HIGHER ORDER THINKING IN TRANSITION:
A CASE STUDY OF FIRST YEAR UNIVERSITY STUDENTS

Thesis submitted by

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ABSTRACT

This thesis is a contrastive case study which explores elements of student writing in relation to higher order thinking of 12 students enrolled in a Foundation in English Course at the University of the Witwatersrand. All of the students speak English as an additional language. They were admitted to the university through an alternative admissions route that recognised their academic potential in the early 2000s. The study examines a number of factors related to students' academic dispositions and personal qualities, their capacity to develop comparison and discursive writing and the growth in their ability to reflect on their writing tasks through the foundation year. It has developed an integrative approach for investigating contextual and course-related issues which contributed towards students' cognitive and meta-cognitive growth as first year university student in transition.

The research methodology makes use of socio-cognitive instruments for assessing students' levels of cognition through their writing. In particular, the SOLO taxonomy (Biggs and Collis 1982) has been adapted as a tool for analysing student responses to the different task types and for assessing student engagement with the course pedagogy and feedback practices. It uses a meta-cognitive hierarchical model (Perkins 1992) for gauging how students reflect on their writing development in response to the meta-level questions integrated into the course material. For its theoretical framework, the study draws on socio-cultural understandings of student cognition and learning, local and international research in the field of higher education as well as current developments in academic literacy and social constructivism. The implications of both the developmental and socially-based perspectives are examined in order to make sense of the pedagogical data within the Foundation Course. There is a particular focus on the range of scaffolding devices used to promote higher order thinking.

A number of key findings emerge from the detailed comparative analysis of the two groups of students ('solid' and 'borderline') based on their academic performance on the Foundation Course. The most significant is the establishment of a profile of

students who have benefited the most from the various forms of scaffolding and assessment practices on the course. The study reveals that students in the solid group show adeptness at higher order reasoning, explanation, elaboration and reflection compared to those from the borderline group who are unable to benefit optimally from the intensive interaction and mediation on the course. The analysis unpacks the intrinsic and extrinsic factors that promote or inhibit engaged learning on the course. In so doing, it highlights strengths and gaps in the pedagogical orientation of the teaching pedagogy for developing academic potential in this context.

In order to address generalised, deficit views within the university about the perceived under-performance of 'foundation students', the study aims to present a more nuanced account of how students have engaged with academic literacy on the Foundation Course. It seeks to understand how students develop higher order thinking in the transition from school to university and have the capacity to make progress in a course in which educational strategies and assessment practices are highly scaffolded on an extended four-year degree programme. The case study methodology underlines the importance of documenting and tracking student progress more systematically and assessing the extent to which they transfer academic literacy competencies to other disciplines. The thesis investigates possibilities for integrating the educational strategies described in the thesis to promote transitional learning for first year students at university.

DECLARATION

I, **Laura Dison (Student Number: 7815960)**, declare that this thesis is my own original work and that where use has been made of the work of others, it has been duly acknowledged in the text. This thesis is being submitted in fulfilment of the Doctor of Philosophy in the Faculty of Humanities at the University of the Witwatersrand, South Africa.

It has not been submitted before for any degree or examination, or to any other university.

Signature: Date: 16th day of February 2009.

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I wish to mention my appreciation of my colleagues in the field of tertiary teaching at Wits and other tertiary institutions in South Africa. We have formed our own community of enquiry over the years in furthering teaching and learning in higher education. My thinking has been shaped by many of the creative theoretical models and practices that have emerged from the collective experience of enhancing the access and success of 'non-traditional' university students.

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Finally, I would like to honour the students in my case study in the Foundation Course. Regardless of whether you ‘made it’ in the end you all showed remarkable willingness to engage with the teaching programme on offer at the university. You overcame many obstacles to reach university and displayed qualities and talents that will sustain you in your working lives. You all represent the human capacity to change and develop in a teaching environment that recognises true potential. You have become role models for future generations of students with the amazing will to learn.

TABLE OF CONTENTS

CHAPTER ONE **1**
INTRODUCTION AND BACKGROUND TO THE STUDY
1 Background to the Study: Phases of Academic Support at Wits University 2
2 Integrated Curricula: Foundation Courses 4
3 Shifting from Present to Past Tense: Altered Circumstances at the University 7
4 Critical Reflections on AD at Wits 9
5 Research Questions 13
6 Outline of Thesis 15

CHAPTER TWO **18**
METHODOLOGY
1 The Analytic Case Study Method 18
2 Ethical Considerations 21
3 Data Collection Techniques 21
4 Selection of Students for the Case Study 24
5 Deriving Student Success Categories 25
6 Analysis of Data 28
7 Analysis of Student Writing Using the SOLO Taxonomy 30
8 Variation in Analysis 36

CHAPTER THREE **37**
ANALYSING AFFECTIVE FACTORS
1 The Biographical Questionnaire 38
2 Investment and 'Will to Learn' 40
3 Relevant Tasks for Analysis of Affective Factors 41
4 Analytical Criteria 42
5 Key Affective Differences between Solid and Borderline Achievers in Relation to Success at University 70

CHAPTER FOUR **73**
PEDAGOGICAL PRINCIPLES AND PRACTICES OF THE FOUNDATION COURSE
1 Introduction 73
2 Key Theories of Teaching and Learning 75
3 The Foundation in English Course: A Situated Case Study 84
4 Analysis of the Pedagogy 86
5 Critical comments on the scaffolding devices used in the Foundation Course 104
6 Concluding Comments 109

CHAPTER FIVE **111**
ANALYSING COMPARISON WRITING
1 Adapted SOLO Taxonomy Used to Assess Levels of Performance in Comparative Tasks 112
2 School-University Comparison 113
3 South Africa-Zimbabwe Comparison 134

CHAPTER SIX **156**
COGNITIVE ANALYSIS OF THE ARGUMENT AND RESEARCH PHASES OF THE COURSE
1 Argument Essay on Polygamy in South Africa 157
2 Research Report 172

CHAPTER SEVEN **214**
META-COGNITION
1 Background to Developing the Meta-Curriculum 215
2 Meta-Level Questions Linked to Course Tasks 215
3 Analysing Student Reflections 216

CHAPTER EIGHT **261**
DISCUSSION AND CONCLUSION
1 Context of the Study 261
What are the Main Findings of the Research Study? 264
3 The Value of the Integrative Approach for Understanding Student Learning and Teaching in the Foundation Course 277
4 Implications of the Research for Pedagogical and Admissions Practices at the University 283

BIBLIOGRAPHY **288**

APPENDIX A **299**
FRAMEWORK FOR ANALYSING CURRICULAR AND META-CURRICULAR TASKS

APPENDIX B **312**
INTERVIEW SCHEDULE

APPENDIX C **313**
TUTOR'S FEEDBACK SHEET

APPENDIX D **314**
INDIVIDUAL ANALYSIS: SOLID AND BORDERLINE GROUPS

APPENDIX E **320**
ANALYSIS OF STUDENT REFLECTIONS ON THE COURSE: SOLID AND BORDERLINE GROUPS

TABLES & FIGURES

TABLES

Table 2.1: The analysis is divided into 'solid' and 'borderline' performers 27
Table 2.2: Solid performers 27
Table 2.3: Borderline performers 27
Table 2.4: Top performers 28
Table 2.5: Weakest performers 28
Table 2.6: Sub-levels of the SOLO taxonomy adapted from Chan *et al.* (2002) 33

Table 3.1: Foundation Course results and university throughput rates: solid and borderline performers 43

Table 4.1 Curricular and meta-curricular tasks 86
Table 4.2: Similarities: psychological factors 91
Table 4.3: Differences: psychological factors 91

Table 5.1: SOLO taxonomy applied to solid achievers 131
Table 5.2: SOLO taxonomy applied to borderline achievers 131
Table 5.3: SOLO taxonomy applied to solid achievers 151
Table 5.4: SOLO taxonomy applied to borderline achievers 152

Table 6.1: SOLO taxonomy applied to solid achievers 169
Table 6.2: SOLO taxonomy applied to borderline achievers 169
Table 6.3: Rubric for analysing research reports using SOLO taxonomy 177
Table 6.4: Comparison of the performance of the three students in Group 1 184
Table 6.5: Comparison of the performance of the two students in research Group 2 190
Table 6.6: Comparison of the performance of the two students in research Group 3 195
Table 6.7: Comparison of the performance of the three students in research Group 4 200
Table 6.8: Analysis of Joe's performance 204
Table 6.9: Analysis of Sipho's performance 206
Table 6.10: Consolidated table of student performance according to the SOLO taxonomy 208

Table 7.1 School-university comparison: solid achievers 228
Table 7.2: School-university comparison: borderline achievers 228
Table 7.3: Assessment criteria for Agar assignment and feedback handout 231
Table 7.4: Reflection – South Africa-Zimbabwe comparison: solid achievers 238
Table 7.5: Reflection – South Africa-Zimbabwe comparison: borderline achievers 239
Table 7.6: Summary of critical reflection on the content of the research report 244
Table 7.7: Summary of student reflection on the research process 248
Table 7.8: Reflection on group process of 'doing research': solid achievers 253
Table 7.9: Reflection on group process of 'doing research': borderline achievers 253
Table 7.10: Synthesis of Biggs' and Perkins' levels of understanding and critical performance with students' capacity to reflect on the content of their research reports 256

Table 8.1: Solid performers 263
Table 8.2: Borderline performers 264
Table 8.3: Top performers 264
Table 8.4: Weakest performers 264

FIGURES

Figure 2.1: Diagram of SOLO taxonomy 31

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AD	Academic Development
AELS	Applied English Language Studies
ASP	Academic Support Programme
BQ	Biographical questionnaire
DET	Department of Education and Training (former)
DoE	Department of Education
EAL	English as an Additional Language
EAP	English for Academic Purposes
ESL	English as Second Language
HE	Higher Education
HESA	Higher Education South Africa
AISU	Academic Information Systems Unit
NCHE	National Commission on Higher Education
PTEEP	Placement Test in English for Educational Purposes
SOLO	Structure of Observed Learning Outcome
UCT	University of Cape Town
WITS	University of the Witwatersrand
ZAD	Zone of Actual Development
ZPD	Zone of Proximal Development

CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

Students entering academic study at university tackle many tasks that require them to use higher order thinking and reasoning. This generally involves their going beyond gathering and understanding basic concepts and issues to a point at which they can process, analyse, synthesise and evaluate information. The development of higher order cognitive thinking and processing warrants investigation as it promotes an understanding of improved academic engagement and performance of students who enter university.

Although much research has been conducted on what higher learning entails at different levels of study (Bloom 1953, Perry 1970, Biggs and Collis 1982, Perkins 1992), little research attention has been given to how students develop higher order thinking. Campbell, Smith and Brooker (1998:449) have commented on how few writing theorists have investigated 'the nature of student learning and understanding which occurs through essay writing or the student strategies that lead to success'. Laurillard (1993:49) urges educators to understand the nature of student learning by providing a 'deep level of description of what is happening for the student when they learn, linking the way they think about the content to what they achieve as an outcome'.

In a South African higher education (HE) context, there has been extensive intellectual interest and development in the relationship between educational policy developments and approaches to curriculum development and teaching. Debates that have centred on critical pedagogies, power relations and academic literacy development (Angelil-Carter 1998, Paxton 2003, Thesen and van Pletzen 2006) have enhanced and extended pedagogical practices at a number of HE institutions intent on creating programmes to widen access to students from diverse educational backgrounds. Nonetheless, research detailing the process of the means whereby students come to 'think' and 'know' at university has been largely overlooked in the literature. Barnett (2007:7) argues that 'knowledge' and 'skills' together have become a 'ubiquitous mantra', which 'cannot begin to offer us a sufficient set of ideas for a higher education in the twenty-first century'. This thesis is part of the quest to extend the set of ideas available to tertiary

educators who seek to facilitate increased access to university in a context of unequal opportunity at primary and secondary levels of education. In order to achieve this it is crucial that the mechanisms and processes through which learning and higher order thinking are attained by students who enter university from a position of disadvantage are better understood.

The primary purpose of this research is to identify and describe a range of external and internal factors that promote or inhibit the processing of information at higher cognitive levels by a particular group of students, in response to the inputs provided within a dedicated foundation course (See Section 2).

Two secondary purposes flow from this primary purpose:

To analyse aspects which enhance cognitive thinking in higher education from the perspective of students' actual learning processes. This focus on personal learning reflects on learning and teaching through the filter of the students' own agency. It contrasts with research that views students primarily as recipients of university policies and educational practices.

To describe a number of key pedagogical principles and strategies derived from this research and propose possibilities for integrating them into mainstream teaching for the benefit of all students. This involves generalising from this teaching context to others in relation to the assessment of academic potential and the implementation of tertiary teaching practices.

1 Background to the Study: Phases of Academic Support at Wits University

The Academic Support Programme (ASP) at the University of the Witwatersrand (Wits) has progressed through a number of phases of development since its inception in the mid 1980s. In tracking its history I will necessarily include my own role as it is intrinsic to the changes in conceptual thinking about educational provision at the university. Improving the academic performance of 'special selection' students was the main focus of academic development work in the range of support programmes offered to educationally disadvantaged students in the 1980s and early 1990s. At that time the educational

interventions were of an add-on and 'remedial' nature with a particular emphasis on academic skills development in generic courses. I joined the Academic Support Programme (ASP) during this period described by Starfield (1999:27) as 'Phase One'. It was characterised by attempts to sever links with the apartheid past by providing language and learning support for students who spoke English as an additional language.

