

Gow, L. & Kember, D. (1990). Does higher education promote independent learning? *Higher Education*, *19*, 307-322.

Granville, S. (2002). Initiates into the academy: students becoming researchers. In M. Mostert & A. Dison (eds), *Academic Development: Changes and Challenges* (pp. 179-194). Grahamstown: Rhodes University Press.

Gravett, S. & Henning, E. (1998). Teaching as dialogic mediation: a learning-centred view of higher education. *South African Journal of Higher Education*, *12*(2), 60-68.

Grayson, D.J. (1996). A holistic approach to preparing disadvantaged students to succeed in tertiary science studies. Part 1. Design of the Science Foundation Programme. *International Journal of Science Education*, *18*(8), 993-1013.

Griffin, P. & Cole, M. (1999). Current activity for the future: the Zo-ped. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 276-295). London: Routledge.

Haggis, T. (2003). Constructing Images of Ourselves? A Critical Investigation into Approaches to Learning Research in Higher Education. *British Educational Research Journal*, *29*(1), 89-104.

Hamilton, D. (2000). *Discourse*. Buckingham: Open University Press.

Hammersley, M. & Atkinson, P. (1995). *Ethnography. Principles and Practice* (2nd). London: Routledge.

Hanfman, E. & Vakar, G. (1962). *Thought and Language*. Cambridge, MA: MIT Press.

Hannah, L.S. & Michaelis, J.U. (1977). *A comprehensive framework for instructional objectives: a guide to systematic planning and evaluation*. Reading, MA: Addison-Wesley.

Hardman, J. & Ng'ambi, D. (2003). A questioning environment for scaffolding learners' questioning engagement with academic text: a university case study. *South African Journal of Higher Education*, *17*(2), 139-146.

Harre, R. (1981). The positivist-empiricist approach and its alternative. In P. Reason & J. Rowan (Eds). *Human Inquiry. A Sourcebook of New Paradigm Research*. (pp.33-46). Chichester: John Wiley and Sons.

Hawker, S. (2001). *The Oxford Dictionary, Thesaurus, and Wordpower Guide*. Oxford: Oxford University Press.

Hayden, M. & Carpenter, P. From school to higher education in Australia. *Higher Education*, *20*, 175-196.

Hebert, E. & Worthy, T. (2001). Does the first year of teaching have to be a bad one? A case study of success. *Teaching and Teacher Education*, *17*, 897-911.

Heckhausen, J. (1999). Balancing for weakness and challenging developmental weakness: a longitudinal study of mother-infant dyads in apprenticeship interactions. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 67-80). London: Routledge.

Hedegaard, M. (1996). The zone of proximal development as basis for instruction. In H. Daniels (ed). *An Introduction to Vygotsky* (pp171-195). London: Routledge.

Henning, E. (1997). Viability and adaptation in a socio-constructivist perspective on knowledge-making: a response to Zietsman and to Magadla. *South African Journal of Higher Education*, *11*(2), 21-27.

Henson, D. & Owusu-Ampomah, K. (2005). A better life for all? Service delivery and poverty alleviation. In J. Daniel, R Southall and J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp. 511-540).Cape Town: HSRC Press.

Henson, R.K. (2001). The effects of participation in teacher research on teacher efficacy. *Teaching and Teacher Education*, *17*, 819-836.

Higher Education Act, Act 101 of 1997. *Republic of South Africa Government Gazette*, (18207), 1-55.

Higher Education Amendment Act, Act 55 of 1999. *Republic of South Africa Government Gazette*, *413*(20651), 1-6.

Higher Education Amendment Act, Act 54 of 2000. *Republic of South Africa Government Gazette*, *425*(21784), 1-10.

Hind, M., Norman, I., Cooper, S., Gill, E., Hilton, R., Judd, P. & Jones, S.C. (2003). Interprofessional perceptions of health care students. *Journal of Interprofessional Care*, *17*(1), 21-34.

Hofer, B. & Pintrich, P. (1997). The development of epistemological theories: beliefs about knowledge and knowing in relation to learning. *Review of Educational Research*, *67*(1), 88-140.

Holtzhausen, S.M. (2005). The supervisor's accountability versus postgraduates' responsibility within the academic writing arena. *South African Journal of Higher Education*, *19*(1), 89-100.

Hugo, A. (2003). From literacy to literacies: preparing education in South Africa for the future. *South African Journal of Higher Education*, *17*(2), 46-53.

Hugo, G. (2005). The demography of Australia's academic workforce: The ATN universities. *Australian Technology Network of Universities (ATN) Conference on Building Partnerships: Finding Solutions – the ATN Workforce in Profile*, Melbourne, Australia, 9-11 February 2005.

Humphreys. M. (1999). Ethnography: reading across culture. In I. Parker & the Bolton Discourse Network (Eds). *Critical textwork. An introduction to varieties of discourse and analysis* (pp. 74- 95). Buckingham: Open University Press.

Hutchings, C. (2005). Aspects of students' learning that effect control of their texts: The Writing Centre's experience. *South African Journal of Higher Education*, *19*(4), 715-734.

Huysamen, G. K. (2001). A comparative study of first-year psychological test participants and evaders. *South African Journal of Higher Education*, *15*(3), 150-153.

Ivanovic, R. (1998). *Writing and Identity: The Discoursal Construction of Identity in Academic Writing*. Amsterdam: John Benjamins.

Jack, M. (1996). Rationale, Problems and Pitfalls of Foundation Course Design: An Experience from the Faculty of Social Science, University of Natal Pietermaritzburg. *Academic Development*, *2*(2), 65- 81.

Jacobs, G. & Gravett, S. (1998). University teachers' conceptions of their teaching role. *South African Journal of Higher Education*, *12*(1), 54-60.

Jansen, J.D. (2001). Does the national plan effectively address the critical issues facing higher education? *South African Journal of Higher Education*, *15*(3), 5-9.

Jansen, J.D., Habib, A., Gibbon, P. & Parekh, A. (2001). Accounting for change, the micropolitics of university restructuring. Part three: global pressures, local responses. *South African Journal of Higher Education*,*15*(3), 32- 38.

Jaques, D. (1991). *Learning in Groups*, 2nd ed. Essex: Kogan Page.

Jonesick,V.J. (1998). *"Stretching" Exercises for Qualitative Researchers*. Thousand Oaks: Sage Publications.

Kahle, J.B., Parker, L.H., Rennie, L.J. & Riley, D. (1993). Gender Differences in Science Education: Building a Model. *Educational Psychologist*, *28*(4), 379-404.

Kalmykova, Z.I. (1955). Psychological Prerequisites for Increasing the Effectiveness of learning in Problem Solving in Arithmetic.In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.180-191) London: Routledge and Kegan Paul.

Karpov, Y.V. (2006). *The Neo-Vygotskian Approach to Child Development*. New York: Cambridge University Press

Karphov, Y.V. & Brandsford, J.D. (1995). L. S. Vygotsky and the Doctrine of Empirical and Theoretical Learning. *Educational Psychologist*, *30*(2), 61-66.

Kegan, D.L. (1977). Using Bloom's Cognitive Taxonomy for Curriculum Planning and Evaluation in Nontraditional Educational Settings. *Journal of Higher Education*, *48*(1), 63- 77.

Kelly, K. (1999). Calling it a Day: Reaching Conclusions in Qualitative Research. In M Terre Blanche & K. Durrheim (Eds). *Research in Practice: Applied Methods for the Social Sciences.* (pp. 27-39). Cape Town: UCT Press.

Kember, D. & Wong, A. (2000). Implications for evaluation from a study of students' perceptions of good and poor teaching. *Higher Education*, *40*, 69-97.

Kilfoil, W.R. (2003). Implementing National Qualifications Framework policy. *South African Journal of Higher Education*, *17*(2), 54-59.

Killen, R. & Hattingh, S.A. (2004). A theoretical framework for measuring the quality of student learning in outcomes-based education. *South African Journal of Higher Education*, *18*(1), 72-86.

Kissack, M. & Enslin, P. (2003). Reconstruction from the ruins: higher education policy and the cultivation of citizenship in the new South Africa. *South African Journal of Higher Education*, *17*(3), 36-48.

Kistan, C. (2002). Recognition of prior learning: a challenge to higher education. *South African Journal of Higher Education*, *16*(1), 169-173. .

Knox, J.E. & Stevens, C.B. (1993). Introduction to *The Collected Works of L.S. Vygotsky. Volume 2,The Fundamentals of Defectology (Abnormal Psychology and learning Disabilities).* New York: Plenum Press.

Koch, E. & Kriel, M. (2005). An argument for integrating language or language-related skills in the accounting curriculum. *South African Journal of Higher Education*, *19*(3), 626-637.

Koch, S.E. & Foxcroft, C.D. (2003). A developmental focus to admissions testing: admissions and placement standards. *South African Journal of Higher Education*, *17*(3), 193-208.

Kostiuk, G.S. (1956). Some Aspects of the Interrelation between Education and the Development of Personality. In B. Simon & J. Simon (Eds., 1963), *Educational Psychology in the U.S.S.R.*.(pp. 35-49). London: Routledge & Kegan Paul.

Kozulin, A. (1990). *Vygotsky's psychology: A biography of ideas*. London: Harvester.

Kozulin, A. (1996). The concept of activity in Soviet psychology: Vygotsky, his disciples and critics. In H. Daniels (ed). *An Introduction to Vygotsky* (pp99-122). London: Routledge.