In the early to mid 90s there was increasing recognition on the part of academic development practitioners and subject specialists committed to improving student learning, that generic programmes alone were not addressing the dynamics of the changing demographics at the university. While language courses provided 'bridging' structure and support for the increasing numbers of disadvantaged students, they did not engage with the challenges students faced in high risk courses whose pedagogies and assessment practices remained unchanged. In this period described by Starfield (1999:28) as 'Phase Two', initiatives sought to integrate language and learning competencies into disciplinary discourses using Cummins' model (1996) for developing students' cognitive language proficiency in subject areas. In line with the concerted attempts to promote a more integrated approach to mainstream curriculum development and course design, the ASP was renamed the Academic Development (AD) Programme in 1993. I became part of the reconceptualised AD in targeting students within their subject areas rather than as a separate cohort in need of support. This involved working closely with subject tutors and AD practitioners to design skills embedded tutorials and materials.

'Phase Three' of the AD Programme which started in the mid 1990s coincided with dramatic national political changes and consequent shifts in policies around higher education. Thesen and van Pletzen (2006:4) draw on Jansens' analysis of 'changes and continuities in higher education' since the democratic elections of 1994. The key shift in higher education was in the marked increase in the enrolments of 'African' students in the system between 1990 and 1999 and an 'overarching policy framework' that was put

in place during the Mandela years. This policy framework provided specific guidance for academic support and language development in the sphere of higher education[1].

'Phase Three' also coincided with national developments at South African universities where academic development practitioners opted for 'a focus on curriculum and staff development rather than student disadvantage' (Thesen and van Pletzen 2006:6). Starfield (1994:29) describes the AD Programme in 'Phase Three' as 'no longer simply assigned to support disadvantaged students but to assist academic staff in developing students' academic literacy within their disciplines through appropriate curriculum development'. At Wits, it became apparent that rather than focus on student development as practised in 'Phase Two', course design needed to become the focal point of academic development interventions. A positive consequence of this model was the strengthening of the collaboration between education and subject specialists. Its continued success, however, would depend on systematic institutional support for the professionalisation of tertiary teaching.

2 Integrated Curricula: Foundation Courses

Although significant progress was made in the improvement of educational resources in primary and secondary schools after the advent of democracy in 1994, many of the students came from working class homes in township and rural areas where teachers were under-qualified and where there remained inequitable access to resources. Despite the determination to achieve quality education for all in the 'New South Africa', Morrow (1999:56) attributes the problems and challenges to poor implementation on the part of the Department of Education and 'deeply debilitating social problems that affect basic education'. Jansen (2007), in commenting on poor matriculation pass rates in the Sunday Independent, explains the pattern of the 'dual school system' in South Africa. The one system consists of former middle class white schools that are increasingly deracialised, while the other 'consists of the large majority of schools, all black, and which together account for the fact that about one-third of pupils fail this high stakes examination'.

[1] See, for example, the Department of Education (1997) 'Language-in-Education Policy', Government Gazette No. 18546, 19 December, 5-7.

In post apartheid South Africa, in response to the need to redress inequality in education at the tertiary level, Wits introduced a number of one-year subject-based foundation courses over and above the existing English as a Second Language (ESL) course in the department of Applied English Language Studies. The Faculty Admissions Committee[2] began to select approximately 200 students from disadvantaged communities on an annual basis if they demonstrated academic potential on the alternative testing instruments (biographical questionnaire and language proficiency test[3]). The majority of selected students were subsequently placed on two foundation courses to improve their academic literacy competence. At this point, redress was an important issue for the university as a whole and the Faculty of Humanities demonstrated a sustained commitment to foundation courses and discipline-based academic skills support.

As one of the teaching and learning advisors in the Faculty of Humanities, I worked closely with subject specialists to integrate literacy and cognitive skills into the undergraduate curriculum. This was a move away from the generic approach which offered language/learning skills workshops and printed resources outside of the curriculum to one which embedded language and cognitive skills within foundation and mainstream curricula. Integrated courses used the course's conceptual issues to consciously develop students' reading and writing abilities. Students were thus engaged directly in disciplinary reading and writing taught by subject specialists. In devising foundation courses, course developers potentially had an opportunity to design all pedagogical and assessment aspects of the curriculum in response to students' language and learning needs.

During this decade of foundational provision, students in the Faculty of Humanities had a choice of five foundation courses. These were Sociology, International Relations, Foundation in English (which offered combined English Language and English Literature courses), Geography (which was eventually combined with Archaeology as

[2] The Admissions Committee was established in the mid 1980s to select disadvantaged students with poor matriculation scores for admission to the Faculty of Arts.
[3] Selection tests are discussed in Chapter 3.

Environmental Issues), and Visual Literacy (a combination of History of Arts, Music and Drama). Students were normally required to do two foundation courses in order to provide additional support while they did one mainstream first year course. This model was considered to provide sufficient instructional support in students' major subjects while grounding them in the cognitive realities of first year teaching. The foundation courses were credit-bearing and aimed to support students' integration into the university on various academic, social and cultural levels. Three of the foundation courses were awarded the Vice Chancellor's Teaching and Learning award and outside of Wits, in the broader Higher Education sector, these courses were portrayed as 'models' of good practice.[4] The extended degree model (four years instead of three) was in line with the university's analysis of student 'throughput rates'; the majority of students were completing their degrees in four years without support so supplementary tuition would enhance their chances of success.

Once these courses were established, how to accommodate student *diversity* became the key organising principle for academic development initiatives rather than notions of *disadvantage* and *language deficit* (Thesen and van Pletzen 2006). Alongside the variety of foundation courses on offer to students selected through the alternative admissions process, the role of academic development practitioners expanded to working with subject specialists to situate academic literacy within disciplinary contexts at all levels of undergraduate study. It became apparent to lecturers that the majority of students would benefit from interventions that made discoursal conventions, literacy and assessment expectations of the discipline explicit. One vivid example of this was the shift from understanding plagiarism from a 'blame the student' perspective to one in which departments took responsibility for developing students' ability to use sources appropriately. Furthermore, there was a concerted attempt on the part of foundation course lecturers to integrate their pedagogical principles and practices into undergraduate courses as a whole.

[4] The three foundation courses: English, International Relations and Sociology were given the annual Vice Chancellors' teaching award that recognises high quality teaching.

3 Shifting from Present to Past Tense: Altered Circumstances at the University

The University Admissions policy, approved by Senate in 2003, committed itself to 'admissions practices that are fair and transparent; to a teaching and learning environment which is conducive to success and which actively targets students who may previously not have been admitted as a result of any form of deprivation or prejudice but who have the potential to succeed at university'. Despite this policy aimed at student redress, since 2005 there have been a number of changes in the educational provision of 'special selection' students as a direct consequence of Wits' financial policy. Scott (2007), in a draft HSRC research report on factors affecting throughput and retention rates, draws attention to the implications of capping of student numbers especially first-year intakes and reduced Government funding during this period. In the context of financial pressures and the review of NSFAS[5] funding in 2005, a policy decision was taken by the university to cancel funds to students who had not gained automatic entry to the university (based on their matriculation results) and who were required to write the selections tests. Scott (2007: 46) points out that 'the success of these programmes was hotly debated…the question whether success was rated according to individual achievements or on an overall efficiency basis was raised'. Disappointing studies on South African university dropout rates[6] contributed to the assumption that 'marginal students' in foundation courses contributed to the declining graduation rates. University discourse at the time around poor throughput and retention rates mostly reflected deficit constructions of students[7].

As a result of the reduced funding, the number of students who could avail themselves for admission dropped precipitously. Consequently, course lecturers were redeployed elsewhere and foundation courses were ultimately suspended. By the end of 2006, Visual Literacy, Environmental Issues and International Relations were put into abeyance as

[5] National Student Financial Aid Scheme.

[6] According to Scott (2007: iii) South Africa's higher education sector is battling to come to terms with 'shocking dropout rates in which only an estimated 30% of students obtain their qualifications within five years of enrolling for a three-year generic bachelor's degree'.

[7] It must be noted, however, that the performance of foundation students (Scott 2007: 46) was about the same as similar students who were not on the foundation programme.

were the remaining two foundation courses, Foundation in English and Sociology, by the end of 2007[8]. Furthermore, the kind of students writing the current series of special selection admissions tests changed. From the 1990s to the early 2000s, there were large numbers of students from under-resourced rural and township schools (former DET schools[9]) and mature age students who wrote these tests, including the students in this case study. If their application was 'successful', they were offered a package including financial aid and extensive educational support in an extended curriculum. Currently, as this package is no longer available, fewer students from former DET schools are applying to the Faculty of Humanities through the special selection route. In more recent years, the Faculty of Humanities has attracted increasing numbers of urbanised middle class students who have had access to more consistent schooling than in previous years[10].

The trend away from foundational provision in a research-oriented university[11] contrasts with proposals from several South African tertiary institutions and education decision-makers for additional space in the curriculum in the form of four-year undergraduate degrees. According to Higher Education South Africa (HESA) quoted in a Mail&Guardian supplement on Higher Education (May 2008), 'The underpreparedness of learners entering higher education, the high drop-out rate coupled with complaints from business that graduates are not work ready – all suggest that higher education would benefit from increasing the duration of undergraduate degrees and diplomas.' Similarly, Scott (2008) has described the 'articulation gap' between students' preparedness for university study (50% under prepared) and the level expected of them. He has proposed systemic responses to closing this gap with an explicit focus on the relationship between student selection, placement on foundational courses and mainstream curriculum development.

[8] A contributing factor in closing down Foundations Courses was that Wits' application for additional funding to the DoE for Humanities foundation courses was refused in 2004.
[9] These were previously segregated Department of Education and Training schools.
[10] This does not necessarily mean that the quality of their written output is superior to that of students from under-resourced township and rural schools. Thesen and van Pletzen (2006:8) caution against quantifying 'shifts in the class profile of the student population as the country moves away from Apartheids' oppressive classification system'.
[11] When in 2006, the Faculty of Humanities' bid for funding for Sociology and English foundation courses was successful it had to be returned in 2007 after these foundation courses were no longer financially viable.

4 Critical reflections on AD at Wits

My conceptual approach to academic development from my involvement in discipline based integrated programmes and courses, has been guided by the view that context-specific educational strategies and materials that have evolved over the years have developed in students the meta-knowledge for enhancing their knowledge and their ability to succeed. I believe that the conscious skills focus of this material has provided clearer expectations of the new disciplinary discourses and improved learning outcomes for students. The move away from generalist views of writing supports the social constructivist-based notion of a discourse community propounded by New Literacy Studies theorists such as Gee (1990). Thesen and van Pletzen (2006:12) have described New literacy Studies' contribution to academic literacy practice in South Africa, especially in terms of enabling practitioners 'to reconceptualise their academic literacy curricula and deepen their understandings of the complex embedding of writing in disciplines in and out of formal education'. Similarly, my view has been that integrated skills approaches have assisted staff in improving their teaching practices as they clarify and make explicit the conventions and requisite skills for the discipline.

More recently, however, a number of questions have been raised for me with regard to the impact of integrated approaches on student learning. To what extent, for example, do integrated learning materials promote learning in the Zone of Proximal Development (ZPD) (Vygotsky 1978)? How do students engage with these materials in terms of their own approaches to learning? Despite the assumed pedagogical advantages of integrating teaching and learning principles into the curriculum, the reasons for the development or failure of student learning are unknown. Models of teaching and learning in higher education have not been effective in describing the difficulties students have in trying to become expert learners in the disciplines. Nor does the theorisation of these models shed light on the poor throughput rates of students, an issue that has been largely neglected[12].

[12] It must be noted that policy changes at national level prompted the establishment of a university working committee at Wits (Working Group on Retention and Throughput 2002) to investigate the throughput problem more thoroughly.

I have been deeply involved in course and staff development since Phase Two of the AD Programme. During that phase emphasis was placed on structural and pedagogical improvements. However, student development and learning remain a neglected area of AD work. Research on teaching and learning practices in higher education at Wits has received scant attention and little has been published, for example, on the success rates of special selection students compared to mainstream students. At Wits, although many pedagogic mechanisms for assisting educationally disadvantaged students have been described and analysed at annual teaching and learning symposia and higher educational conferences[13], their effects on student learning and development have not been explored in any depth. This phenomenon is compounded by the low status accorded to teaching and student support resulting in the poor monitoring of teaching and learning activities and of learner profiles at the institution.

Consequently, teaching and subject specialists at Wits have often made opposing claims about the needs and expectations of disadvantaged students based on an assumed 'in touchness' with students' experiences and understandings. Zamel (1995:510) highlights the deficit model of language and learning in which students' language deficiencies (usually surface features of language) are highlighted by teaching staff. She argues that teaching staff believe in the 'myth of transience' (Rose 1985), that is, that students' problems are temporary and can be remediated by outside courses or academic development programmes. In the South African context, Thesen (1997) raises the issue of the way many of the students who adopt surface strategies have been labelled by the universities. Terms such as 'disadvantaged', 'underprepared', and 'second language' are used as a kind of short hand to describe black students who have been historically excluded from white universities. Such labels, argues Thesen (1997:490), 'signal an institutional discourse, which translates in practical terms into special paths for black students. Tested on entry, they are placed on language development courses that simultaneously enable and stigmatize learners.'

[13] Conferences such as the South African Association for Academic Development and Higher Education Research and Development in Southern Australasia have been well attended by Wits teaching staff.

Unfortunately what has also been lost by sidelining student learning issues in favour of broader course design initiatives is a more in-depth grasp or picture of what is happening to students in particular teaching contexts. By examining different ways of viewing student learning in the Foundation Course, I reflect critically on my own considered views regarding student learning and development. For example, given the history of academic development at Wits, I too have been steeped in looking at students in terms of their cognitive development in the university context (from the academy's way of seeing them and how they should adapt). Assumptions are easily made by academic literacy practitioners regarding the students' levels of cognition required for performing course and assessment tasks. Students' readiness or not to cope with academic tasks is framed in terms of levels of skills required to perform particular academic tasks. 'Are they ready to deal with a "critically discuss" task in first year?' or 'Should we be assessing students on their ability to apply complex concepts?'