Kozulin, A. & Presseisen, B.Z. (1995). Mediated Learning Experience and Psychological Tools: Vygotsky's and Feuerstein's Perspectives in a Study of Student Learning. *Educational Psychologist*, *30*(2), 67-75.

Kraak, A. (1999). Competing Education and Training Policy Discourses: A 'Systematic' versus 'Unit Standards' Framework. In J. Jansen & P. Christie (Eds). *Changing Curriculum. Studies on Outcomes-based Education in South Africa* (pp. 21-58). Cape Town : Juta & Co Ltd.

Krutetski, V.A. (1961). Some Characteristics of the Thinking of Pupils with Little Capacity for Mathematics. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.214-232). London: Routledge and Kegan Paul.

Kuhn, D. (1999). A Developmental Model of Critical Thinking. *Educational Researcher*, *25*(4), 5-11.

Labuschagne, M. & Mashile, E.O. (2005). Factors influencing choice between print and online delivery methods in a distance education institution: A case study. *South African Journal of Higher Education*, *19*(3), 566-579.

Lake, D.A. (2001). Student Performance and Perceptions of a Lecture-Based Course Compared with the Same Course utilizing Group Discussion. *Physical Therapy*, *81*(3), 896-902.

Lau, D.C. (2001). Analysing the Curriculum Development Process: three models. *Pedogogy, Culture and Society*, *9*(1), 29- 44.

Lave, J. (1988). *Cognition in practice: Mind mathematics and culture in everyday life*. Cambridge: Cambridge University Press.

Lave, J. (1993). The practice of learning. In S. Chaiklin & J. Lave (eds), *Understanding practice. Perspectives on activity and context*. (pp.59-82). Cambridge: Cambridge University Press.

Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Lave, J. & Wenger, E. (1996). Practice, person, social world. In H. Daniels (ed). *An Introduction to Vygotsky* (pp 143-150). London: Routledge.

Lawton, D. & Dufour, B. (1973). *The New Social Studies. A Handbook for Teachers in Primary, Secondary and Further Education*. London: Heineman Educational Books

Lea, M.R. & Street, B. (1998). Student writing in higher education: An academic literacies approach. *Studies in Higher Education*, *23*(2), 157-174.

Lee, B. (1987). Intellectual origins of Vygotsky's semiotic analysis. In J.V. Wertsch (ed). *Culture, communication and cognition: Vygotskian perspectives*. (pp 66-93). Cambridge: Cambridge University Press.

Legett, T. (2005). The state of crime and policing. In J. Daniel, R Southall and J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp. 431-478). Cape Town: HSRC Press.

Le Grange, L. & Newmark, R. (2002). Postgraduate research supervision in a socially distributed knowledge system: some thoughts. *South African Journal of Higher Education*, *16*(3), 50-57.

Leontiev, A.N. (1959). Principles of Child Mental Development and the Problem of Intellectual backwardness. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.68-82) London: Routledge and Kegan Paul.

Leontiev, A.N. (1997). On Vygotsky's creative development. In R. W. Rieber & J. Wollock (eds), translated by R. van der Veer. *The Collected Works of L.S. Vygotsky, Volume 3, Problems of the Theory and History of Psychology*. (pp. 351-382). New York: Plenum Press.

Lessing, A.C. & Schulze, S. (2002). Postgraduate supervision and academic support: students' perceptions. *South African Journal of Higher Education*, *16*(2), 139-149.

Lloyd, C. (1993). *The Structures of History*. Oxford: Blackwell.

Loo, C.M. & Rolison, G. (1986). Alienation of Ethnic Minority Students at a Predominantly White University. *Journal of Higher Education*, *57*(1), 58-78.

Lourens, A. & Smit, P.J. (2003). Retention: predicting first-year success. *South African Journal of Higher Education*, *17*(2), 169-170.

Louw, B. (2004). Culture. In I. Eloff & L. Ebersohn (Eds). *Keys to Educational Psychology*. (pp. 48-64). Cape Town: UCT Press.

Lumina, C. (2005). Giving students greater responsibility for their own learning: Portfolio assessment and peer-marking as tools for promoting self-directed learning in a second-year law course. *South African Journal of Higher Education*, *19*(3), 482-496.

Luria, A. R. (1960). The Role of Speech in the Formation of Temporary Connections and the Regulation of Behaviour in the Normal and Oligophrenic Child. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp. 83-100). London: Routledge and Kegan Paul.

Luria, A. R. (1976). *Cognitive Development. Its Cultural and Social Foundations*. Cambridge: Harvard University Press.

Luria, A. R. (1978). Biographical Note on L.S. Vygotsky. In M. Cole, V. John-Steiner, S. Scribner and E. Souberman (eds). *Mind in Society. The Development of Higher Psychological Processes*. Cambridge, Massachusetts : Harvard University Press.

Main, A. (1980). *Encouraging Effective Learning – an approach to study counselling*. Edinburgh: Scottish Academic Press.

Mangena, A. (2005). Strategies to overcome obstacles in the facilitation of critical thinking in nursing education. *Nurse Education Today*, *25*(4), 291-298.

Marchbank, J. & Letherby, G. (2007). *Introduction to Gender: Social Science Perspectives*. England: Pearson Education Ltd.

Marton, F. & Saljo, R. (1976). On qualitative differences in learning. *British Journal of Educational Psychology*, *46*, 4-11.

Marx, K. (1978). Capital, Volume One. In R.C. Tucker (ed). *The Marx-Engels Reader* (2nd Edition). New York : W.W. Norton and Company Inc.

Marx, K. (1978). Contribution to the Critique of Hegel's *Philosophy of Right*. In R.C. Tucker (ed). *The Marx-Engels Reader* (2nd Edition). New York : W.W. Norton and Company Inc.

Marx, K. (1978). The *Grundisse*. In R.C. Tucker (ed). *The Marx-Engels Reader* (2nd Edition). New York : W.W. Norton and Company Inc.

Marzarno, R.J. (1998). A theory-based meta-analysis of research on instruction. Aurora, CO: Mid-Continent Regional Educational Laboratory. www.mcrel.org/topics/productDetail, 12 February 2005.

Mason, M. (2000). Teachers as Critical Mediators of Knowledge. *Journal of Philosophy of Education*, *34* (2), 343-352.

Matusov, E. (2001). Intersubjectivity as a way of informing teaching design for a community of learners classroom. *Teaching and Teaching Education*, *17*, 383-402.

Maunder, R.E. & Harrop, A. (2003). Investigating Students' Perceptions of What Contributes to Productive Seminars and Lectures and Staff Predictions of Students' Perceptions: how well do staff know their students? *Journal of Further and Higher Education*, *27*(4), 443-456.

McGill, I. & Beaty, L. (1992). *Action Learning. A Practitioners' Guide*. London: Kogan Page.

McNaughton, S. & Leyland, J. (1999). The shifting focus of maternal tutoring across different difficulty levels on a problem-solving task. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 132-142). London: Routledge.

Mehl, M. (2002). Academic Development and Change : Still Potential Bedfellows? In M. Mostert & A. Dison (eds) *Academic Development: Changes and Challenges*, pp. 17-24. Grahamstown: Academic Development Centre, Rhodes University.

Meins, E. (1999). Security of attachment and maternal tutoring strategies: interaction within the zone of proximal development. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 113-131). London: Routledge.

Meyer, J.H.F. (1991). Study orchestration: the manifestation, interpretation and consequences of contextualised approaches to studying. *Higher Education*, *22*, 297-316.

Meyer, J.H.F. & Muller, M.W. (1990). Evaluating the Quality of Student Learning. An unfolding analysis of the association between perception of learning context and approaches to studying at an individual level. *Studies in Higher Education*, *15*(2), 131- 154.

Mezirow, J. (1998). On critical reflection. *Adult Education Quarterly*, *48*(3), 185-198.

Mfusi, M.X. (2004). The effects of higher education mergers on the resultant curricula of the combined institutions. *South African Journal of Higher Education*, *18*(1), 98- 110.

Milerian, E.A. (1960). Psychological Characteristics of the Transfer of Technical Skills in Older Schoolchildren. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.233-242). London: Routledge and Kegan Paul.

Minick, N. (1987). The Development of Vygotsky's thought: An Introduction. In R.W. Rieber & A.S. Carton (eds) and N. Minick (translator). *The Collected Works of L.S. Vygotsky. Volume One. Problems of General Psychology*. New York: Plenum Press.

Moll, L.C. (1990). *Vygotsky and education: Instructional implications and applications of sociohistorical psychology*. Cambridge: Cambridge University Press.

Mollis, M. & Marginson, S. (2002). The assessment of universities in Argentina and Australia: Between autonomy and heteronomy. *Higher Education*, *43*, 311-330.

Moseley, D., Baumfield, V., Elliot, J., Higgins, S., Miller, Newton, D.P. (2005). *Frameworks for Thinking. A Handbook for Teaching and Learning*. Cambridge: Cambridge University Press.

Motala, S. (1997). From Policy to Implementation: Ongoing Challenges and Constraints. *Wits EPU Quarterly Review of Education and Training in South Africa*, *5*(1), 1-18.

Motala, S., Vally, S. & Modiba, M. (1999). "A Call to Action" A review of Minister K.Asmal's Educational Priorities. *Quarterly Review of Education and Training in South Africa*, *6*(3).

Mouton, J. (1994). *Basic Concepts in the Methodology of the Social Sciences*. Pretoria: HSRC.

Mpofu, D.J.S., Das, M., Stewart, T., Dunn, E. & Schmidt, H. (1998). Perceptions of group dynamics in problem-based learning sessions: A time to reflect on group issues. *Medical Teacher*, *20*(5), 421- 429.

Mseleku, T.D. (2004). National Curriculum Statement. Parents' Guide. Department of Education, South Africa.

Mumba, F.K., Rollnick, M. & White, M. (2002). How wide is the gap between high school and first-year chemistry at the University of the Witwatersrand? *South African Journal of Higher Education*, *16*(3), 148-156.

Naidoo, N.A. & Tshivase, A.C. (2003). Mentored academic writing for higher education in South Africa. *South African Journal of Higher Education*, *17*(3), 227-234.

Nair, P.A.P. (2003). Can prior learning experience serve as a catalyst in the paradigm shift from traditional teaching methodology to outcomes-based educational practice? *South African Journal of Higher Education*, *17*(2), 68-78.

Narsee, S. (2001). Literacy and workplace communication: A South African technikon perspective. *South African Journal of Higher Education*, *15*(3), 47-52.

Natadze, R.G. (1957). The mastery of Scientific Concepts in School. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.192-197). London: Routledge and Kegan Paul.

Naude, P. & Ivy, J. (1999). The marketing strategies of universities in the United Kingdom. *The International Journal of Educational Management*, *13*(3), 126-134.

Nel, C. & Dreyer, C. (2005). Factors predicting English second-language students' use of Web-based information systems: Implications for student support. *South African Journal of Higher Education*, *19*(1), 129- 1143.

Nettles, M.T., Thoeny, R.A. & Gosman, E.J. (1986). Comparative and Predictive Analyses of Black and White Students' College Achievement and Experiences. Jo*urnal of Higher Education*, *57*(3), 289-315.

Neuman, R. (1994). The Teaching-Research Nexus: applying a framework to university students' learning experiences. *European Journal of Education*, *29*(3), 323- 338.

Newman, F. & Holzman, L. (1993). *Lev Vygotsky. Revolutionary scientist*. London: Routledge.

Niven, P.M. (2005). Exploring first-year students' and their lecturers' constructions of what it means to read in a humanities discipline: A conflict of frames? *South African Journal of Higher Education*, *19*(4), 777-789.

Noels, K.A., Clement, R. & Pelletier, L.G. (1999). Perceptions of teachers' Communicative Style and Students' Intrinsic and Extrinsic Motivation. *The Modern Language Journal*, *83*(i), 23-34.

Ntshoe, I.M. (2002). National plan for higher education in South Africa: a programme for equity and redress or globalised competition and managerialism? *South African Journal of Higher Education*, *16*(2), 7-10.

Nunan, D. (1988). *The Learner-Centred Curriculum*. Cambridge; Cambridge University Press.

Nyamapfene, K. & Letseka, M. (1995). Problems of learning among first year students in South African universities. *South African Journal of Higher Education*, *9*(1), 159-167.

Olivier, M.A.J., de Jager, M.J., Grootboom, P. & Tokota, K.B. (2005). Work wellness: A prerequisite for effective education in higher education institutions. *South African Journal of Higher Education*, *19*(5), 912-930.

Osman, R. & Castle, J. (2002). Recognition of prior learning: a soft option in higher education in South Africa? *South African Journal of Higher Education*, *16*(2), 63-68.

Pacifici, C. & Bearison, D.J. (1999). Development of children's self-regulations in idealized and mother-child interactions. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 163-179). London: Routledge.

Padgett, S.K. (2004). Finding a Middle Ground in Qualitative Research. In D.K. Padgett (Ed). *The Qualitative Research Experience*. United States: Thomson Brooks/ Cole.

Pandor, G.N.M. (2004). Ministry of Education. The Higher Education Qualifications Framework. Policy issued under the Higher Education Act, Act No. 101 of 1997.

Park, T. (2003). Rethinking and re-imagining higher education: why? *South African Journal of Higher Education*, *17*(3), 5-8.

Parker, I. (1999). Introduction: varieties of discourse and analysis. In I. Parker and the Bolton Discourse Network (Eds). *Critical textwork. An introduction to varieties of discourse and analysis*. (pp.1-8). Buckingham: Open University Press.

Paterson, A. (2005). Information systems and institutional mergers in South African higher education. *South African Journal of Higher Education*, *19*(1), 113- 128.

Patton, M.Q. (1980).*Qualitative Evaluation Methods*. Beverly Hills: Sage Publications.

Paul, R.W. (1993). *Critical Thinking- what every person needs to survive in a rapidly changing world*. Santa Rosa, CA: Foundation for Critical Thinking.

Payne, G. & Payne, J. (2004). *Key Concepts in Social Research*. London: Sage Publications.

Pea, R.D. (1993). Learning Scientific Concepts Through Material and Social Activities: Conversational Analysis Meets Conceptual Change. *Educational Psychologist*, *28*(3), 265-277.

Penny, A.J. & Harley, K.L. (1995). Critical reflection and mentorship in initial teacher education. *South African Journal of Higher Education*, *9*(1), 73- 84.

Penuel, W.R. & Wertsch, J.V. (1995). Vygotsky and identity formation: A Sociocultural Approach. *Educational Psychologist*, *30*(2), 83-92.

Perkins, D.N. (1986). Thinking Frames. *Educational Leadership*, 4-10.

Perkins, D.N. (1991). Educating for Insight. *Educational Leadership*, 4-8.

Perkins, D.N., Jay, E. & Tishman, S. (1993). Introduction: New Conceptions of Thinking. *Educational Psychologist*, *28*(1), 1-5.

Perkins, D.N. & Salomon, G. (1988). Teaching for Transfer. *Educational Leadership*, 22-32.

Perkins, D.N. & Simmons, R. (1988). Patterns of Misunderstanding: An integrative Model for Science, Math and Programming. *Review of Educational Research*, *58*(3), 303-326.

Perkins, D. N., Tishman, S., Ritchart, R., Donis, K. & Andrade, A. (2000). Intelligence in the Wild: A Dispositional View of Intellectual Traits. *Educational Psychologist*, *12*(3), 269-293.

Perry, W. (1970). *Forms of intellectual and ethical development in the college years*. New York: Holt, Rinehart & Winston.

Phipps, M, Phipps, C, Kask, S. & Higgins, S. (2001). University Students' perceptions of Cooperative Learning: Implications for Administrators and Instructors. *The Journal of Experiential Education*, *24*(1), 14-21.

Pickworth, G. (2001). Developing an instrument to identify MBChB students' approaches to learning. *South African Journal of Higher Education*, *15*(2), 140-145.

Pienaar, J. & Sieberhagen, C. (2005). Burnout and engagement of student leaders in a higher education institution. *South African Journal of Higher Education*, *19*(1), 155-166

Pityana, B. (2005). Guest Editorial: An Open Letter to the President of the Republic of South Africa, His Excellency Mr T.M. Mbeki. *South African Journal of Higher Education*, *19*(3), 415-422.

Pollard, D.S. (1993). Gender, Achievement, and African-American Students' Perceptions of Their School Experience. *Educational Psychologist*, *28*(4), 341-356.

Popper, K.R. (1966). *The Open Society and its Enemies. Volume Two: Hegel and Marx* (5th edition). London: Routledge and Kegan Paul.

Pratt, M.W., Kerig, P., Cowan, P.A. & Cowan, C.P. (1999). Mothers and fathers teaching 3-year-olds: authoritative parenting and adult scaffolding of young children's learning. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 143-162). London: Routledge.

Preliminary Report of the Working Group on Retention and Throughput (2003). *Undergraduate success at the University of the Witwatersrand*. September 2003, unpublished university report.

Pretorius, R. (2003). Quality enhancement in higher education in South Africa: why a paradigm shift is necessary. *South African Journal of Higher Education*, *17(*3), 129-136.

Prinsloo, P. & Beukes, C. (2005). Re-arranging the deckchairs on the Titanic? Teaching ethics in higher education. *South African Journal of Higher Education*, *19*(5), 931-942.

Prosser, M. & Trigwell, K. (1999). *Understanding Learning and Teaching. The Experience in Higher Education*. Buckingham: Open University Press and SRHE.

Quellmaltz, E.S. & Hoskyn, J.A. (1988) Making a difference in Arkansas: the multicultural reading and thinking project. *Educational Leadership*, *45*(7), 52-55.

Quinlan, T. & Willan, S. (2005). HIV/AIDS: finding ways to contain the pandemic. In J. Daniel, R Southall & J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp.479-492). Cape Town: HSRC Press.

Ramsden, P. (1979). Student learning and perceptions of the academic environment. *Higher Education*, *8*, 411-427.

Ramsden, P. (1992). *Learning to teach in higher education*. London: Routledge.

Ratner, C. (1998). Prologue to *The Collected Works of L.S. Vygotsky. Volume 5, Child Psychology.* New York: Plenum Press.

Reddy, V. (2005). The state of mathematics and science education: schools are not equal. In J. Daniel, R Southall & J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp. 493- 514). Cape Town: HSRC Press.

Richards, P.D.G., Howarth, G.R. & Richards, P.A. (2002). Medical ethics education: thoughts on a South African medical bioethics curriculum. *South African Journal of Higher Education*, *16*(3), 89- 94.