These questions have been relevant for the Wits context because they are a response to the traditional disciplinary design of assessment tasks that do not address basic questions of where students 'are at'. Subject specialists have not seen it as their responsibility to 'scaffold'[14] questions for students or to take into account issues of student learning. (It is assumed that higher order thinking will happen automatically.) While they have begun changing their pedagogical approaches and their current course design practices to handle 'student diversity', we need to question whether the 'right sorts' of questions are being asked about student learning. We need to probe whether we have been asking these questions about student learning purely from the perspective of the teacher who wants students to cope with a specified level of competence and skill or whether we wish to gain insight into what is happening from students' own perspectives.

Haggis (2003:99), in her critical discussion of the developmental model of teaching and learning in Higher Education (to be discussed in more detail in Chapter Four), claims that it is successful in describing the positions from which academics operate. However, it

[14] Scaffolding is a term adapted by HE practitioners to describe the form of instructional support given to university students in first year teaching contexts. The form of scaffolding in the Foundation Course is explored in detail in Chapter Four.

‘does not do so well in describing, even at a general level, the difficulties that students have in trying to get to that position, or indeed what it might mean not to have any sense of the existence of that position at all’. A response to this would be to examine possible models of teaching and learning that represent the students’ perspective rather than that of their teachers. Such an approach would provide more of a match between the purposes of literacy as defined by the institution and as defined by the students themselves (Tusting, Ivanic and Wilson 2000). It would also require more explicitness within the teaching of the specific discipline, with regard to the specific literacy norms of each discipline.

In my attempt to ascertain the changes that students underwent in their educational journey, I have drawn on Cottrell’s (2001:17) identification of several factors that determine whether learning will be a ‘transformative experience’ or merely reinforce old learning. She describes internal factors such as students’ capability levels, their positive or negative emotions from previous experiences, their beliefs and values about their self-worth and potential, their identity of their ‘learning selves’ and their higher purpose of study involving overall direction and motivation. The question is whether these levels can become the sites where learning is promoted, described as ‘the “take-off” stage… where inhibitions to learning become outweighed or over-ridden by factors which promote learning so that students become engaged with their learning, taking charge of it for themselves’ (Cottrell 2001:27). Although the ‘take-off’ metaphor is a useful one for understanding students in transition at university, my research study pays equal attention to sociological and cognitive factors for analysing student progress in the case study. How does the learning environment, for example, ‘reinforce students’ own social and cultural capital’ (Barnett 2007:3)?

The title of the thesis, *Higher order thinking in transition: a case study of first year university students*, reflects the strong influences on my thinking of socio-cognitive, Vygotskian approaches to undergraduate learning (Wertsche and Bivens 1992, Bayer 1996). Having worked with ‘students in transition’ between school and university for 20 years, I argue that an in-depth analysis of how they develop academic literacy competence has significant implications for developing educational strategies to promote

'epistemological access' (Morrow 1992) as well as access to the institution. Morrow's notion of 'epistemological access' illuminates my research study as it focuses on educational strategies that enable students from under prepared educational backgrounds to gain access to university knowledge and to 'learn the kinds of things universities teach' (Morrow 2007:18). Although the current discourse at Wits University pays attention to boosting postgraduate student numbers and postgraduate pedagogy of high level research skills in line with 'Wits' character as a research-driven institution' (Ballim 2007), the sidelining of undergraduate teaching and learning could seriously jeopardise the chances for academic growth of a highly resourceful and talented pool of future postgraduate students. My thesis supports Barnett's (2007:62) claim that in order for students to 'take off, take flight and fly', educational processes in higher education need to pay attention to and enhance students' 'will to learn' and 'continuing process of becoming'.

5 Research questions

In 2000 I began working with Stella Granville, coordinator of the Academic Literacy Foundation Course (referred to in future as the 'Foundation Course') to investigate the extent to which various forms of mediation were supporting student learning in the course. What became clear to me were the possibilities in this course for promoting reflective thinking in students by integrating meta-level questions into the teaching programme and building the 'meta-curriculum' (Perkins 1992). Students began to reflect on their understandings at increasingly higher levels of abstraction in response to the mediation. Some students made remarkable progress in a fairly short space of time and it appeared that they were responding to the mediation within the course. We argued that the ZPD (Vygotsky 1978, see Chapter Four) was useful as a starting point for understanding our attempts to work with students' existing knowledge and identities in order to develop their abstract thinking.

The Foundation Course gave me the opportunity to examine the complex inter-relationship between teaching and learning that resulted in the development of higher order processing. I was able to create a more multi-layered, elaborated 'way of seeing' and analysing student writing and reflection. Certain students on the course managed to

handle the challenging assessment tasks in first year and beyond despite some of the negative expectations of their academic ability. In order to address the research gap in the field, I formulated the following central research question that unpacks the problems outlined above more fully:

What contributes to the ongoing development of higher order thinking skills in students enrolled for the Foundation Course in their first year at university?

This will entail consideration of the following sub-questions:

What factors inhibit or motivate learning and how do these relate to students' previous learning experiences?

How effective are the various forms of 'scaffolding' in promoting student learning in this foundation course?

What theoretical constructs emerge from this study as useful for understanding the shifts in students' Zones of Proximal Development as they acquire the ability to think at higher and increasingly abstract levels?

What theoretical frameworks for describing and characterising the development of higher order writing emerge from this study?

How does students' ability to compare information develop in their first year at university in the Foundation Course?

How does students' ability to construct an academic argument develop in their first year at university in the Foundation Course?

What is the role of student reflection in facilitating higher order thinking?

How does students' ability to reflect on their writing develop in their first year at university in the Foundation Course?

Are there individual differences in terms of how students respond to the teaching mediation in the Foundation Course?

6 Outline of thesis

Flowing from these questions, I have structured my thesis into eight chapters after the general introduction (Chapter One).

In Chapter Two, I discuss the methodology that guided the study. The chapter describes and motivates the use of the analytic case study design method and documents how the research participants, representing different levels of performance in the foundation course, were selected. I describe the participants and the variety of methods used to collect both teacher and student-produced documents. I explain the qualitative methods of data analysis used for developing conceptual categories. I was able to adapt and combine relevant cognitive instruments such as Biggs' SOLO (Structure of Observed Learning Outcome) taxonomy (1982) and Perkins' levels of understanding (1992) for ascertaining shifts in student writing and reflection. Although I have integrated relevant literature throughout the thesis to reflect on teaching and learning outcomes of the Foundation Course, Chapter Three and especially Chapter Four chronicles the key theoretical underpinnings of my study.

In Chapter Three, I present a detailed account of the dispositions and qualities displayed by students in the case study who were selected on the basis of their responses to the biographical questionnaire. I assess the extent of the relationship between these affective factors like the 'will to learn' (Barnett 2007) and academic thinking capacities required of first year university students. Having established the various success categories of students in the case study, the chapter examines whether there are differences in the way students reflect on their learner identities from past learning experiences and in terms of future expectations. The chapter aims to identify and characterise dispositions in students who have performed at different levels to establish whether there is an interrelationship between 'investment' factors and ongoing performance on the course. It draws on theories of affective and motivational factors that influence success at university (Perkins 1992, Gardner 1999, Brockbank and McGill 1998, Norton 2000, Cottrell 2001).

Chapter Four, after examining the pedagogical implications of developmental and socio-cultural models of teaching and learning presents a detailed description of the course pedagogy in an attempt to analyse the role of 'text-mediational scaffolding' (Wertsche and Bivens 1992) in eliciting participatory and higher order thinking processes. This chapter critically analyses the nature of 'scaffolding' on the course by referring to several examples gleaned from the teaching situation.

In the data analysis in Chapters Five and Six, I examine student writing in response to the range of teaching mediations and tasks within the course. I have adapted existing taxonomies for an analysis of the levels at which different students write in response to comparison and argument tasks in the Foundation Course. Chapter Five focuses on how students engage with the pedagogy and assessment tasks in the comparison phase of the course while Chapter Six deals with their academic writing development in the argument and research phase of the course. In particular, the analysis discusses how students engage with their own ideas through writing in terms of content, organisation and language issues.

In Chapter Seven I explore how students reflect on their writing while engaged in the writing tasks discussed in the previous two data analysis chapters. I examine student responses to the meta-level questions specifically designed to elicit their understanding of their own writing processes. The questions I address are how students conceive of their cognitive progress and their handling of different aspects of the tasks, and how they see themselves learning from the course pedagogy and the feedback in particular. I have adapted a framework based on differentiated levels of thinking for analysing student engagement with the meta-curriculum (Perkins 1992).

Chapter Eight draws conclusions from my analysis of student writing and reflections and indicates the key pedagogical implications of the findings for teaching and learning practices at Wits University. I provide a visual, qualitative analysis of each student in the case study in terms of their performance on both cognitive and meta-cognitive tasks. This detailed plotting and tracking allows me to draw out educational strategies for improving

pedagogies in first year university courses in general. The concluding chapter reflects holistically on factors that have promoted or inhibited learning and thinking on the course as well as evaluates the analytical tools used for assessing student writing and reflections.

CHAPTER TWO
METHODOLOGY

In order to describe student development of academic writing and thinking in the Foundation Course, I have used a predominantly qualitative approach to research. I believe this yields a more complex and layered understanding of how students learn and think in response to the pedagogical strategies on the course. This chapter firstly provides my rationale for using the analytic case study method to researching student learning in this teaching context. Secondly, it explains how both teacher- and student-produced data was collected by the researcher through the course of the year in the early 2000s (from now referred to as 200x). Thirdly, it documents the process of selecting students for the case study, ethical concerns and how the student success categories were derived from available data. Fourthly, it elaborates on how this data was analysed by adapting and extending existing cognitive and meta-cognitive taxonomies for analysing students' writing and thinking.

1 The Analytic Case Study Method

In the year prior to the case study analysis, I had been sitting in on the Foundation Course coordinators' lectures and tutorials consistently as part of a collaborative research project to assess the extent to which the educational strategies and assessment practices were promoting student learning. It occurred to me that I needed to do more than observe the interaction between pedagogical interventions and student responses if I wished to examine the development of higher order thinking in students' transition from school to university. It was evident that there was a profound engagement with the course scaffolding from a number of students in the foundation tutorial class who may not have responded similarly in other first year courses. I had deduced this from my observation of these students in 'mainstream' tutorials where their participation had been comparably passive and disengaged.

From my experience as a 'formative evaluator' of lecturing staff, I had become accustomed to commenting critically on lectures not only in terms of the teaching methods and techniques, but also in terms of students' levels of participation. My

intention of highlighting issues of student learning to lecturers eager to improve their teaching practices drew me to observe what students were doing in lectures while 'listening' to the lecture. This took the form of their comments and questions in class as well as the extent to which they recorded key points and examples from the lecture material. It became apparent, however, that this was a highly subjective, generalised and 'unscientific' method of judging student involvement with the pedagogy. I realised, in consultation with coordinator of the Foundation Course that I needed to develop more rigorous mechanisms for understanding 'what was happening for students' in the teaching situation. As my key interest was in the development of thinking processes that emerged through the various writing activities in the Foundation Course, I gravitated towards the case study method as most appropriate for tracking students' cognitive and meta-cognitive growth processes. In retrospect I wished to address Barnett's contention that in higher education, with the focus on students 'en masse', we have little understanding 'of the individual student with his or her own challenges and struggles' (2007:80).

According to Yin (1994), my choice of 12 cases representative of different levels of student performance would comply with the case study design method. Merriam (1998:61) points out that purposive sampling is based on the assumption that the investigator wants to 'discover, understand and gain insight and therefore must select a sample from which the most can be learnt'. I believed that an intensive and detailed examination of the students' writing and reflections would shed light on how cognition and meta-cognition develop at foundational and first year levels of university study. An analytic case study provided an opportunity for generating a deep-level description of phenomena. I identified recurring patterns in the data from the 12 cases and developed conceptual categories for investigating what was happening to students' learning in their first year at university in relation to the teaching and learning issues to be discussed in chapter Four. As Merriam (1998:38) claims 'A case study researcher gathers as much information about the problem as possible with the intent of analyzing, interpreting or theorizing about the phenomenon'. I conducted what Yin (1994:41) referred to as an

embedded case study. Unlike a holistic design, it allowed the investigator to examine 'specific phenomena in operational detail'.

Case study research has been described as a 'bounded system' because it is an *instance* of some concern, issue or hypothesis. The challenge for me was to distinguish the categories that could be generalised from this 'bounded system' from those that could not. As Benesche (2001:81) points out, students placed together in a separate language course (such as the Foundation Course) are not a uniform group. She says that the multiple identities of students often 'defy neat categorization'. Each student in the case study provided an opportunity to highlight student differences in terms of background, educational experience, literacy skills and the way they responded to the various forms of scaffolding and teaching on the course. This offered a challenge to many of the deficit and remedial labels given to students placed on special selection paths. According to Yin (1994), the typical 'how' and 'why' questions used in a case study have a distinct advantage for offering insights and illuminating meanings and explanations about the phenomena.

The objection most frequently raised with reference to the case study method is the 'generalisation problem'. Wolcott (1990:106) argues that the purpose of case study observation is to 'probe deeply and analyze intensively the multifarious phenomena that constitute the life cycle of the unit with a view to establishing generalizations about the wider population to which that unit belongs'. Questions have been asked regarding what the justification is of studying only one instance (in my situation, 12 instances), and whether valid generalisations can ever be drawn from the one instance. Walker's response (1980) is that it does not really matter which instance is studied as one instance is as likely to be as typical or atypical as another. The problem of generalising is more of an issue for the reader who has to ask, 'What is there in this study that I can apply to my own situation, and what clearly does not apply?' (Walker 1980:34). Similarly, Merriam (1998) takes the view that the case study offers the reader the opportunity to recognise similarities and differences within his/her own setting and to test his/her experience against the merits of the case. Thus the current study invites the reader to test his/her

understanding of the development of cognition and meta-cognition in his/her students against this study of cases investigating student learning.