Richardson, J.T.E. (2005). Students' perceptions of academic quality and approaches to studying in distance education. *British Educational Research Journal*, *31*(1), 7-27.

Rieber, R. W. & Carton, A.S. (1987). Editors' Foreword to *The Collected Works of L.S. Vygotsky. Volume1, Problems of General Psychology.* New York: Plenum Press.

Rieber, R.W. & Wollock, J. (1997) Prologue to *The Collected Works of L.S. Vygotsky. Volume3, Problems of the Theory and History of Psychology.* New York: Plenum Press.

Robbins, D. (1999). Prologue to *The Collected Works of L.S. Vygotsky. Volume 6, Scientific Legacy.* New York: Plenum Press.

Roberts, B. (2005). "Empty stomachs, empty pockets": poverty and inequality in post-apartheid South Africa. In J. Daniel, R Southall & J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp. 399-426). Cape Town: HSRC Press.

Rochford, K. (2003). Hundred percent successful throughput rates of Master's and doctoral research students. *South African Journal of Higher Education*, *17*(3), 217-225.

Rogoff, B. & Angelillo, C. (2002). Investigating the Coordinated Functioning of Multifacted Cultural Practices in Human Development. *Human Development*, *45*, 211-225.

Rogoff, B., Ellis, S. & Gardner, W. (1999). Adjustment of adult-child instruction according to child's age and task. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 180-194). London: Routledge.

Romm, T. & Mahler, S. (1986). A three dimensional model for using case studies in the academic classroom. *Higher Education*, *15*, pp. 677-696.

Rosenthal,R. & Rosnow, R.L. (1991). *Essentials of Behavioural Research: Methods and Data Analysis*. 2nd Edition. New York: Mcgraw-Hill, Inc.

Roth, W-M., Lawless, D.V. & Masciotra, D. (2001). *Spielraum* and Teaching. *Curriculum Inquiry*, *31*(2), 183- 207.

Rowan, J. (1981a). A dialectical paradigm for research. In P. Reason & J. Rowan (Eds). *Human Inquiry. A Sourcebook of New Paradigm Research*. (pp. 34-54). Chichester: John Wiley and Sons.

Rowan, J. (1981b). The *subjective side of science* by Ian Mitroff: an appreciation. In P. Reason & J. Rowan (Eds). *Human Inquiry. A Sourcebook of New Paradigm Research*. (pp. 21-27). Chichester: John Wiley and Sons.

Ryan, G. (1993). Student Perceptions about Self-directed Learning in a Professional Course Implementing Problem- based Learning. *Studies in Higher Education*, *18*(1), 53- 63.

Saljo, R. & Wyndham, J. (1993). Solving everyday problems in the formal setting: An empirical study of the school as context for thought. In S. Chaiklin & J. Lave (Eds), *Understanding Practice. Perspectives on activity and context* (pp.327-342). Cambridge: Cambridge University Press.

Salomon, G. & Perkins, D.N.(1989). Rocky Roads to Transfer: Rethinking Mechanisms of a Neglected Phenomenon. *Educational Psychologist*, *24*(2), 113-142.

Salomon, G. & Perkins, D.N. (1998). Individual and Social Aspects of Learning. *Review of Educational Research*, *23*, 1-24.

Salomon, G., Perkins, D.N. & Globerson, T. (1991). Partners in Cognition: Extending Human Intelligence with Intelligent Technologies. *Educational Researcher*, *20*(3), 2-9.

Samuell, L., Tejero, M. & Lopate, K. (1999). Underpreapred College Students' Perceptions of Reading: Are Their Perceptions Different than Other Students? *Journal of College Reading and Learning*, *299*(2), 123- 132.

Sander, P., Stevenson, K., King, M. & Coats, D. (2000). University students' expectations of teaching. *Studies in Higher Education*, *25*(3), 309- 323.

Saunders, S. (2005). Market segmentation using quality perceptions: An investigation into a higher education institution. *South African Journal of Higher Education*, *19*(1), 144-154.

Saxe, G.B., Gearhart, M. & Guberman, S.R. (1999). The social organization of early number development. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 371-382). London: Routledge.

Schauble, L. (2003). Scientific Thinking: More on What Develops. *Human Development*, *46*, 155-160.

Schefer, T. & Ratele, K. (2006). New questions, old answers? In G. Stevens, T. Swart and V. Franchi (eds), *A Race Against Time* (pp. 229-244). Pretoria: UNISA Press.

Scheurich, J.J. (1997). *Research Method in the Postmodern*. London: The Falmer Press

Schon, D.A. (1983). *The Reflective Practitioner*. New York : Basic Books.

Scott-Jones, J. (2002). The Complexities of Gender and Other Status Variables in Studies of Schooling. *Human Development*, *45*, 54-60.

Scribner, S. (1987). Vygotsky's uses of history. In J.V. Wertsch (Ed), *Culture, communication and cognition: Vygotskian perspectives* (pp 119-145). Cambridge: Cambridge University Press

Scriven, M. (1991). *Evaluation Thesaurus*. 4th Edition. Newbury Park: Sage Publications.

Seddon, G.M. (1978). The Properties of Bloom's Taxonomy of Educational Objectives for the Cognitive Domain. *Review of Educational Research*, *48*(2), 303- 323.

Sedumedi, S.D. (2002). Students' perceptions and expectations of a first-year psychology course at the University of the North. *South African Journal of Higher Education*, *16*(3), 167-176.

Sennett, J., Finchiliescu, G., Gibson, K. & Strauss, R. (2003). Adjustment of Black Students at a Historically White South African University. *Educational Psychology*, *23*(1), 107-116.

Sharp, J.J. (1990). Does higher education promote learning? A discussion. *Higher Education*, *20*, 335-336.

Shaw, W.H. (1978). *Marx's Theory of History*. London: Hutchinson.

Sheppard, C. & Gilbert, J. (1991). Course design, teaching method and student epistemology. *Higher Education*, *22*, 229-249.

Simmonds, J.C. (1989). History Curriculum and Curriculum Change in Colleges and Universities of the United States: A Study of Twenty-Three History Departments in 1988. *The History Teacher*, *22*(3), 293-316.

Simon, B. & Simon, J. (1963). *Educational Psychology in the U.S.S.R.* London: Routledge and Kegan Paul.

Simpson, A. W. & Erickson, M.T. (1983). Teachers' Verbal and Nonverbal Communication Patterns as a Function of Teacher Race, Student Gender, and Student Race. *American Educational Research Journal*, *20*(2), 183-198.

Siraj-Blatchford, I. (1991). A study of black students' perceptions of racism in initial teacher education. *British Educational Research Journal*, *17*(1), 35-50.

Slonimsky, L. & Shalem, Y. (2006). Pedagogic Responsiveness for Academic Depth. www.sauvuca.co.za

Smith, R.B. (1968). An Empirical Examination of the Assumptions Underlying the Taxonomy of Educational Objectives: Cognitive Domain. *Journal of Educational Measurement*, *5*(2), 125- 128.

Southall, R. (2005). Black empowerment and corporate capital. In J. Daniel, R Southall & J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp. 231-257). Cape Town: HSRC Press.

Southall, R. & Daniel J. (2005). The state of parties post-election 2004: ANC dominance and opposition enfeeblement. In J. Daniel, R Southall & J. Lutchman (Eds). *State of the Nation. South Africa 2004-2005*. (pp.143- 164). Cape Town: HSRC Press.

Stein, P. & Janks, H. (1996). Collaborative Teaching and Learning with Large Classes: A Case Study from the University of the Witwatersrand. *Perspectives in Education*, *17*(1), 99-116.

Stevens, G., Swart, T. & Franchi, V. (2006). Changing contexts of race and racism: problematics, polemics and perspectives. In G. Stevens, T. Swart and V. Franchi (eds), *A Race Against Time* (pp. 3-27). Pretoria: UNISA Press.

Steyn, P.D.G. & Killen, R. (2001). The compatibility of student teacher beliefs with research on supportive classroom climates. *South African Journal of Higher Education*, *15*(3), 178-184.

Street, B. (1995). Adult literacy in the United Kingdom. A History of Research and Practice. National Centre on Adult Literacy Technical Report. Philadelphia: University of Pennsylvania.

Street, B. (2004). Academic literacies and the 'new orders': implications for research and practice in student writing in higher education. *Learning and Teaching in the Social Sciences*, *1*(1), 9-20.

Swanepoel, C.H. & Moll, A.M. (2004). Honours degree performance as predictor of achievement on Master's degree level. *South African Journal of Higher Education*, *18*(1), 290-302.

Tait, A. (2003). Reflections on Student Support in Open and Distance Learning. *The International Review in Open and Distance Learning*, *4*(1), 1-5.

Tait, M., van Eeden, S. & Tait, M. (2002). An exploratory study on the perceptions of previously educationally disadvantaged learners of law regarding university education. *South African Journal of Higher Education*, *16*(2), 177-182.

Teplov, B.M. (1946). Psychological Aspects of Artistic Education. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.259-280). London: Routledge and Kegan Paul.

Terenzini, P.T., Theophilides, C. & Lorang, W.G. (1984). Influences on Students; Perceptions of Their Academic Skill Development during College. *Journal of Higher Education*, *55*(5), 621-635.

Thomas, J.W., Bol, L. & Warkentin, R.W. (1991). Antecedents of college students' study deficiencies: the relationship between course features and students'study activities. *Higher Education*, *22*, 275-296.

Thomen, C. & Barnes, J. (2005). Assessing students' performance in first-year university management tutorials. *South African Journal of Higher Education*, *19*(5), 956-968.

Thomson, C. (2002). Massification, distance learning and quality in INSET teacher education: A challenging relationship. In M. Mostert and A. Dison (eds), *Academic Development: Changes and Challenges* (pp 195-201). Grahamstown: Rhodes University Press.

Thomson, C. (2005). Towards an integration of a pedagogical and political project: The use of the genre approach in academic literacy development. *South African Journal of Higher Education*, *19*(1), 20-30.

Tisani, T. (2002). tO BE or not tO BE- that is the Question. In M. Mostert & A. Dison (eds), *Academic Development: Changes and Challenges,* (pp 59-64). Grahamstown: Rhodes University Press.

Tishman, S., Jay, E. & Perkins, D.N. (1992). Teaching Thinking Dispositions: From Transmission to Enculturation. http://learnweb.harvard.edu/alps/thinking/ docs/article2.html. Retrieved 20 January 2006.

Titscher, S., Meyer, M., Wodak, R. & Vetter, E. (2000). *Methods of text and discourse analysis*. London : Sage Publications.

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

Trigwell, K., Prosser, M. & Waterhouse, F. (1999). Relations between Teachers' Approaches to Teaching and Students' Approaches to Learning. *Higher Education*, *37*(1), 57-70.

Tucker, R.C. (1978). *The Marx-Engels Reader* (2nd Edition). New York : W.W. Norton and Company Inc.

Tudge, J.R.H. (1999). Processes and consequences of peer collaboration: a Vygotskian analysis. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 195- 224). London: Routledge.

Tudge, J. & Rogoff, B. (1999). Peer influences on cognitive development: Piagetian and Vygotskain perspectives. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 32- 56). London: Routledge.

Ullyatt, T. (2004). "Addicted to the status quo"- academic fantasies and primary task in the Faculty of the Humanities. *South African Journal of Higher Education*, *18*(2), 109-130.

Undergraduate success at the University of the Witwatersrand. Preliminary Report of the Working Group on Retention and Throughput. September 2003: Draft Three. Executive overview.

Uzoka, F.M.E. & Akinyokon, O.C. (2005). Factor Analytic Model for evaluating the effects of a human resource profile on organizational productivity: A case study of university academic staff. *South African Journal of Higher Education*, *19*(3), 527-538.

Valsiner, J. & Van der Veer, R. (1999). The encoding of distance: the concept of the zone of proximal development and its interpretation. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 3-31). London: Routledge.

van Boxtel, C., van der Linden, J. & Kansellar, G. (2000). Deep Processing in a Collaborative Learning Environment. In H. Cowie & G. van der Aalsvoort (eds). *Social Interaction in Learning and Instruction. The Meaning of Discourse for the Construction of Knowledge* (pp161-178). Amsterdam: Pergamon.

van der Aalsvoort, G.M. & Harinck, F. J.H. (2000). Studying Social Interaction in Instruction and Leaning: Methodological Approaches and Problems. In H. Cowie and G. van der Aalsvoort (eds). *Social Interaction in Learning and Instruction. The Meaning of Discourse for the Construction of Knowledge* (pp 5-20). Amsterdam: Pergamon.

van der Merwe, A. & Gous, S. (2005). HIV/AIDS and institutions of higher education: an impact and response framework. *South African Journal of Higher Education*, *19*(1), 45-58.

van der Veer, R. (1997). Introduction to *The Collected Works of L.S. Vygotsky. Volume3, Problems of the Theory and History of Psychology.* New York: Plenum Press.

van der Westhuizen, P.C. & de Wet, J.J. (2002). The training needs of supervisors of postgraduate students in the social sciences and humanities. *South African Journal of Higher Education*, *16*(3), 185-195.

van Lill, D. (2005). Grooming great graduates. *South African Journal of Higher Education*, *19*(5), 969-989.

van Rooy, T. (2002). Recognition of prior learning (RPL): from principle to practice in higher education. *South African Journal of Higher Education*, *16*(2), 75-82.

van Wyk, B. (2005). Performativity in higher education transformation in South Africa. *South African Journal of Higher Education*, *19*(1), 5-15.

Vasquez, J.A. & Wainstien, N. (1990). Instructional Responsibilities of College Faculty to Minority Students. *The Journal of Negro Education*, *59*, 599-610.

Viljoen, H. (2005). Constraints in the teaching and learning of the humanities at South African universities: a Delphi study. *South African Journal of Higher Education*, *19*(1), 31-44.

Vocate, D.R. (1987). *The Theory of A.R. Luria. Functions of Spoken Language in the Development of Higher Mental Processes*. Hillsdale: Lawrence Erlbaum Associates.

Vygotsky, L.S. (1929). The Problem of the Cultural Development of the Child. *Journal of Genetic Psychology*, *6*, 26-39.

Vygotsky, L.S. (1934). Learning and Mental Development at School Age. In B. Simon *&* J. Simon (eds). *Educational Psychology in the U.S.S.R.* (pp. 23-34). London: Routledge and Kegan Paul.

Vygotsky, L.S. (1978). *Mind in Society. The Development of Higher Psychological Processes*. Cambridge, Massachusetts : Harvard University Press.

Vygotsky, L.S. (1981). The instrumental method in psychology. In J. V. Wertsch (ed) *The concept of activity in Soviet psychology*. (pp. 17-28). New York: Sharpe.

Vygotsky, L.S. (1987). *The Collected Works of L.S. Vygotsky. Volume One. Problems of General Psychology*. New York: Plenum Press.

Vygotsky, L.S. (1993).*The Collected Works of L.S. Vygotsky. Volume Two The Fundamentals of Defectology (Abnormal Psychology and Learning Disabilities*.. New York: Plenum Press.

Vygotsky, L.S. (1997a). *The Collected Works of L.S. Vygotsky. Volume Three. Problems of the Theory and History of Psychology.* New York: Plenum Press.

Vygotsky, L.S. (1997b). *The Collected Works of L.S. Vygotsky. Volume Four. The History of the Development of Higher Mental Functions*. New York: Plenum Press.

Vygotsky, L.S. (1998). *The Collected Works of L.S. Vygotsky. Volume Five. Child Psychology*. New York: Plenum Press.

Vygotsky, L.S. (1999). *The Collected Works of L.S. Vygotsky. Volume Six. Scientific Legacy*. New York: Plenum Press.

Waghid, Y. (2001). Reflexive democratic discourse and critical pedagogy. *South African Journal of Education*, *21*(1), 1-5.

Waghid, Y. & le Grange, L. (2002). Globalisation and higher education restructuring in South Africa: moving towards distributive justice. *South African Journal of Higher Education*, *16*(1), 5-8.

Walker, E. & Wright, A.E. (1996). Medical Education begins in First Year: Problem-Based, Community-Oriented Teaching in a Pre-Clinical Curriculum. *Academic Development*, *2*(2), 17-29.

Walker, M. (2002). Higher education and a democratic learning society: professionalism, identities and educational action research. In M. Mostert & A. Dison (eds), *Academic Development: Changes and Challenges (*pp 1-2). Grahamstown: Rhodes University Press.

Warren, D. (2002). Curriculum Design in a Context of Widening Participation in Higher Education. *Arts and Humanities in Higher Education*, *1*(1), 85-99.

Watt, C., Lancaster, C., Gilbert, J. & Higerd, T. (2004). Performance funding and quality enhancement at three research universities in the United States. *Tertiary Education and Management*, *10*, 61-72.

Weber, E. (2005). 'Becoming like us': Global discourses, local knowledge and social struggle in comparative African higher education. *South African Journal of Higher Education*, *19*(5), 990-1001.

Weil, S., Oyelere, P., Yeoh, J. & Firer, C. (2001). A study of students' perceptions of the usefulness of case studies for the development of finance and accounting-related skills and knowledge. *Accounting Education*, *10*(2), 123-146.

Wenger, E. (1999). *Communities of practice. Learning, meaning and identity*. Cambridge: Cambridge University Press

Wertsch, J.V. (1981). *The concept of activity in Soviet Psychology*. New York: Sharpe.

Wertsch, J.V. (1984). The Zone of Proximal Development: Some Conceptual Issues. In B. Rogoff & J.V. Wertsch (eds), *Children's Learning in the "Zone of Proximal Development"*. (pp. 9-16). California: Jossey Bass.

Wertsch, J.V. (1985). *Vygotsky and the social formation of mind*. Cambridge, Mass: Harvard University Press.

Wertsch, J.V. (1987). *Culture, communication and cognition: Vygotskian perspectives*. New York: Cambridge University Press.

Wertsch, J.V. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge, Mass: Harvard University Press.

Wertsch, J.V. (1999). The zone of proximal development: some conceptual issues. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 67-80). London: Routledge.

Wertsch, J.V. (2005). Cole's 'Cross-Cultural and Historical Perspectives on the Developmental Consequences of Education. *Human Development*, *48*, 223-226.

Wertsch, J.V., McNamee, G.D., McLane, J.B. & Budwig, N.A. (1980). The Adult-Child Dyad as Problem-Solving System. *Child Development*, *51*(4), 1215-1221.