In Yin's (1994) discussion of generalising from theory, he suggests that a useful method of generalisation is 'analytic generalisation' in which a previously developed theory is used as a template with which to compare the empirical results of the case study. Merriam (1998) proposes that case studies have a number of advantages that make them attractive to educational evaluators or researchers. Their particular strength is their focus on questions, issues and concerns broadly related to teaching and learning and for 'bringing about understanding in educational processes that can affect and even improve educational practice' (Merriam 1998:37). Smith (1978) also emphasises the quality of 'undeniability' in that a real situation, rather than a hypothetical one, is being described.

2 Ethical Considerations

Ethics clearance was obtained from the Research Office in the year prior to conducting the research and students were assured in writing of confidentiality and anonymity throughout the research process. Students were provided with a description of the research project together with the consent form. They were told that their participation was voluntary. They gave permission for me to use their biographical questionnaires and all written course tasks and reflections. They were also assured that they could withdraw from the research process at any time without prejudice. No real student names appear in the report or other literature arising from the study and the exact year of the study has been withheld to protect the identity of students. The year is therefore referred to as 200x.

3 Data Collection Techniques

3.1 Five methods of data collection

I collected most of the data in 200x. Ethics clearance was obtained before the data was collected. A variety of methods were used to collect data. These were in line with Yin's (1994:98) principles of data collection: using multiple sources of evidence to 'triangulate' the research, creating a case study database and maintaining a 'chain of evidence' to enable the reader to 'follow the derivation of any evidence from initial research questions

to ultimate case study conclusions'. Having access to multiple sources of data validated my interpretations of the students' overall transition experiences while addressing the perceived lack of rigor in case study research (Yin 1994). The combination of teacher and student-focused data allowed me to produce an integrated study of students' participation and progress in the Foundation Course.

Firstly, non-participant observation (Ashcroft 1996) enabled me to record classroom practice in field notes. These observations focused on Granville's teaching methods and of students' responses to her teaching. A structured schedule was drawn up of 'what students did' during the teaching sessions, in particular the individual and group activities they engaged in and the questions they asked and responded to. At least one tutorial per week was observed for both semester modules during 200x.

Secondly, I documented all discussions held with Granville in which we planned various tutorial and lecture activities and discussed possibilities for evaluating the teaching sessions. I also collected previous course evaluations and examiners' reports.

Thirdly, I collected a range of macro and micro-level course materials used in 200x. These included the overall course outline, all the reading texts and accompanying worksheets used in lectures and tutorials, the tutorial reading and writing activities incorporated into the course workbooks as well as formative and summative assessment tasks.

Fourthly, I collected all relevant student texts for the duration of 200x. These included biographical questionnaires written to gain access to the university, essays and assignments (first and second drafts when submitted), written reflections on classroom tasks (for each assignment, students were required to write a reflective piece) and examination scripts.

Fifthly, I conducted semi-structured interviews with students in the latter part of 200x. The interview schedule (see Appendix B) contained several specific questions I wanted to

ask students and some open-ended questions that could be followed up with probes. All interviews were tape-recorded and transcripts were produced. I analysed the interview transcripts of the 12 students and incorporated relevant comments into the data analysis in Chapters Five, Six and Seven.

3.2 Critical comments on data collection methods

Although I collected a broad range of teacher and student-produced documents, I encountered a number of stumbling blocks while doing the detailed data analysis some time after collecting the data. In retrospect, I should have had a more systematic method of organising the student-produced documents, as I did not have access to particular assignments that would have enhanced my ability to compare data. As I had not finalised my case study during the data collection process, a set of writing from the entire class would have benefited the analytical phase of the research. Unfortunately, in a few instances, the selection of students for the case study was influenced by the amount of data I had filed. Furthermore, as the reflections were not awarded marks, besides the reflective comments on draft two of the South Africa-Zimbabwe comparison, students did not always retain these reflective pieces. This also became a gap in the data supply during my analysis of student reflections.

An additional obstacle was the student interview process. Firstly, not all students in the class of 33 made themselves available for the voluntary interviews, an issue beyond the control of the researcher. With hindsight, even though I had not clarified the case study members at the time of conducting the research, it may have been more productive to have motivated strongly for all students to attend the interview sessions by communicating the mutual benefit of the interview process. For example, during the interviews, I was often able to respond constructively to students' immediate learning concerns. Under such circumstances, I would have had a wider pool of students to draw from in selecting the cases. Regarding the interviews themselves, after reading the transcripts, I felt slightly uncomfortable with some of the 'leading' questions I had asked students about how useful they had found aspects of the course scaffolding. Now that I have had time to develop a more sophisticated and elaborated conception of scaffolding

on this course, it would have been more useful to have asked them questions relating to specific aspects of the mediation. The task-related meta-questions discussed in Chapter Seven, address this concern to some extent as students were asked to comment on what they had learnt in relation to particular teaching and learning activities.

4 Selection of Students for the Case Study

4.1 Criteria for selecting students

The 12 students were drawn from Granville's tutorial group of 33 students to provide purposeful and information-rich cases for study when I began analysing the data. The first criterion for choosing the students was on the basis of their performance on a number of assessment tasks and the June examination in their first module. My initial 'hunch' was that the comparison producing the most interesting findings would be that between students from similarly challenging schooling backgrounds, but who handled the Foundation Course assessment tasks at different levels of performance. From my own experience as an academic development practitioner I was always interested in the academic trajectory of students from disadvantaged schooling backgrounds who appeared to respond positively to the teaching interventions (solid group discussed in section 5). I believed this group would make an interesting comparison with the group from similar backgrounds that seemed not to respond as readily to the course pedagogy (borderline group discussed in section 5). The usefulness of this comparison has been borne out in the research findings (Chapters Five, Six and Seven). By using results from the key assessment tasks and a combination of taxonomies discussed below (Biggs and Collis 1982 and Perkins 1992), the students were selected onto the case study to represent different levels of performance. This enabled a comparison of the development of cognition and meta-cognition at different levels, in response to the teaching intervention.

The second criterion for selecting students for the case study was their submission of all written assignments and class reflections. I therefore had a complete set of data including exam scripts. In addition, each of the students in the sample had attended the voluntary hour-long scheduled interview with me. As mentioned above, there were certain students I would have chosen, but for whom I did not have a complete data set. I have used some

of their responses when reflecting on certain aspects of student writing and reflection in general. A third consideration was to include students registered for a range of disciplines in the Social Sciences, Human and Community Development and Visual Arts over and above their mandatory foundation courses. It was fortuitous that in this tutorial group there was a spread of male and female students from rural and urban areas, as these represented the changing profile of learners within the university at the time of the study.

5 Deriving Student Success Categories

I conducted the study when the students were in their first year of a four-year extended curriculum. By the time they completed their studies, they should have obtained a minimum of 96 points, a system used by the Faculty of Humanities at the time to calculate required points for degree completion. For the year-long Foundation Course, students were awarded eight points towards their degree, which is the same value as two first-year level modules.

5.1 Categories of success (based on Foundation Course results)

As far as performance on the Foundation Course is concerned, I have divided students in this study into the following groups:

- **The 'solid' group** – students who passed both their foundation modules comfortably (usually with low to high Ds or low Cs) and mostly improved from first to second drafts.

  (14/33 students in the tutorial class are in this group and there are six in the case study).
- **The 'borderline' group** – students who obtained low (borderline) Ds for both foundation modules, or who failed one of their modules

  (8/33 students in the tutorial class are in this group and there are six in the case study).

Of the remaining students in the class, seven obtained high seconds and upper seconds for the course ('top performers') and four students failed both modules ('weakest performers').

5.2 University throughput categories

Information became available four years after collecting the data about which students had completed their degrees with 96 points in the expected time of four years for special selection students. The following was the system used by the university to calculate 'throughput rates' until 2007 when a new system was introduced:

- The degree was expected to take three years for 'mainstream' students. These were ***n*** students.
- With the inclusion of the extended curriculum in the form of an additional structured year, students who took an additional year to complete their degrees were classified ***n* + 1** students. These students were expected to obtain the required 96 points in four years for a regular BA degree, and in five years for the professional degrees: Social Work, Drama and Fine Art.
- Students taking an additional year or more were classified ***n* + *x*** where *x* stands for the number of years they took to complete their degrees.

5.2.1 Results of students in the case study

n: One student graduated with a three-year degree although he had been placed on a four-year curriculum. He was in the solid group of performers.

n* + *1: Of the 12 students chosen for the case study analysis, five obtained the required 96 points in four years. Of these students, four (in the solid category) had all passed comfortably in the Foundation Course. One student in the borderline category graduated in the expected time.

n* + *x: Three students chosen for the case study analysis obtained the required 96 points in at least one extra year expected of them. One of these students passed both modules of the Foundation Course comfortably (solid category) and two were borderline students. One of these students made the most improvement of all students in the Foundation Course (from 45% in the first module to 63% in the second module) (*6/33 students are in this category in the class as a whole*).

Not registered: Three students in the 'borderline' group dropped out of university at different times in the course of their degrees.

5.3 Results of students chosen for the case study

Table 2.1: Solid and borderline performers

Student	**Solid performers** Marks in foundation modules	**University throughput category** (96 minimum to graduate in 200x)
Thabo (m)	57% 60%	*n* + 1
Maloko (f)	58% 62%	*n* + 1
Bramley (m)	55% 63%	*N*
Imelda (f)	58% 61%	*n* + 2
Lebogang (f)	55% 53%	*n* + 1
Karabo (f)	53% 57%	*n* + 1
	Borderline performers	**University throughput category** (96 minimum to graduate in 200x)
Isiaah (m)	48% 54%	*n + 1*
Mabe (m)	50% 50%	Not registered
Lindiwe (f)	42% 52%	*n + 2*
Joe (m)	45% 63%	*n + 3*
Sipho (m)	45% 54%	Not registered
Angie (f)	42% 50%	Not registered

5.4 Results of students in the whole tutorial group

The following is a consolidated table of student performance for the whole tutorial group. The numbers will be explained and analysed in detail in Chapter Eight, the conclusion of the thesis.

Table 2.2: Solid performers

Number	**Years to graduate**	**Percentage graduation**	**Drop-out rate**	**Postgraduate study**
14/33	*n:* 1/14 *n* + 1: 9/14 *n* + 2: 2/14	12/14 = 86%	2/14 (both 1st year)	4/14

Table 2.3: Borderline performers

Number	**Years to graduate**	**Percentage graduation**	**Drop-out rate (not registered)**	**Postgraduate study**
8/33	*n* + 1: 1/8 *n* + 2: 3/8	4/8 = 50%	4/8 (1 in 1st year, 2 in 3rd year and 1 in 4th year)	0

Table 2.4: Top performers

Number	Years to graduate	Percentage graduation	Drop-out rate (not registered)	Postgraduate study
7/33	*n* +1: 3/7	3/7 = 43%	4/7 (1 in 1st year, 2 in 2nd year and 1 in 3rd year)	1 completed LLB

Table 2.5: Weakest performers

Number	Years to graduate	Percentage graduation	Drop-out rate (not registered)	Postgraduate study
4/33	*n* + 2: 1/4	1/4 = 25%	3/4 (2 in 1st year, 1 in 2nd year and 1 in 4th year)	0

Total number of graduations: 20/33 (61%)

Total number of drop outs: 13/33 (39%)

Total number of postgraduate registrations: 5

n: 1 graduation

n + 1: 13 graduations

n + 2: 6 graduations

6 Analysis of Data

6.1 Timing of analysis

I began analysing the writing and reflections of students in the case study after I had established the success categories (solid and borderline) based on their performance on the Foundation Course. As the years passed in the early 2000s, I was able to get a sense of how well students had fared in their degrees as a whole. I did not want information about their throughput results to influence my analysis of the qualitative differences between solid and borderline performers. However, I believed such knowledge would ultimately enhance my understanding of student growth on the Foundation Course in terms of their responses to the various forms of scaffolding. Firstly, the continued success or failure of these students at university allowed me to reflect on the relationship between their writing and thinking development on the course and their performance in the degree as a whole (bearing in mind socio-economic factors beyond the students' control that may have jeopardised their chances of success at university). Secondly, an awareness of

student success rates enabled me to critically assess the categories I had set up during the initial analysis. Thirdly, having a 'bird's eye view' was advantageous for reviewing my perspective of how students operated in the Foundation Course itself. It provided me with an additional dimension for analysing the complex elements of the course pedagogy. In each data analysis chapter (Five, Six and Seven), I reflect on the connection between student dispositions, levels of writing and reflections in the Foundation Course in terms of how they performed in the degree as a whole.

6.2 Methods of analysis

It became evident that a qualitative analysis of student writing and reflections, from a socio-cognitive perspective, would shed light on and enhance my understanding of the available figures regarding throughput rates of students in the case study. Yin suggests using theoretical propositions as a strategy for analysing case study evidence and says that the 'better case studies are the ones in which explanations have reflected some theoretically significant propositions' (Yin 1994:110). He also advises using various analytic techniques such as making a matrix of categories and placing the evidence within such categories. I adhered to this approach by scrutinising both teacher and student-produced documents using a range of pedagogical constructs.

6.2.2 Teacher-produced documents

This involved a text analysis of materials used for teaching purposes such as teaching activities, course texts and assessment tasks. I examined the documents in relation to the key features of the different forms of scaffolding (Bayer 1996). Some criteria that distinguish scaffolding from other kinds of teaching and learning (Hammond 2001) are:

- the learning of some specific skill or concept
- independent competence on the student's part
- evidence of students successfully completing the task at hand
- evidence that students are now able to go on to deal with subsequent tasks and related problems.

I have explored the extent to which 'students are pushed beyond their current abilities and levels of understanding (so that they are) able to 'internalize' new understandings.