Wertsch, J.V., McNamee, G.D., McLane, J.B. & Budwig, N.A. (1999). The adult-child dyad as problem-solving system. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 81-100). London: Routledge.

Wertsch, J.V. & Stone, C.A. (1987). The concept of internalization in Vygotsky's account of the genesis of higher mental functions. In J.V. Wertsch (Ed), *Culture, communication and cognition: Vygotskian perspectives* (pp. 162-182). New York: Cambridge University Press.

Wertsch, J.V. & Tulviste, P. (1996). L.S. Vygotsky and contemporary developmental psychology. In H. Daniels (ed). *An Introduction to Vygotsky* (pp53-74). London: Routledge.

Wessels, J.S. (2001). Criteria for assessing learning material for distance education. *South African Journal of Higher Education*, *15*(1), 217-224.

Wessels, J.S. (2002). Globalisation and international compatibility- a challenge to learning within the context of application. *South African Journal of Higher Education*, *16*(1), 189- 194.

Wierstra, R.F.A., Kanselaar, G., van der Linden, J.L. & Lodewijks, H.G.L.C. (1999). Learning Environment perceptions of European University Students. *Learning Environment Research*, *2*, 79-98.

Williams, J.E., Hodge, A.A., Garza, L. and Breaux, A. (1999). The Colour of Teachers, the Colour of Students: The Multicultural Classroom Experience. *Teaching Sociology*, *27*, 233- 251.

Willie, C.V. & Cunnigen, D. (1981). Black Students in Higher Education: A review of Studies 1965- 1980. *Annual Review of Sociology*, *7*, 177-198.

Wood, D.J. (1999). Teaching the young child: some relationships between social interaction, language, and thought. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky. Critical Assessments* (pp. 259-275). London: Routledge.

Wood, L.A. & Lithauer, P. (2005). The 'added value' of a foundation programme. *South African Journal of Higher Education*, *19*(5), 1002-1019.

Woolfolk, A.E. & Brooks, D.M. (1985). The Influence of teachers' Nonverbal behaviours on Students' perceptions and Performance. *The Elementary School Journal*, *85*(4), 513-528.

Wright, L.S. (2005). Renovating the humanities for South Africa. *South African Journal of Higher Education*, *19*(3), 539-554.

Yeld, N. & Haeck, W. (1997). Educational histories and academic potential: Can tests deliver? *Assessment and Evaluation in Higher Education*, *22*(1), 5-18.

Yencken, J, Cole, T. & Gillin, M. (2002). Spin-off companies from universities and other public research agencies in Australia: Findings from early stage case studies. *Twente University High-Tech Small Companies Conference*, Enschede, The Netherlands. 11-12 June 2002.

Zankov, L.V. (1957). Combination of the Verbal and Visual in Teaching. In B. Simon & J. Simon (Eds, 1963). *Educational Psychology in the U.S.S.R.* (pp.243-258). London: Routledge and Kegan Paul.

Zotov, V. (1988). *How to study Historical Materialism*. Moscow: Progress Publishers.

APPENDICES

APPENDIX A

APPENDIX B

TEACHING STRATEGY ONE

THE LEARNING OUTCOMES

At the end of the six week period you should be able to:

(a) Knowledge

- describe the process of development from conception to death
- integrate the different theories of personality in order to understand human functioning
- define what it meant by abnormal functioning and discuss why abnormality occurs

(b) Skills

- translate knowledge of the developmental stages into a health care context
- compare and contrast the different theoretical orientations to personality in a health care context
- apply psychological understandings of abnormality, and not just medical interpretations, to a health care setting
- self-reflect on issues arising in the course

(c) Values

- critically evaluate the notion that psychological theories are contextual and contested
- extrapolate knowledge of the different developmental stages to a health care context (e.g. information transmission to patients)
- appreciate that one's theoretical orientation to personality influences one's dealings with patients
- conclude that abnormality is not always a definite diagnosis, but is related to cultural understandings of human functioning
- demonstrate that an understanding of an individual's cultural and social background influences their development, how they think, and how they manifest both health and abnormality

2002 Resourcepack, pp. 2-3

APPENDIX C

TEACHING STRATEGY TWO

THE ESSAY TASKS

(1) Questions

- all the questions are equally weighted
- you must do **either** Question One **or** Question Two
- you must do Question Three
- this assignment is divided into 2 parts

(i) discussing and relating psychological theory to two case studies

(ii) discussing the HCP's ethical issues in South Africa and relating these issues to the two case studies

CHOICE QUESTIONS

Question One

Discuss the violence experienced by Yassir Henry and William Harrington in terms of its impact on their identity development. You must focus on **Erikson's identity achievement versus role confusion stage** and **Marcia's stages of identity development**

OR

Question Two

How would **Rogers** explain Yassir Henry and William Henry's personality development? You need to focus your discussion on Roger's concepts of **actualisation; the fully functioning person; the organismic valuing process; congruence; incongruence; unconditional and conditional positive regard; conditions of worth**

COMPULSORY QUESTION

Question Three

After reading the accounts of both Yassir Henry and William Harrington, and the article about torture and the medical profession, you need to consider what you would have done if you had been a HCP during this time. Present an argument in which you state what your position as a HCP during the Apartheid era would have been. Remember that there is no "correct" answer to this

question, but when you present an argument you need to examine both sides of the debate.

(2) The learning outcomes of this assignment are:

(i) Knowledge

understand and explain Erikson's developmental theory or Rogers' personality theory

(ii) Skills

apply the relevant developmental and personality theory to the issue of the violation of civil rights by the State

(iii) Values

demonstrate and understanding of the specific issues which Health Care Professionals face in a society in which the State is a violator of its citizens' civil rights

(3) Required Reading

- case study 1 – Yassir Henry (Article One)
- case study 2 – William Harrington (Article Two)
- Torture and the medical profession in South Africa – complicity or concern (Article Three)
- Erikson's theory (prescribed text, chapter 11, Article Four) OR
- Rogers' theory (prescribed text chapter 11, Article Five)

2000 Resourcepack pp. 3-4

APPENDIX D

TEACHING STRATEGY THREE

THE PROBLEM-SOLVING STRATEGIES FOR THE ESSAY TASKS

The following exercises are designed to help you complete the assignment. The completion of this work is not compulsory, but will probably be reflected in the mark you attain in the assignment. Some of this material may be covered in tutorials. There are exercises for each question of the assignment.

EXERCISE ONE

This exercise is designed to help you summarise the assumptions and relate them to the theory.

Using a framework of questioning is important because:

- it is a model of critical thought
- it clarifies what the assessment task requires

Hint = Article One is of primary importance here. This exercise is designed to help you complete Question One.

	Assumption 1	Assumption 2	Assumption 3
Explanation of the assumption			
Why is the assumption important?			
Is the assumption present in the theory?			
How is the assumption present in the theory?			

Some helpful hints:

Some Do's and Don't's of "critically evaluate"

Don't's

- it does not mean to be negative (like the everyday use of the word "critical")
- it does not mean that you only interpret one side of a debate

Do's

- it does mean that you interpret information and ideas
- it does mean that you will evaluate or make judgments about how valuable information and ideas are
- it does mean that you will use your evaluation to formulate and ARGUMENT
- it does mean that you will use EVIDENCE to demonstrate that your argument is stronger than others and why other arguments are not as strong as your

EXERCISE TWO

Providing an argument (or justifying your opinion) is the central task of university education. This exercise can help you to formulate your own opinion and argument for Question Two.

Formulating arguments

(A) An assumption of HCP's in South Africa that I think is important is _____

_____

_____

The main reasons I think that this assumption is important are

1.
2.
3.
4.
5.

These reasons must be drawn from examples and evidence from various sources (e.g. textbook, RP articles, other books and journal articles)

(B) An assumption of HCP's in South Africa that I think is important is _____

_____

_____

The main reasons I think that this assumption is important are

1.

2.

3.

4.

5.

These reasons must be drawn from examples and evidence from various sources (e.g. textbook, RP articles, other books and journal articles)

(C) An assumption of HCP's in South Africa that I think is important is _____

_____

_____

The main reasons I think that this assumption is important are

1.

2.

3.

4.

5.

These reasons must be drawn from examples and evidence from various sources (e.g. textbook, RP articles, other books and journal articles)

You need to have a think now!!!!!!

- which assumption is the most important?
- why do I think that this is the most important assumption?
- for which assumption do I have the most evidence?
- how can I prioritise the importance of my three different assumptions?

EXERCISE THREE

The strength/ persuasiveness of evidence

All evidence is not created equal. Some evidence is stronger than other evidence. Evidence can also come from different sources, e.g. ideas from reputable writers, factual evidence, case studies, statistical evidence and opinions. Depending on the context, some forms of evidence are more persuasive than others.

Source of evidence	Type of evidence: what point is it making or supporting?	Is it persuasive? Explain, e.g. is the source reputable?	How can I best use this evidence?