The notion of 'constructive alignment' (Biggs 1996) was a useful construct for establishing how aligned the course was in relation to its learning outcomes, pedagogy and assessment methods. The extent to which these different aspects of the curriculum were congruent played a role in determining the levels at which students developed their writing abilities on the Foundation Course. Previous course evaluations and examiners' reports were scrutinised using a 'constant comparative method' described by Maykut and Morehouse (1994). This technique involves using 'analytic generalization' to compare data with previously developed theory. The course pedagogy is accounted for in detail in Chapter Four.

6.2.3 Student-produced documents

Biggs and Collis' SOLO taxonomy (1982) and Perkins (1992) framework for identifying increasing levels of thinking and reflection were the key methods for ascertaining shifts/progress in students' learning processes. I have adapted both these taxonomies in recognition of the importance of social interaction in producing student texts. A thorough critical application of these analyses occurs in Chapters Five, Six and Seven.

7 Analysis of Student Writing Using the SOLO Taxonomy

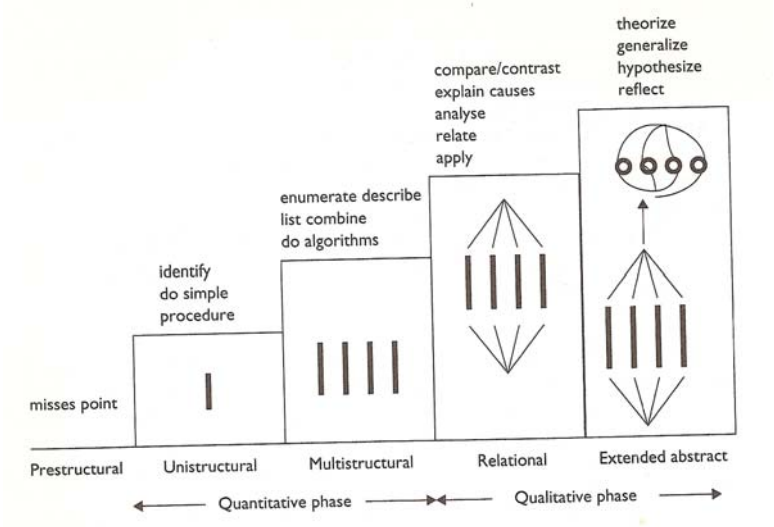
The SOLO taxonomy (Biggs and Collis 1982) has been used by teaching and learning practitioners at universities globally to assess how students' performance develops in relation to particular disciplinary tasks. The taxonomy is a five-tier hierarchical framework of learning outcomes intended to describe the increasing structural complexity in the way students learn in particular contexts. Chan, Tsui and Chan (2002) draw on Hattie and Purdie (1998) to describe the taxonomy as a 'hierarchical model of increasing structural complexity: increasing consistency, increasing number of organizing dimensions and increasing use of relating principles'. It assumes that understanding develops gradually and becomes more structured and articulated during the course of mastering academic tasks.

Biggs' social constructivist perspective (2003) highlights meaning created by students' learning activities or approaches to learning. It is useful for my analysis of students' growing writing abilities as it describes the increasing structural complexity in the way students learn in particular contexts. According to Biggs (2003:37), there are two main changes in the outcomes of student learning: 'quantitative as the amount of detail in the student's response increases, and qualitative as that detail becomes integrated into a structural pattern'. Other well-documented theories of learning and understanding in university students (Marton and Saljo 1984, Belenky et al 1986, Entwistle 1997) have found a similar contrast between the organisation of knowledge as 'discrete, serial elements to be remembered and reproduced, and the integration and transformation of knowledge into a personally constructed and meaningful entity' (Campbell *et al.* 1998:450).

Although I retain the principle distinctions between the four higher levels of understanding described in the SOLO taxonomy, I have adjusted the criteria according to specific task requirements of the different phases of the Foundation Course. I have omitted the first pre-structural level in my analysis as students' inability to cope with academic tasks in the admissions tests would have precluded them from being admitted to the university.

7.1 Four levels of understanding

Figure 2.1: SOLO Taxonomy (Biggs: 2003:48)



In referring to the diagram, level 1 is a *uni-structural* response in which responses focus on one relevant element. There is no relationship between facts or ideas and understanding is nominal. A *multi-structural* level response is one in which several relevant independent elements are used in sequence. Students extrapolate from simple information or use simple, linear logic. 'Uni-' and 'multi-structural' levels of understanding view understanding as a quantitative increase in what is known or grasped. Organisation at this level follows the 'add-on, shopping list' logic.

Qualitative shifts in student writing occur when student understanding is deepened and there is a move to a 'relational' level of performance. This answer is no longer a listing of ideas and facts, but attempts to address a point and 'make sense in the light of their contribution to the topic as a whole' (Biggs 2003:39). It is a level that explores connections between key elements of phenomena and grasps the significance of the information and how to use it. The essence of the final 'extended abstract' level, is that the 'coherent whole is conceptualized at a higher level of abstraction' (Biggs 2003:39). It requires students to find implications beyond the parameters of the task. This level marks the transition to a higher mode of functioning in which students evaluate existing knowledge and create new knowledge.

7.2 Adapting the SOLO taxonomy for analysis of different text types

In its general form, it is possible for the taxonomy to provide a limited, one-dimensional view of how students formulate their comparisons or arguments. In my work with Granville, we were able to evolve a multi-dimensional approach to using the taxonomy for assessment purposes. For example, the different levels of performance related to aspects of content, organisation and language expression. Hattie and Brown (2004:28) contend that the key strength of the SOLO taxonomy is the way it reflects the complexity of human learning, 'Unlike the assumptions on which the Bloom taxonomy has been predicated, there is no separation between content and context, and there is recognition of the role of both the student and the teacher in student learning.' Chan *et al.* (2002) have added a number of sub-levels to the SOLO taxonomy, which I have used at times to identify subtle differences within levels of operation. For example, they draw on Hattie

and Purdie (1998) to differentiate between low, moderate and high levels of multi-structural functioning; and between low, moderate and high levels of relational functioning. Chapters Five and Six elaborate on how the SOLO taxonomy has been tailor-made to produce an elaborated perspective on student writing for the tasks at hand.

Table 2.6: Sub-levels of the SOLO taxonomy adapted from Chan *et al.* (2002)

SOLO Level	Description
Uni-structural	Mentions only one relevant piece of information. Simple serial listing of successive points with no links.
Multi-structural/low	Mentions two or three aspects that are related to the question with no elaboration.
Multi-strucural/moderate	Describes a number or relevant aspects with limited elaboration. The key issue is not addressed.
Multi-structural/high	Describes and elaborates many points with illustrations. Competent sequential description provided.
Relational/low	Generalises ideas in at least two paragraphs. Begins integrating and explaining separate ideas.
Relational/moderate	Generalises ideas in many parts of the essay. Shows understanding of how ideas and concepts fit together to address the question.
Relational/high	Overall generalisation in essay as a whole. Several aspects are integrated so that the essay has a coherent structure and argument.
Extended abstract	A 'breakthrough response' that changes our perspective on the issue. Questions or criticises conventional practices and principles of the discipline.

7.2.1 SOLO taxonomy applied to comparison tasks

In both data analysis Chapters Five and Six, I unpack the meaning of three key areas for analysing student writing: content, organisation and language. The central analytical criterion for the comparative tasks in Chapter Five is how students use available information to compare information within various categories at increasingly higher levels of integration. For the school-university comparison, I contextualise the essay-writing criteria by examining the *depth and breadth* of ideas themselves, whereas in the South Africa-Zimbabwe task, I focus more on the way students *represent different perspectives* on student experiences at university. I elaborate on these varying organising principles in Chapter Five.

7.2.2 SOLO taxonomy applied to argument essay

Chapter Six presents an application of the SOLO taxonomy for the argument essay on polygamy. Students were required to build a coherent argument by considering different positions on polygamy and weighing them up. The key principle governing my analysis of the argument essays is student capacity to develop a thread of argument. This involves the evidence students use to explain both sides of the argument and the extent to which they take a position regarding polygamy (content), their skill in developing the thread of the argument in the essay (organisation) and their use of language to explain the different positions (language).

7.2.3 SOLO taxonomy applied to research report

Categorisation in the research report is a more complex and higher order process as students generate their own categories emerging from the data. They need to supply reasons and examples to explain their findings as well as interpret the findings. Because of the many different aspects to the research report, I have developed a rubric in Chapter Six that unpacks the content, organisational and language criteria relevant to the research report.

7.3 Analysis of student reflection

Perkins (1992) has described the development of meta-cognitive and reflective thinking as students acquire conceptual knowledge. In Chapter Seven I use this approach as a basis for analysing the way students reflect on their writing at increasingly higher levels of articulation. Perkins (1992) elaborated on the relationship between learning and meta-cognition by identifying four levels of meta-cognition: tacit, aware, strategic and reflective. ‘Tacit’ is when students are unaware of their meta-cognitive knowledge. They are not able to restate or reproduce information about their method of addressing the task. An ‘aware’ level of self awareness/meta-cognition indicates that students know about some of the thinking they do but are not ‘strategic’ in their thinking. Students at this level would be able to restate accurately the steps they took for getting the right answer though they have no understanding of the purpose of the steps. They would see the implications based on factual information about the concept.

Strategic students organise their thinking and develop strategies for addressing course tasks. As they understand the purpose of the steps, they go beyond obvious implications of the task to talk about new learning. They are able to reflect on how to tackle tasks in the discipline. This level corresponds with Schon's 'reflection-in-action' (1987) that happens in the midst of a task or action. Brockbank and McGill (1998:74) suggest that reflection-in-action occurs when students notice that something surprising is happening to them or they check with themselves that they are on the right track. It is strategic as it has immediate implications for practice and 'adjustment will take place to resume normal service'.

Reflective students according to Perkins (1992) evaluate the strategies they are using and are able to assess and revise their own progress. This is the highest level of reflection as it transforms and reconstructs the original information. Students are more interested in their problem-solving procedures than the right answer. They reflect on an understanding of evidence and enquiry in the discipline (Perkins 1992). This level relates to Schon's 'reflection-on-action', which can be undertaken by students after the action. Brockbank and McGill (1998:79) argue that this level of reflection, often undertaken in dialogue, 'will be more likely to be effective in promoting critical reflective learning'. Chan *et al.* (2002:513) incorporate a reflective thinking instrument (to assess the level of reflection and critical thinking in students' written assignments). There are two thinking categories: non-reflective (corresponding to Perkins' tacit and aware levels of reflection) and reflective (corresponding to Perkins' strategic and reflective levels of thinking).

In my analysis of student responses to the meta-level questions integrated into the course, I have adapted and broadened Perkins' levels of reflection for interpreting students' capacity to reflect on their written performances. Although each reflective task on the Foundation Course contains different types of questions and task demands, it is possible to apply the four levels of reflection to interpret how students develop their meta-cognitive ability alongside their academic writing. Chapter Seven demonstrates how

students address these ‘thinking’ tasks at evolving levels of sophistication on their educational trajectory.

8 Variation in Analysis

As this is a qualitative research study, I do not believe it an issue that I have not used a standard procedure for analysing the different forms of data: affective factors, writing and reflections. When analysing affective factors, I compare solid and borderline groups more directly in relation to the criteria than in my analysis of writing and reflections in subsequent chapters. This gives me the opportunity to characterise affective qualities used to select foundation students for factors that are non quantifiable (see Chapter Three). As I had access to the results of the various writing tasks students completed in the Foundation Course, I have been able to use thematic organising principles to compare solid and borderline achievers in their comparative, argumentative and research-based writing. At the end of each section, I tabulate my assessment of their levels of understanding in relation to their course marks (see Chapters Five and Six).

I engage in a more in-depth analysis of reflective writing because students addressed fewer tasks in these areas (Chapter Seven). A final point is that I examine some of the students in the solid and borderline groups in more detail than others when examining affective, cognitive and reflective factors to illustrate and unpack the key criteria of the data analysis. The use of the taxonomies allows a rigorous criterion-referenced method of analysis to counteract the researcher’s subjective interpretation of the data.

CHAPTER THREE
ANALYSING AFFECTIVE FACTORS

> The emphasis on the cognitive domain of learning privileged by the school exit level exams does not provide sufficient information regarding students' potential to transform in response to teaching interventions. (Enslin, Button, Chakane, De Groot and Dison 2006:437)

The description of affective qualities in this chapter provides a holistic perspective of students in relation to their achievements in the Foundation Course and at university. I have chosen the term 'affective' as a generic term for describing the complex combination of emotional, motivational and endurance qualities believed to indicate commitment to learning[1]. The purpose of this chapter is to provide evidence of these qualities in order to enrich an understanding of how they relate to student mastery of cognitive tasks. In counteracting some of the generalised views of students' academic progress, my intention is to surface the attributes identified in students selected through the alternative admissions route. The purpose of the research study is not to play an advocacy role for alternative admissions processes and their related foundation programmes. Nor does it set out to formulate simple cause effect relations that account for student success or failure. While recognising the value of affective qualities, this analysis probes the extent to which they have contributed to student achievement at university, the assumption on which the biographical questionnaire rests.

In advancing higher education for the contemporary world, Barnett (2007:7) uses the notion of 'human disposition' to underline the importance of 'a willingness to open oneself to new experiences, and a propensity critically to be honest with oneself and to interrogate oneself critically'. Chapter Three aims to identify and characterise dispositions in students who have performed both well and badly in order to determine whether there is an interrelationship between affective factors and ongoing performance on the course.

[1] See Cliff, Yeld and Hanslo 2004

As discussed in Chapter Two the comparative study analyses the writing and reflections of 12 students over a period of a year across three assessment phases of the Foundation Course. The discussion of affective factors employs the analytical criteria of identity, investment and resourcefulness outlined below as a basis for comparing data across two achieving groups, namely solid and borderline. I explain the history and purpose of the biographical questionnaire[2], one of the key tests that students are required to write to gain entry to the Faculty of Humanities. I use each of the analytical criteria as a lens for comparing students in the two achieving groups by drawing on examples from the biographical questionnaire and other relevant writing tasks (see section 3) to foreground the key indicators for each criterion. I reflect on these indicators in relation to individual student success rates on the Foundation Course and at university as a whole.

1 The Biographical Questionnaire

> Candidates present themselves as agents, each with a life history, a narrative whose telling describes the context of that life…The life history sketched in response to the BQ offers a brief but rich account of the educational trajectory over time of an individual between two institutions, of their engagement with the challenges of schooling in the context of a particular family and community. (Enslin et al 2006:434)

The Faculty of Humanities Admissions Committee[3] comprising academics involved in foundation and first year teaching has used the biographical questionnaire since 1985 to give those students who had not achieved automatic entrance to the university a second chance of being assessed for a place on the undergraduate programme. The Committee identifies certain dispositions that suggest potential for success at university based on their collective experience of teaching foundation and first year students. In response to the university administration's directive to validate university entrance tests, there was an attempt in the early 2000s to specify the behaviours, inclinations or traits that correlated with success in first year university courses (Enslin et al 2006). The questionnaire has been refined on an annual basis to

[2] The biographical questionnaire is currently being used as an admissions test only for mature age students who have not received the requisite matriculation points for the Faculty of Humanities.
[3] I have been a member of this committee since 1997 and chair from 2000 to 2008.

interrogate these factors within its recording of the educational, economic, financial and personal context of the candidate. Its purpose has been to establish a portrait of those attributes 'rather than attempting to identify an indefinable quality sometimes referred to as 'sparkle' or 'talent' (Enslin et al 2006:437). Along with the language proficiency test[4] the questionnaire is the basis for an alternative assessment for incoming students. It probes a mixture of affective, investment and dispositional factors whose meanings will unfold during the course of the analysis.

1.1 Criteria for evaluating the biographical questionnaire

The following criteria have been used by the Faculty of Humanities' Admissions Committee to evaluate the information elicited from the biographical questionnaire:

1. Evidence that candidate has dealt in a resourceful and constructive manner with difficulties/challenges in his/her past background.
2. Resourcefulness in seeking assistance.
3. Capacity for self-reflection.
4. Internal locus of control.
5. Positive, determined and purposeful approach to life.
6. Strong levels of motivation.
7. Evidence of achievement within student's own context.
8. Goal-directedness and career focus.
9. Awareness of community/social political issues.
10. Evidence of English language and cognitive abilities:
    a. Ability to respond to questions appropriately
    b. Ability to provide elaborated and detailed responses
    c. Ability to provide considered and reasoned responses

The criteria in point 10 relate to students' cognitive ability and are assessed in conjunction with their performance on the language proficiency test. The applicants' responses to the biographical questionnaire and other relevant tasks reveal information about their likely orientation to learning in higher education as well as 'significant indicators of an emerging capacity to think critically about their own

[4] University of Cape Town's Placement Test in English for Educational Purposes (PTEEP).

learning' (Enslin *et al.* 2006:437). The following section demonstrates the relevance of the concept of 'investment' for analysing affective factors in this context.

2 Investment and 'will to learn' (Barnett: 2007)

The combined wisdom arising from many years of teaching experience of the Admissions Committee suggests that 'a student who approaches university study in a systematic, purposeful and realistic manner, is more likely to succeed than a student who has only vague ideas about what university study will entail' (Enslin *et al.* 2006:441). A distinction made by the Admissions Committee is between motivation that is appropriate to the learning context (integrative motivation) and motivation that appears founded largely on 'believe-in-yourself' discourse (Enslin *et al.* 2006).

This research study does not presuppose that students' qualities of motivation and resourcefulness are fixed or static. Norton uses the notion of investment (2000:10) to argue that students are 'constantly organizing and reorganizing a sense of who they are and how they relate to the social world'. It is important to note that affective factors shift over time as they respond to and interact with course and teaching related demands. McKenna (2004:273) also problematises the discourses of motivation when considered in terms of socio-economic class. Motivation is lacking in certain students who are not 'invested' in their academic identities if the 'target ways of being' are not similar to their culture as language learners. McKenna (2004:274) refers to Norton to highlight that learners are:

> not always free to engage with the environment (their texts, fellow students and lecturers) in whichever ways they would choose since they are constrained by power imbalances, available discourses and shifting notions of their own multiple notions of identities.

Drawing on Cummins' distinction between collaborative and coercive relations of power (1996), Norton (2000:9) argues that 'relations of power can serve to enable or constrain the range of identities that language learners can negotiate in their classrooms and communities'. The investment in students' own identity as learners is constantly changing over time and space as they experience a range of teaching and learning interventions at university. In examining student development in response to the course pedagogy, I have described the shifts that take place in student investment.

While influenced by Norton's socio-political perspective, my description of students' responses to the biographical questionnaire and autobiography in this chapter uses the term 'investment' more as a psychological construct.

This study draws usefully on Barnett's discussion (2007:16) of students' 'will to learn' at university, that is 'fundamentally internal to the person' rather than 'motivation' that he sees as 'external to the person'. He argues that 'will' is similar to Marton's characterisation (1997) of a deep, personal orientation towards studying in which the student 'invests something of herself as a person'. The student 'projects herself actively into her studies' and is not merely fulfilling the means towards an end-goal. Thus learning occurs when students are engaged with and energised by their learning experiences. I explore this notion more fully in my analysis of students' learning dispositions below.

3 Relevant Tasks for Analysis of Affective Factors

Even though the biographical questionnaire and autobiography assess affective factors predominantly, it is still possible to monitor these dispositions and attributes in other tasks and activities. Students have opportunities throughout the course to reveal their levels of motivation and personal interest in various activities. For example, these qualities were evident in the research report in their final assessment in the second half of the year when students reflected on their group processes and feelings about the project. The following tasks are appropriate for an analysis of affective factors as they all elicit, to varying degrees, the criteria outlined below:

- biographical questionnaire including problem-solving tasks
- autobiography
- school-university comparison
- post-exam reflection
- reflection on research report
- reflections in general
- individual interviews with students (October 200x).

4 Analytical criteria

I analyse and compare the responses of students in the different achieving groups, solid and borderline. I have specified three broad affective criteria from examining student responses to the biographical questionnaire and the autobiography (the first course task), the key tasks for gauging the extent to which students fulfil affective criteria. These are: identity as learner, investment/ 'will to learn' (dedication, goal-directedness and elaboration) and resourcefulness. I have foregrounded the notion of investment/ 'will to learn' as all criteria relate to it in one way or another. However, students' commitment to their studies takes into account contextual factors and does not view these characteristics as permanent predispositions.

The characteristics of motivation, determination and resourcefulness are to a large extent determined by how learning communities value student identities either at school or university. It would be simplistic to ascribe student success merely to these dispositions without understanding students' multiple and fluid identities. I will therefore begin the analysis by examining student identities as shaped by their home and schooling experiences before investigating evidence of investment and resourcefulness in the various academic and reflective tasks. I draw on students in the broader tutorial group of 33 students where appropriate to add flesh to the characteristics of 'achievement qualities'. In particular, Zanele and James illustrate a number of these attributes[5].

The following are the key categories relating to affective issues**:**

- **Identity as learners (based on past experiences).** This involves a discussion of leadership and accomplishments at school and support/affirmation from family and mentors.
- **Investment/ 'will to learn'.** This involves a discussion of students' will/determination to succeed in tertiary studies, goal-directedness and determination.

[5] As I incorporated a number of comments from Zanele and James (solid achievers) to enhance my analysis of affective factors, it is important to mention that James completed his degree in the regulation time (n + 1) while Zanele took an additional year (n + 2).

- **Resourcefulness in dealing with challenges or difficulties (internal locus of control).** This involves a discussion of how students coped with difficulties and resolved dilemmas.

Table 3.1: Foundation Course results and university throughput rates: solid and borderline performers

Student	**SOLID PERFORMERS** Marks in the two foundation modules	**University throughput category**
Thabo (m)	57% 60%	*n* +1
Maloko (f)	58% 62%	*n* +1
Bramley (m)	55% 63%	*N*
Imelda (f)	58% 61%	*n* + 2
Lebogang (f)	55% 53%	*n* +1
Karabo (f)	53% 57%	*n* + 1
	BORDERLINE PERFORMERS	**University throughput category**
Isiaah (m)	48% 54%	*n + 1*
Mabe (m)	50% 50%	Not registered
Lindiwe (f)	42% 52%	*n + 2*
Joe (m)	45% 63%	*n + 3*
Sipho (m)	45% 54%	Not registered
Angie (f)	42% 50%	Not registered

4.1 Analysis of students' identity as learners

This section firstly examines the role of leadership at school and secondly the support from students' family members and mentors in shaping their positive learning identities. Finally, the section compares the factors of identity in terms of Foundation Course achievement.

4.1.1 Leadership and accomplishments during schooling

Analysis of solid achievers

It has been the experience of the Admissions Committee that 'students who prove themselves to be "go-getters" at university usually demonstrated similar behaviors during their schooling years, or in other contexts' (Enslin *et al.* 2006). The students in this category showed pride in their school accomplishments in both curricular and extra-curricular activities. Bramley, despite having had to endure 'poor schooling, financial constraints and lack of library study material', pointed out that he had obtained a matric exemption at 16 and an A symbol for History Standard Grade which, he claimed, 'shows lots of willingness and creativity'. Similarly, Thabo expressed his excitement at being elected a leader at school,

I was good at talking in front of the crowd, I had the chance to produce the first ever edition of the school newspaper.

Students also listed a range of sporting, leadership (student representative council, SRC) and cultural activities they were involved in at school such as debating, drama and media projects that indicated active engagement with school life. Karabo experienced school as a nurturing place after a brief spell in an Afrikaans school in Pretoria. She said that it was 'easy for me to settle in a township school and in township life and the teachers really brought out the best in me'. The township school elected her to various leadership positions and her peers contributed to her success as a student,

Academically I performed under pressure because everyone wanted to know me on their side especially my fellow learners; they wanted me to prove something. That made me even stronger and keen to succeed.

She clearly felt more comfortable in the township environment where she believed she could excel and shine as an exemplary learner. Karabo was a 'youth and cultural leader' as well as active participant in debating and public relations work.

Analysis of borderline achievers

On the whole, students in this group did not articulate their achievements at school to the same extent as the solid achievers did. Angie mentioned some of her sporting involvements and Lindiwe expressed her pride in being awarded R800 by the school governing body for textbooks and stationery, but she did not identify major curricular or extra-curricular accomplishments at school.

Students in the borderline group interestingly focused more on non-academic and extra-curricular activities. Sipho chose to discuss his 'perfect dress style' in his autobiography and said that he was 'surprised they didn't give me a certificate of cleanness'. He also spoke with pride about his debating achievements and how his English teacher had helped him to stand up in front of an audience. He won several awards for debating and enjoyed class discussions on school set workbooks. He said, 'It was wonderful to discuss especially with classmates'. Similarly, Mabe enthused about his 'brilliant' achievements at school,

I received various awards mainly accredited for hard working students. With such merits I won favour from the principal, the teachers and my fellow students.

Joe mentioned how receiving his merit certificate 'for being a leader of all students' in grade 10 'really showed me that success doesn't come to you but you have to go to it'. Isiaah also identified a turning point in his school career when he decided not to rely on teachers who were 'not committed to their jobs'. At that point he resolved to work autonomously. As a consequence of increasing his work effort, he exclaimed,

Fortunately I passed my grade ten exam with flying colours and that thing motivated me and showed me that I had the potential of doing tertiary study.

4.1.2 Support and affirmation from family and mentors

Analysis of solid achievers

This category of students identified with being 'good students' as they claimed there was positive affirmation at school or home. It appears that they all had family members or teachers in their lives supporting their endeavours. Bramley described the support he got from his grandparents who encouraged him to succeed academically, 'My granddad always wanted me to become a lawyer' (which he has become). Thabo remembered his mother's enthusiasm about his first day at school and Maloko describes how a part-time teacher in high school noticed her,

She informed me that my essays are interesting and she usually reads them to multiracial schools for inspiration to some of the pupils.

Lebogang's husband encouraged her academically and gave her information about different aspects of university, 'how to apply for financial aid and how to cope with my studies'. Her family expected her to become a professional nurse so that she could start earning money straight after school. She was surprised to discover that,

University was not meant for rich (people) only. Our guidance teacher gave us the wrong information.

Zanele, a solid performer from the broader tutorial class, attributed her ambition to be 'one of the most respected professors in this country' to the ongoing encouragement by her parents. Imelda's teachers constantly told her she was university material and

would receive a bursary. Her narrative about her schooling experiences highlighted the role of her teachers and role models in encouraging her to achieve and become invested in her studies,

> *They use to tell me, that 'you are a bright child – you must work hard so that one day you could go to varsity and further your studies'.*

The following statement by Maloko shows a strong belief in being valued as a learner:

> *It felt so good to have people who had my interests at heart around me at school. I loved school with all my heart. I realise that all I needed was some encouragement. I felt honoured to be at school.*

Analysis of borderline achievers

In terms of identity issues, these students all mentioned significant people in their lives, either family members or people from the broader community, who had encouraged them to study and to achieve their academic goals. Angie's sister, for example, was a role model for her as a student at Wits Technikon,

> *When I pay a visit to her place I wishes if one day I can be like her. She told me that without education, nothing happen easier. Everything will be harder to me. No education, no job, no money.*

It was equally important for Joe to have a brother at Wits who 'gave me encouragement and kept me on the right track'. He aspired to being like him and developed a strong identity as a potential student, despite his difficult home circumstances.