2003 Resourcepack pp. 6-10

APPENDIX E

TEACHING STRATEGY FOUR

THE GENERAL AND SPECIFIC LECTURE OUTLINES

General Lecture Outline

The relevant readings are given in brackets ; W = Weiten

LECTURE 1: Introduction and Orientation (W pp 431- 432)

LECTURE 2: Prenatal development and the newborn baby (W pp 432 – 446)

LECTURE 3:Infancy and childhood (W pp 447 – 456)

LECTURE 4:Infancy and childhood (W pp 447 – 456)

LECTURE 5:Adolescence (W pp 446 –461)

LECTURE 6:Adolescence and adulthood (W pp 462 –467)

LECTURE 7: Late adulthood, death and dying (W pp 467 – 473)

LECTURE 8:Assignment lecture

LECTURE 9:Introduction to personality theories (W pp 485-487)

LECTURE 10:Freud (W pp 488 – 496)

LECTURE 11:Freud (W pp 488 – 496)

LECTURE 12:Erikson (W pp 445 – 447)

LECTURE 13:Erikson (W pp 445 – 447)

LECTURE 14:Rogers (W pp 503 – 507)

LECTURE 15:Cognitive social learning theories (W pp 501 – 503)

LECTURE 16:Personality assessment (W pp 519 – 524)

LECTURE 17:Definitions of abnormal behaviour (W pp 569 – 574)

LECTURE 18:Conflicting theories about the nature, causes and treatment of abnormal behaviour (W chap 14)

LECTURE 19:Mood disorders (W pp 586 – 591)

LECTURE 20:Anxiety disorders (W pp 577 – 581)

LECTURE 21:Psychosomatic and somatoform disorders (W pp 582- 584)

LECTURE 22:Personality disorders (W pp 598 – 599)

LECTURE 23:Personality disorders (W pp 598 – 599)

LECTURE 24:Schizophrenic disorders (W 592 – 598)

LECTURE 25:Schizophrenic disorders (W 592 – 598)

LECTURE 26:Problems of childhood and adolescence (W 599 – 601)

2001 Resourcepack pp. 18- 19

Specific Lecture Outlines (before the introduction of the Lecture Notes)

LECTURES 9 AND 10

Freud (W pp 488 – 496)

1. Background
2. Structure of personality
    - id
    - ego
    - superego
3. Levels of awareness
    - conscious
    - preconscious
    - unconscious
4. Personality development
    - stages
        - oral
        - anal
        - phallic
        - latent
        - genital
5. Evaluation

2002 Resourcepack p 28

Specific Lecture Outlines (after the introduction of the Lecture Notes)

LECTURES 9 AND 10

Freud

Reading:

Weiten 5th, pp 488 – 496)

Important concepts: biographical background; personality structure (id, ego, superego); levels of awareness (conscious, preconscious, unconscious); developmental stages (oral, anal, phallic, latent, genital)

2003 Resourcepack, p 19

APPENDIX F

TEACHING STRATEGY FIVE

THE LECTURE NOTES

LECTURE NINE

INTRODUCTION TO PERSONALITIES THEORIES

Pp 485 – 487

Definition: Personality is that pattern of characteristic thoughts, feelings, and behaviours that distinguishes one person from another and that persists over time and situations

Distinctiveness: or individuality

Critical feature =

Stability and consistency : behave in a recognizable way over a variety of situations and over time

Determinants of personality

Biological perspective

Evolution: variation within humans who possess adaptive characteristics lived long enough to pass them along to the next generation, e.g. those who could think better and run faster survived.

Evolution today =

Criticisms

Positive =

Negative =

Examples:

- Intelligence =
- Personality characteristics =

    Eyesenck

- biochemistry and personality
    - thyroid =
    - insulin =
    - adrenaline =

Environmental perspective

Being human = means that have the capacity for learning

(1) physical world

example = Eskimos are hunters (assertive, individualistic, take risks, relaxed discipline)

Tenne people (Sierra Leone) = agriculture (conscientious, compliant, conservative, harsh discipline)

(2) social class

classes separated by =

upper class =

mental illness =

explanations (a) poverty =

(b) mentally ill drift to lower classes =

(3) personality and social practice – only label self with labels that society provides =

APPENDIX G

TEACHING STRATEGY SIX

THE CASE STUDIES

Case Study Two – Betty

Betty had been irritable for many years, but during the last six months this irritability had been irrational. She often screamed in anger or burst into tears if a dirty dish was left on the coffee table. Planning dinner for her family sent her into terrifying indecision. Her whole family was wary and ill at ease when around her. She believed that it would be better if she were dead. Betty worked at a branch of a large chain store and felt that she could not cope. She often asked junior workers for advice on how to complete tasks. Before having to go to work she would often complain of nausea. Betty's husband loved her, but was confused by what was happening. In order to help her, he took on more household chores and childcare responsibilities. His helpfulness made Betty feel more worthless and guilty. Betty stopped going to work and seeing her friends and eventually spent most of her time at home screaming and crying.

(Adapted from Comer, 1995)

IMPORTANT FACTS: _____

_____

_____

SYMPTOMS : _____

_____

_____

DIAGNOSIS: _____

2001 Resourcepack pp 36-37

Case Study Four – specific phobias (spiders)

When I see a spider I become rigid with fear. I tremble and feel hot and dizzy. I sometimes vomit or faint to avoid the situation. I feel like this for four or five days after seeing a spider. Pictures of spiders can make me feel the same way, especially if I place my hand on one by accident.

(Adapted from Comer, 1995)

BEHAVIOURAL SYMPTOMS : _____

_____

_____

EMOTIONAL SYMPTOMS: _____

_____

_____

2001 Resourcepack p 39

Case Study Nine – Susan

Susan described being overcome with feelings of extreme dizziness and nausea four to five nights a week. During these attacks the room would start to shimmer and she would feel as though she were floating and unable to keep her balance. These attacks always occurred at about 4PM and she would have to lie down until about 7 or 8PM. Usually she would fall asleep in front of the television and would eventually go to bed at 3AM. An internist, a neurologist and an ear, nose and throat specialist had found nothing wrong with her. Hypoglycemia had also been ruled out. Susan described her husband as a tyrant, who was often verbally abusive to her and the children. She admitted that she did not look forward to his arrival home from work everyday.

(Adapted from Comer, 1995)

SYMPTOMS: _____

_____

_____

DIAGNOSIS: _____

_____

_____

2001 Resourcepack p 43

APPENDIX H

TEACHING STRATEGY SEVEN
THE CHALLENGE QUESTIONS

Do you think that First and Third World countries are affected differently by prenatal environmental factors? Why / Why not? Would you classify South African as a First or Third World country?
2003 Resourcepack p 15

Was adolescence a time of "storm and stress" for you? Ask a classmate from another culture about his/her adolescence. How similar/ different are your two experiences?
2003 Resourcepack p 17

How would an awareness of a person's stage of development affect the way a Health Care Professional interacts with that person?
2003 Resourcepack p 19

Do personality tests tell us more about ourselves than horoscopes, palm readers or a sangoma's assessment? Why / Why not?
2003 Resourcepack p 21

What is "normal" and "abnormal" behaviour for South Africans?
2003 Resourcepack p 22

Some disorders are culturally-specific. Would you classify post-traumatic stress syndrome as specific to the South African context given our high rates of violence? Why / Why not?
2003 Resourcepack p 26

Some people believe that the diagnosis of schizophrenia is to some degree an ethical or moral judgment. If our ethical beliefs depend on our particular culture, does this mean that *any* cultural ethic is acceptable? What implications does this *relativity* of ethic have for diagnosis? 2003 Resourcepack p 38.

APPENDIX I

READINGS CONTAINED IN THE RESOURCEPACKS

Copyright permission was obtained for the following articles that were reproduced in the Resourcepacks

2000

Carver, C.S. and Scheier, M.F. (1992). *Perspectives on Personality*. Second Edition. Boston: Allyn and Bacon. Pp 401 – 405.

Gill, A. (1988). *The Journey back from Hell. An Oral History – Conversations with Concentration Camp Surviors*. New York: William Morrow and Company Inc. pp148-155.

Haiden, G.A. and Medelsohn, M. (1998). Thought Processes in Health Care Settings. In JW.P. Heurchert (ed) *Psychology and the Health Sciences*. Belfast: Zoekop Publishers. Pp 102 - 114

Haiden, G.A. (1998). The Relationship between Personality and Disease. In JW.P. Heurchert (ed) *Psychology and the Health Sciences*. Belfast: Zoekop Publishers. Pp 189 - 200

Haiden, G.A. (1998). Defining Abnormality. In JW.P. Heurchert (ed) *Psychology and the Health Sciences*. Belfast: Zoekop Publishers. Pp 227 – 242.

Krog, A. (1999). *Country of My Skull*. Johannesburg: Vintage. Pp. 79-83.

Krog, A. (1999). *Country of My Skull*. Johannesburg: Vintage. Pp.105-107

Louw, D.A., van Ede, D.M. and Louw, A.E. (1998). *Human Development*. Second Edition. Pretoria: Kagiso Tertiary. Pp 426-429.

Veriava, Y. (1989). Torture and the medical profession- complicity or concern. *Critical Health*, 26, pp. 39-52.

2001

Bishop, G.D. (1994). *Health Psychology: Integrating Mind and Body*. Boston: Allyn and Bacon. Pp 267 – 291.

Bruhn, J.G. (1997). Social and Psychological Aspects of Care. In R.D. Muma, B.A. Lyons, M. Borucki and R.B. Pollard (eds). *HIV Manual for Health Care Professionals*. Connecticut: Appleton and Lange. Pp 365 – 380.

Kubler-Ross, E. (1986). *On Death and Dying*. London: Tavistock Publications. Pp 34-38; 44- 49; 72 – 77; 99 – 101.