Sipho gave a moving account of his mother's encouragement of him before her death,

> *Even though she never been in school in her life, she didn't hesitated to encourage her son to work very hard when it comes to education.*

She motivated him to try his best when he failed a few times in primary school. It was important for him that he was the first person in his extended family to go to university and he hoped to encourage his brother to come to this great place with 'wonderful gardens and sufficient libraries'.

Isiaah paid tribute to his mother in his autobiography,

> *The person who played a very important part is my mother because she is a hard worker and very dedicated and committed person in everything, she is also supportive, she even encouraged me to work hard in order to succeed in life and not to give up easily. I want to achieve more than she told me in future…*

Students in this group also identified non-family members as motivators in their lives. Positive affirmation clearly played a key role in their perception of themselves as successful students. Angie, for example, regarded her teachers as her 'real parents' and followed their advice on how to 'get high marks'. Lindiwe had to endure many hardships at school as her father's company closed down and her grandmother, who had supported them financially, died unexpectedly. Despite her despondency, a teacher at school encouraged her to 'pull up my socks' and had faith in her ability to win a scholarship to further her studies. Similarly, the school principal demonstrated a strong belief in her capabilities and she was pleased to have proved herself by obtaining a matriculation exemption. Mabe described his feelings of 'comfort' in knowing that his pastor believed in him, 'He always tell me not to give up and believe that someday you shall overcome'. Similarly, he admired and benefited from one particular teacher's 'remarkable and intelligence teachings' as it inspired him to continue his studies.

4.1.3 Comparing factors of identity in terms of Foundation Course achievement

As mentioned earlier, Cummins (2000:42) stresses the influence of societal power relations on educational achievement, particularly in 'subordinated group students'. He argues that collaborative power relations, as opposed to coercive relations, enable students to 'participate confidently in instruction as a result of the fact that their sense of identity is being affirmed and extended in their interactions with educators' (Cummins 2000:44). In both solid and borderline categories, students discussed the important role of family members or significant teachers and community members in validating their identities and inspiring them to study further. Even if some students had been 'disempowered educationally', their experiences of power relations in society had 'challenged the prevailing attitudes of inferiority and exclusion' to the

point at which they generally identified with being ‘good students’. They believed that teachers listened to their voices and they felt respected at school. It is because of their confident outlook and demonstration of leadership at school that these students gained entry to university.

Cottrell (2001:26) suggests that the ‘learning self has an identity which has been forged through previous learning experiences, through the interpretations made of those experiences by the individual and the people around them within given contexts.’ She argues that this identity is not fixed or pre-determined. It is therefore important to examine how students view this identity in terms of their future lives as students and professionals as this may determine whether they continue to be ‘invested’ in their studies. When considering identity factors, this was the key difference between students in the study. Borderline students showed uncertainty regarding expectations as they provided vague and formulaic answers regarding their role as university students. They had ‘not thought about what it is to be a student, what their identity as a student might be’ (Cottrell 2001:26). (See section 5.2.2 on goal-directedness for more evidence of this uncertainty.) By contrast, the solid performers held strong beliefs in their ability to succeed in their future studies at university. Comments emerging from members of this group who became *n* + 1 achievers, were:

> *I don’t think that there is anything that can undermine my plans in BA.*
>
> *I want to prove that I can succeed academically in an intellectually challenging university.*
>
> *I had the potential to study at tertiary level.*
>
> *I always dreamed of becoming something in my life.*
>
> *I had this picture of me going to tertiary school.*

These enthusiastic remarks can be juxtaposed with the generalised, vague comments about university life by students in the *n* + x category. Imelda, for example, made a general point about how at Wits ‘you can achieve your goals’ and how she realised through her cousin that age is not important, ‘My cousin made me to understand that to be late (older) is not bad at university’. They did not project themselves as confidently into the future as students in the solid group, other than the ‘delight at the prospect of wearing that black academic gown!’ (Lindiwe).

4.2 Analysis of investment/ 'will to learn'

This section firstly involves a discussion of students' determination to succeed in tertiary studies as reflected in the way they express their 'will to learn' (Barnett 2007) and their approach to tackling problems in the biographical questionnaire. Secondly, it involves a discussion of students' goal-directedness as manifested in their choice of subjects for their degree and their expectations of university study. Thirdly, the analysis surfaces the importance of students' capacity to elaborate on their life experiences in relation to their will to succeed. Finally, this section compares factors of investment.

4.2.1 Determination and purposeful approach to life

4.2.1.1 Discourse of motivation

Analysis of solid achievers

Students in the solid group mostly displayed strong levels of commitment to their studies and determination to succeed. In Bramley's autobiography, he revealed a powerful sense of higher purpose when he described how his mother's unexpected death 'forced me to fight with might and main to get an education of the highest quality'. He recognised that,

> *The success of my family's future rests on my shoulders, and that hoping and wishing to be successful will actually make me successful.*

This indicates his recognition of direction and motivation as key to becoming successful at university. McKenna (2004) would describe these statements as part of the 'discourse of motivation' that students see as the crucial factor in determining student success. Bramley concluded the autobiography by highlighting his future optimistic dreams,

> *It is my ideal to live life to the fullest and make beautiful history in my family. I therefore regard this as an African journey from rural herdboy to wits student.*

The assumption is that an optimistic, enthusiastic approach can override most of life's challenges. Maloko cited Oprah Winfrey as the person who had contributed to who she was. She attributed this to Oprah being 'a go-getter. She had dreams which she

lives up to today due to sheer determination, hard working and never giving up…' Similarly, Lebogang described her excitement about being at university and her commitment and eagerness to 'learn more every day, work hard and perform well until the end of my last year'.

Zanele displayed the same levels of drive and determination as her fellow students in her responses to questions. She grew up in a remote rural area where she had to work hard for her family doing chores such as fetching water from the river, collecting wood and cooking after school and on weekends. She declared in both her autobiography and comparison between school and university that despite all these responsibilities and having to walk home from school for two hours every day,

> *I had a dream I wanted to fulfill. I wanted to see myself as one of most highly educated person. I told myself if others can manage to do it why not me.*

4.2.1.2 Discourse of hard work

Analysis of borderline achievers

The attributes of determination and motivation were present in this group's biographical questionnaires or autobiographies, but manifested in an overvaluing of the qualities of diligence and effort to improve learning outcomes. Angie, for example, repeatedly described the importance of hard work, 'I always went to school, do homework and my class work. I *always tried hard* and *improved myself*'. In her reflections about university work, she committed to going over lecture notes and 'reading again' and her intention to '*work as hard as possible* to fulfill my goals' and to exhaust all channels to obtain a university bursary for a Social Work degree. Students discussed their 'dreams' of becoming university students through hard work and dedication. Sipho's determination was manifest in his commitment to pass his exams and 'never to fail at school'. He wanted to '*work hard* and be the first person to be here (university)'. Isiaah took this further by declaring,

> *I was encouraged by the fact that no one in my family has graduated so I wanted to be the first one to do so. That gave me a power to come and reach my goal.*

A strong belief in the centrality of perseverance in dealing with life's obstacles and difficulties was also evident among certain members of this group. Problems of strikes and shortages of teachers at his school prompted Joe to establish study groups

and extra classes. He said that at school he was ‘eager to learn and succeed as there were no teachers to help us because of the strike’. Similarly, Mabe gave an account of how strikes at his school disrupted learning as well as the ‘lack of academic facilities such as libraries’. He revealed his determination to overcome these problems as he began to ‘rely upon reading exceedingly with an ambition plus purpose to succeed’.

Joe described how he changed schools so that he could do a ‘variety of subjects for matric’. Though he came under criticism from his peers for this decision to move away from the village school, he persevered and managed to pass matric with exemption. He concluded by telling himself, ‘it is better to be hated for what you are than to be loved for what you are not.’

Interestingly, Mabe also endured attacks from his peers for his success at school and for his spiritual leanings. He wrote a lengthy piece on this in his autobiography, in which he said,

> *Despite major criticism, I was surely developed in positive attitude. And that had determined my sound values to institute life centre for Community development. I was founder of it.*

He felt able to respond creatively to the negativity surrounding him as did Isiaah who reflected on how

> *negative people nearly destroyed my future because they were telling me that even if I could pass my matric I could never go anywhere because they were saying that tertiary is for only who are rich.*

With the assistance of his History teacher, Isiaah ‘concentrated on (his) studies and *worked hard* to achieve my goals’.

Despite the recognition of the importance of perseverance, certain members of this group appeared overwhelmed by their personal difficulties. High levels of anxiety underpinned many of their answers about finances. In her biographical questionnaire, Lindi expressed feelings of despair about having to pay for textbooks at school. She said,

> *During that year the government could not supply us [with textbooks] I thought God had forsaken us. It took me a month of not knowing what to do or who would help me.*

This response contrasts with Isiaah's reflection on his financial and family difficulties in his autobiography. He showed a strong will to learn when he resolved not to become defeatist

> *because I know what I want to achieve. That thing [financial hardship] did not bother me at all and my aim is to come and fulfill my goal. That is how I ended up attending Wits.*

4.2.1.3 Problem-solving

Analysis of solid achievers

In the problem-solving section of the biographical questionnaire, both Bramley and Thabo revealed the spirit of determination while giving advice to a hypothetical student who was unsuccessful in obtaining financial aid for university study. Bramley urged him to 'show the authorities perseverance and ambition as he [the student] will learn to know that asking eagerly can brighten his future plans'. Furthermore, he suggested that the student

> *must visit the financial aid office in person and to tell them what will happen to him and ask loan and express how wholeheartedly he intended to study at Wits.*

Thabo's tenacity emerged when he advised the student in question to 'apply to as many bursary companies as possible as soon as possible.'

Bramley continued to display these purposeful characteristics when he reflected on the strengths and limitations of his group research report in the second half of the year (see further analysis of this in Chapter Six). He concluded that:

> A *successful group is accompanied by co-operation, perseverance, honesty, and ambition (and realistic too), but most importantly, to be persistent even in the face of seemingly mountainous odds.*

Similarly, while reflecting on his group's research project in the second semester, Bramley highlighted his ability to rise above the 'disagreements' in the group by highlighting the importance of hard work and creativity.

Certain students in this group offered generalised and non-specific advice to the hypothetical student who had not received financial aid from the university, compared to the directed advice given by Bramley and Thabo above. The onus was placed on the student to 'work harder' and 'try more'. Imelda told the student to 'go to the other place that help students and work hard so that he can be granted a favour by school.' Similarly, Zanele advised the student to 'make sure in future he had been given money before he registers', which is commonsense but offers nothing that would alter the outcome of the problem.

Analysis of borderline students

Feelings of anxiety manifested in some answers to the problem-tasks in the biographical questionnaire. Joe, for example, advised the hypothetical student without financial aid to 'wait for next year if he really loves Wits at mean time looking for temporary job to help him'. Money is clearly an overriding concern and looking for work was therefore a suitable method of dealing with such challenges. Students' conception of being active and diligent is 'not to stay at home doing nothing'.

Considering Sipho's ability to deal with problems at school, it is surprising that when he reflected on the group process for his research project towards the end of his first year at university, he stressed a number of problems concerning cooperation, effort, punctuality and so on without any strategies for overcoming them. Mabe merely outlined the 'inner conflict' in his group and its negative consequences for the research as 'we failed to come out with concrete and outstanding responses'. Joe, on the other hand, provided a more reflective analysis of his group process. He highlighted the strength of the group in 'realizing that some of the questions were ambiguous' and in settling disputes amicably, 'in a peaceful manner through negotiations in advance'. These reflections are analysed in more detail in Chapter Seven.

4.2.2 Goal-directedness

5.2.2.1 Subjects chosen in relation to careers

Analysis of solid achievers

Investment in one's studies extends to having gathered information about possible and appropriate career paths and Humanities subjects related to a career path. Thabo, for example, had a strong sense of self as a 'helper' in his biographical questionnaire. When asked what his career aspirations were and why, he explained,

> *Being someone who can help the youth to help themselves as they (the youth) need to be given direction to do something as well as how it must not be done.*

Maloko's choice of becoming a 'tourism expert' was consistent with her selection of subjects for the BA. She had clearly thought through her decision and found out about the role of Industrial Psychology in 'understanding the workplace industry better'. All students in this category had chosen professions related to the Humanities and indicated the BA degree as first choice, unlike many candidates who use the BA as a backdoor route into the university without an intrinsic interest in Humanities subjects.

Zanele and Karabo chose subjects and careers compatible with a Humanities degree but were vague about the nature of the work itself. Zanele repeatedly stated her ambition to become a professor so that she could 'write a book to impact on the education of this country'. Her subject choice seemed arbitrary as she opted for Geography and International Relations to improve her communication and business skills. Karabo spoke in general terms about a career in public relations or development and chose subjects predominantly in the Social Sciences. Neither of the students wrote convincingly about their reasons for these subject choices in a Humanities degree. This contrasted with Imelda who was motivated to study so that she could 'get a good profession in Social Work so that I can work and do something on my father's grave' (he was killed in a car accident during her matric year).

Analysis of borderline achievers

Students in the borderline group chose appropriate careers and subjects for a Humanities degree, but did not elaborate on why these were important to them. Lindiwe demonstrated a clear purpose in becoming a Social Worker in her autobiography though she switched to a general BA in second year. In describing the effects of her grandmother's death, she said,

> *I thought that my goal of becoming a social worker would never be realized and I wished I could resurrect my grandmother from the dead because she was very helpful in my studies.*

She found other role models to help her realise her dream.

Although students chose subjects compatible with a Humanities degree like Music, Art History, History and Politics, there was no relationship between the subjects chosen and the students' career paths. These were vague and are broadly situated in the areas of 'development' and 'communication studies'. Isiaah was an exception to the rule in this group as he explained how the subjects selected in the field of Media Studies would help him communicate effectively as a journalist.