McGeary, J. (2001). Death stalks a continent. *Time*, vol 157, no 6, pp 46-54.

Kubler-Ross, E. (1993). *Aids: The Ultimate Challenge*. New York: Collier Books. Pp 1- 13

2002

Hook, D. (2002). Erikson's psychosocial stages of development. In D. Hook, J. Watts and K. Cockcroft (eds). *Developmental Psychology*. Cape Town: UCT Press. Pp 265 – 293.

The impact of HIV-Aids on the family (2001). www.info@woza.co.za

Life expectancy set to reach lowest levels (2002). www.info@woza.co.za

National budget "meets" child's needs (2002). www.info@woza.co.za

HIV-Aids and child rape in South Africa(2002). www.info@woza.co.za

Baragwanath reports 24000 Aids deaths since 1998. (2001). www.info@woza.co.za

2003

Dissel, A. (1997)Youth, Street Gangs and Violence in South Africa. In *Youth, Street Culture and Urban Violence in Africa. Proceedings of the International Symposium*, Abijan, Ivory Coast. www.csvr.org.za, pp 405 – 411.

Lyons, M. (1997). The impact of HIV and Aids on Children, Families and Communities: Risks and Realities of Childhood during the HIV Epidemic, Issues Paper Number Thirty. HIV and Development Programme. UN Development Programme. www.undp.org . pp 1-10

Nicols, L. (2003). *Introduction to Psychology*. Landsdowne: UCT Press. Pp 14-23.

Schmuckler, D. (1989). Growing up in violent situations: The South African situation. Centre for the Study of Violence and Reconciliation, Seminar Number Seven, Johannesburg. www.csvr.org.za, pp4 – 8.

Simpson, G. (1993). Women and Children in Violent South African Townships. In M. Motshekga and E. Delport (eds) *Women and Children Rights in a Violent South Africa*. Pretoria West: Institute for Public Interest, Law and Research. www.csvr.org.za, pp 3-13.

APPENDIX J

STUDENT QUESTIONNAIRE ONE

GROUP VERSUS INDIVIDUAL PARTICIPATION

Compiled by: K. Greenop

1. Did you feel more comfortable with:

(a) using group work to answer questions in class

(b) **NOT** using group work to answer questions in class

(c) there was no difference between a and b

(d) neither a nor b

When you had to use group work to answer questions,

What were the things you **DID like** about it?

What were the things you **DID NOT like** about it?

When you DID NOT use group work to answer questions,

What were the things you **DID like** about it?

What were the things you **DID NOT like** about it?

2. **What helped you understand the concepts in the course more:**

(a) using group work to answer questions in class

(b) **NOT** using group work to answer questions in class

(c) there was no difference between a and b

(d) neither a nor b

When you had to use group work to answer questions,

What were the things you **DID help** you understand concepts?

What were the things you **DID NOT help** you understand concepts?

When you DID NOT use group work to answer questions,

What were the things you **DID help** you understand concepts?

What were the things you **DID NOT help** you understand concepts?

APPENDIX K

STUDENT QUESTIONNAIRE TWO

USEFULNESS OF THE RESOURCEPACK

Compiled by: G. Haiden, L. Dison, M. de Groot and A. Button

DEGREE: _____

STUDENT NUMBER: _____

Consider whether or not the following aspects of the Reading Pack (RP) contributed to your understanding of the course. Please read the following statements and state whether or not you found the different aspects of the Reading Pack (RP) helpful or unhelpful. You might need to refer to the relevant pages in the RP.

A. **The General Instructions and Course Outcomes**

Please state whether or not you found the following aspects of the RP helpful or not.

A1. The outcomes of the course generally (p.1)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A2. Knowledge outcomes of the course (p1)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A3. Skills outcomes of the course (p1)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A4. Values outcomes of the course (p1)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A5. Course assessment details regarding mark allocation (p2).

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A6. Tutorial information (p4)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B. **The Lecture Outlines**

Please refer to the outline of the lectures generally and for each day (pp 18-53) and state whether or not you found the following aspects of the Reading Pack helpful or not.

Introduction

B1. The lecture topics (pp18-19)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B2. The page numbers in the textbook for each lecture topic (pp18-19).

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

For each lecture

B3. The separate outlines for each lecture, including the main points for each lecture

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B4. The cartoons

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B5. The challenge questions

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B6. Did the challenge questions enable you to:

(Tick as many as are appropriate)

1. Participate in class_____
2. Prepare for lectures_____
3. Reflect on issues covered in lectures_____
4. Apply the lecture content to "real life" issues_____
5. Reconsider your own viewpoint_____
6. Other, please specify

_____

_____

_____

B7. The case studies for the section on abnormal behaviour

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

Why/ Why not?

_____

_____

_____

_____

B8. Did you complete the worksheets/ exercises for the case studies?

Yes	No

C. **Open-ended questions**

C1. In general, did you find the RP useful in helping you to understand the:

(Tick as many as are appropriate)

1. Structure of the course _____
2. How the activities fit together _____
3. The content of the course _____

Please provide reasons for your answer:

_____

_____

_____

_____

C2. What did you like best about the Reading Pack?

_____

_____

_____

_____

C3. What did you like least about the Reading Pack?

_____

_____

_____

_____

C4. Do you have any suggestions for how the Reading Pack can be improved?

_____

_____

_____

_____

APPENDIX L

STUDENT QUESTIONNAIRE THREE

USEFULNESS OF THE PROBLEM-SOLVING STRATEGIES

Compiled by: G. Haiden, L. Dison, M. de Groot and A. Button

DEGREE: _____

Consider whether or not the following aspects of the Reading Pack (RP) contributed to your ability to complete the assignment.

Please read the following statements and state whether or not you found the exercises helpful or unhelpful in terms of completing the assignment.

A. **The Questions**

A1. The mark allocation for each question:

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A2. The wording of the question:

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A3. The general points concerning the assignment (p4 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A4. The learning outcomes for the assignment generally (p4 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A5. The knowledge outcomes of the assignment (p4 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A6. The skills outcomes of the assignment (p4 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

A7. The values outcomes of the assignment (p4 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B. **The Required Reading**

Consider whether or not the following aspects of the Reading Pack (RP) contributed to your ability to complete the assignment.

Please read the following statements and state whether or not you found the readings helpful or unhelpful in terms of completing the assignment.

B1. Article One- On Death and Dying

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B2. Article Two- Time Magazine – Death Stalks a continent

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B3. Article Three- Aids- the ultimate challenge

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B4. Article Four- HIV manual for HCP's

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

B5. Article Five- Health Psychology. Integrating Mind and Body

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C. **The Exercises**

C1. Did you do the exercises:

by yourself	in lectures	in tutorials	not at all

C2. Which exercises did you do? Tick as many as are appropriate

Exercise One	Exercise Two	Exercise Three	Exercise Four

C3. The instructions for the exercises (p6 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C4. The instructions for each exercise (pp 6, 9,11, 17 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C5. The hints for each exercise (pp 6, 9,11, 17 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C6. The exercises in general

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C7. Exercise One – the stages of death and dying (pp6-8 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C8. Exercise Two – relating the theory to the case study (pp 9- 10 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C9. Exercise Three – the do's and don'ts of "critically evaluate" ((p11 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C10. Exercise Three – beginning to formulate an argument (p13 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C11. Exercise Three – the strength/ persuasiveness of evidence (p15 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C12. Exercise Three – own examples as evidence (p16 of RP)

very helpful	helpful	slightly helpful	neutral	slightly unhelpful	unhelpful	not at all helpful

C13. Exercise Four – formulating your own opinion on HIV/Aids (p17 of RP)

very helpful	helpful	slightly helpful	neutral	Slightly unhelpful	unhelpful	not at all helpful

D. **Open-ended Question**

D1. Do you think that the exercises helped you to complete the assignment? Why/ Why not?

_____

_____

_____

_____

APPENDIX M

STUDENT QUESTIONNAIRE FOUR

THE LECTURE NOTES

Compiled by: M. de Groot and L. Dison

Gill recently introduced the practice of providing *Handouts* of notes for each lecture. We are trying to evaluate the usefulness of these *Handouts* and would really appreciate your feedback on how you've been using these *Handouts*

Please mark the correct answer with an X

1. Do you add your own notes to the *Handouts*?

Yes	No

2. If you do add your own notes, what do you write (Tick as many as are applicable)

	Only key words
	Whole sentences
	Gill's examples
	Fellow students examples or opinions
	Your own examples

3. Do you still make your own notes on a separate sheet of paper?

Yes	No

4. If you still make your own notes, please explain why you do.

_____

_____

_____

5. Do your fellow students' contributions during class help your understanding?

Not at all	To some extent	To a great extent

6. One student commented: "*The Handouts have helped my learning in this course*" Do you agree or disagree with this comment. Please explain your answer.

_____

_____

_____

APPENDIX N

STUDENT QUESTIONNAIRE FIVE

GENERAL MEDIATION STRATEGY

Compiled by G. Haiden

1. Which aspects of the lecturer's teaching did you find the most helpful in your learning. Please explain your answer.

_____

_____

_____

_____

2. Which aspects of the lectures did you like least? Please explain your answer

_____

_____

_____

_____

3. Please make any suggestions as to how the lecturer could improve her teaching in order to improve your learning experience

_____

_____

_____

_____

4. Any further comments you would like to make

_____

_____

_____

_____

APPENDIX O