4.2.2.2 Expectations of university

Analysis of solid achievers

In terms of expectations of university study, students displayed clear and realistic expectations. Students articulated the learning benefits of a BA degree as follows,

> *Following complex directions, interpersonal and problem-solving skills… as well as reasoning things out clearly and precisely.*
>
> *Communicating, summarizing, thinking critically and 'mind-setting'.*
>
> *Critical and analytical skills and logical skills.*

There was evidence of a strong sense of what the university expected of them in terms of learning higher order tertiary skills as documented in the section on identity.

Bramley extended this conception of higher order skills by pointing out how at university,

> *Students have a prerogative to challenge his [the lecturer's] explanations and come up with our own, as long as we appreciate and can also substantiate our objections to his explanation.*

He also highlighted the learning benefits of becoming self-reliant as 'we read different textbooks and fashion our own notes'. This suggests a sophisticated sense of university expectations and the role of the student in engaging actively and critically with the learning process. Similarly, Thabo, in his comparison essay expressed the view that,

> *At school teaching and learning is mostly the responsibility of teachers whereas at university studying and learning is the responsibility of students.*

Maloko showed an understanding of having to perform at a higher cognitive level at university when she reflected in the biographical questionnaire on why some of the questions were difficult to answer. Her answer was,

> *To familiarize us with what we will face [at university] and to try and observe how we will cope with questions and our answering ability.*

All the above comments suggest that these students not only had a clear orientation of what they wanted to achieve at university in terms of subject and career choices, but they had a strong sense of how they needed to 'make it happen' if they wanted to fulfil the university requirements of them as students.

Imelda analysed the expectations of university learning by highlighting the issue of independence in the task comparing school with university,

> *At university, you need to be an independent learner in order to survive. This means learning how to do your own notes and concentrate on the lecture and take notes at the same time, something we were not taught at high school.*

Analysis of borderline students

Borderline students continued to stress the significance of 'hard work' and 'effort' as essential university requirements. Lindiwe highlighted the increased workload expected of students at university compared to school and stressed the importance of independent study in which, 'the student has to find out by himself many of the concepts discussed in class'. As in the previous section on identity, students did not identify specific qualities needed for success at university and focused rather on what seemed to be a vast amount of academic tasks, reading and writing. They also revealed feelings of stress concerning the challenges of tertiary study. Angie used the metaphor of a baby to depict her initiation into university, 'It's like I'm a new baby not knowing anything and born in a new world'. She spent at least a page of her autobiography discussing the 'hardships' she faced regarding accommodation and finance.

As first generation university students, students in this group did not have a clear conception of university as they relied on accounts from others for relevant information. Joe's brother had informed him about Wits' physical aspects and its 'environmental cleanness'. Students discussed very general gains expected from studying at university such as 'good learning', 'adequate creativeness', 'improve the level of skills' and 'being effective public speakers to be understood by all people'. In terms of specific differences between school and university, students mostly focused on concrete aspects such as uniforms, student behaviour and even physical structure. The issue Joe chose to focus on was physical security both in terms of 'guarding the university entrance' and the physical structure of the buildings. This perspective is covered in Chapter Five, which analyses comparative writing. There was an attempt to discuss university learning expectations by Sipho who identified high workloads and work demands as the main difference between school and university. Like Imelda, he mentioned the importance of 'independent thinking' at university compared to school,

> *At school the teacher will leave the room if you argue and are more independent like at university. At school learners depend on their teachers for everything.*

From analysing these responses to the relevant tasks, it seems that there was a more limited conception by students in this group of 'what it takes' to become university students and of what 'investment' in university studies entailed.

4.2.3 Elaboration

Analysis of solid achievers

As part of the analysis of affective factors, it is important to examine the way students described their investment in learning, i.e. the language they used to express themselves and the extent to which they elaborated on their experiences and approaches, for example whether they provided generalised, vague answers, or whether they provided detailed evidence or descriptions of events or people. The attempts on the part of students in this group to provide detailed information reflected the need to show and even prove to the audience what they had done and how they had succeeded educationally. Bramley, for example, when asked whether his matric results were a true reflection of his academic ability, provided a full response attempting to convince the marker (audience) that he had overcome many obstacles,

> *The problems were a result of schooling at the school that lacks library study material etc. But you can see to it that having obtained A symbol at first year of study shows lots of willingness and creativity.*

In her reflection on whether her matric results were a true reflection, Maloko argued,

> *I usually do better in Biology and Business. I think I was very nervous during my November exams because it was my first major exam… I hope now that I will take it easy and do better.*

This suggests a commitment to improving her approach to learning. A related point is the undertaking on the part of students in this category to completing all tasks in the course including the supplementary, voluntary activities not assessed for marks. Examples of these were the task-related reflections, the general course reflections and students' additional observations like their comments on the purpose of literature in the course and discussions of the usefulness of the literature portfolios.

Not all students in the solid group expressed themselves clearly or provide full and detailed responses to tasks. Zanele gave formulaic and repetitive responses to some of

the questions in the biographical questionnaire. When asked whether her matric results were a true reflection of her academic ability, she declared that she 'was expecting something more than that but only to find that I have obtain those symbols'. This answer did not address the issues and merely rephrased the question. Karabo identified 'pushy friends' as her main problem during school and 'told myself to be away from them even if they were criticizing me'. I analyse these tacit forms of reflection in more detail in Chapter Seven.

Analysis of borderline achievers

In terms of elaboration, students in this group generally provided clipped and short responses to most questions in the biographical questionnaire. Two students said that their matric results were a good reflection of their abilities without giving reasons or excuses for their poor results. There was no evidence of a desire to convince or prove themselves to the markers on the part of these students, as was the case with students in the solid group. Joe did not address the question requiring him to reflect on whether his matric results were a reflection of his academic ability. He said,

> *By the time of matric examination I was still scared, but now I can see I am completely a man of confidence who is always free.*

He attempted an explanation but did not get to the point of the argument. I will explore these issues in depth when I analyse students' cognitive development in Chapters Five and Six.

There were many instances of students not addressing the questions in the biographical questionnaire or giving full narratives in the autobiography, which was present in the writing of the solid group. Serious language difficulties were evident in borderline students (their language development on the Foundation Course is analysed in Chapters Five and Six in the light of their success at university). Angie, for example, displayed very poor sentence structure when describing differences between school and university. She pointed out,

> *Before students writing final examination, our lecturer will check class register, and if a student have more absent, he/she will allow to write final examination.*

Profound language difficulties were manifested in a number of writing tasks. Sipho wrote awkward, lengthy and poorly structured sentences such as his description of his early schooling experiences. He said,

> *Poverty was with us sometimes the trees that we called our class used to produced fruits which meant that when it falls down we were supposed to pick it during lessons.*

This observation is important for an analysis of affective factors as poor language ability may have prevented students from providing detailed information about their achievements and drive for success at university.

Surprisingly, two students elaborated substantially in their autobiographies, but their language was verbose and long-winded. An illustration of this verbosity was Mabe's account of his father's support for him,

> *At my learning age my father was very encourageous to my basic studies. He preferred in much of his time teaching his beloved son extra learning resources…*

He concluded his autobiography by declaring, 'So far I can look back and say I had pursued forward my true reflections of my belief to the best values of my provisions'. I examine this 'cobbling together' of pompous phrases when I investigate students' writing development. In both groups in this category, the writing contained clichés and 'words of wisdom' such as Joe's contention that 'A great pleasure in life is doing what people say you cannot do.'

4.2.4 Comparing factors of investment/ 'will to learn'

In both groups, students recognised the importance of the attributes of determination and motivation as ingredients for success at university. This 'discourse of motivation' (McKenna 2004) was particularly strong amongst certain solid performers in their responses to relevant tasks and questions. Borderline students tended to focus more on the discourse of hard work and effort both in the way they managed their own lives as well as in their advice to other students. Barnett (2007:16) highlights the difference between 'practical commitment' when students commit themselves to 'making the time to study' and 'ontological commitment' in which students have a deep-seated

will to learn and to ‘give (themselves) up to the challenges ahead’. The challenge of this study is to determine the extent of student commitment and will to learn and to assess the role this plays in their learning on the Foundation Course.

Even though students in the case study all came from disadvantaged educational backgrounds and overcame numerous obstacles to get to university, certain students expressed more concern about their financial status and personal difficulties than others. In particular, members of the borderline group, with the exception of Isiaah, and certain solid performers revealed the tendency to become overwhelmed by their own issues and concerns in response to some of the problem-solving tasks. Similarly, some of the borderline students indicated feelings of anxiety when probed about their future role as students. As Cottrell (2001:28) says, ‘Past experiences of learning play a great part in determining how far a student may regard it as worthwhile to invest time or to take risks in self-exposure.’ This research investigates the extent to which these feelings of distress and marginalisation affected students’ ability to reason and handle the challenges of higher order thinking, abstract thought and debate. It points to circumstances at university and in the Foundation Course more specifically, that may have allowed them to move beyond personal difficulties and become invested as tertiary level students.

In both groups, there was evidence of goal-directedness in students’ desire to do Humanities related subjects. Students identified with professions in the Humanities and Social Sciences, which was not surprising given their choice of degree. However, the justification for such career paths was less convincing in the case of the borderline students and often contradicted their choice of subjects. In addition, they did not always display ‘integrative motivation’ by setting reasonable goals against the backdrop of their capacities. As mentioned in the commentary on identity factors, solid achievers were mostly able to articulate what the university expected of them in terms of their role as critical, analytical learners. They saw themselves as active constructors of knowledge and suggested strategies for coping with the higher order demands of university study. This contrasted with other students in the study who had limited and generalised conceptions of university life. Their discourse of ‘hard work’ and ‘effort’ reflected a dogged and passive approach to handling educational challenges. Students in this category concentrated on more concrete and physical

aspects of university life such as building structures, uniforms and cleanliness, the content of which I analyse more fully in the cognitive analysis of student writing.

In the biographical questionnaire, some of the borderline students did not address questions appropriately and missed the point in problem-solving tasks. It is therefore difficult to ascertain whether these students were sufficiently invested in their studies at that point in the year. They appeared not to want to 'prove themselves' to their audience. Even though they had completed the voluntary reflections in the Foundation Course, they did not provide rich elaborated answers compared to most of the solid performers. Language difficulties may have hampered their ability to tackle the various problem-solving tasks in the questionnaire.

4.3 Resourcefulness in dealing with challenges

This section firstly involves a discussion of the manner in which students coped with life challenges. Secondly, it reflects on students' university challenges and how they made use of university resources and support structures. Thirdly, it looks at how they justified their answers for resolving dilemmas. Finally, it compares factors of resourcefulness.

4.3.1 Coping with difficulties

Analysis of solid achievers

Despite conditions of disadvantage, students provided evidence of being able to deal with these difficulties in a resourceful manner. Brighton reflected on the effects of his mother's death in a car accident, by writing, 'I endured pain, sorrow etc cheerfully and have managed still to get position 1.'

Thabo developed strategies for handling bullying by older boys. He said, 'As time went on, I managed to be friends of them.' He was able to deal with the situation as well as other challenges that emerged when his family 'migrated' to Soweto from a rural area.

A further manifestation of resourcefulness was the tendency to claim responsibility for one's destiny as opposed to the tendency to view problems as outside of one's control (external locus of control). Lebogang made a number of suggestions to

lecturers on how to assist students become note-makers in lectures. One of these was to:

> *Give us copies of what they are going to discuss before lectures so that **we study them before** that will make it easy for us to understand (and take notes).*

This showed her willingness to explore strategies for dealing with learning challenges. Maloko selected Oprah Winfrey as her role model because of the way she had dealt proactively with her rape experience. She praised her ability to 'overcome that [rape] and she is helping others who have the same problem.'

With regard to coping with financial difficulties, some students provided evidence of being strategic in seeking support from other quarters. Throughout his autobiography, Bramley elucidated on the financial difficulties he had faced. He would have dropped out of school during matric had it not been for the financial assistance of his History teacher. He found employment at the Independent Electoral Commission after matriculating in 1999 although he wanted to enrol with Wits. It was clear that he did not become defeatist, was determined to write the selection test and apply for financial aid (not all students took this initiative and applied on time).[6]

Indications of resourcefulness emerged in certain students who had supported their families financially from an early age by selling vegetables, teaching part-time and engaging in various 'casual jobs'. At school students took the initiative in the form of study groups, workshops before exams and consulting with their teachers. Imelda indicated this 'internal locus of control' clearly when she reflected on her poor performance in the June exams,

> *I know what to do now if I have a problem or difficulties. I know the steps I can take to help myself.*

Students in the solid group spoke confidently about coping with the challenges of the second semester, even though they expressed disappointment with their June exam results. Thabo, in remembering that 'once bitten is twice shy', professed to be 'really determined to work this term as I have already started studying and consulting and am

[6] In 200x, the university supplied all students in the case study with sufficient financial aid for their studies for a period of four years.

now used to the required style of learning.' Similarly, Bramley described himself as a 'well-oiled machine which is fully prepared for good work' after failing the June exam.

When interviewed in October, 200x, Bramley revealed a combination of deep and strategic approaches to handling academic tasks. He recognised the necessity of understanding the parameters of exam questions. By implication, he reflected on the relationship between understanding and performance, which he had learnt about from his poor exam performance.

> *Every time when I answer a question, I always want to make sure that, no, I have to answer this question very well, as long as I understand it. I just don't like to answer it in a short manner to an extent that it will ultimately result in the marker giving me a low mark.*

The following comment from interviews with the researcher (Lebogang, October, 200x), also illustrates a strong drive and determination to learn from her mistakes and handle the demands of future assessment.

> *What I've learnt so far is that I have to invest hard work in my studies, so that I may be in a good position to overcome the stumbling blocks that I have come across in the June exams.*

Imelda dedicated herself to engaging in a number of activities that would help her fulfil her ambition such as

> *reading a lot of books from the school library and being in a debating group to come up with new ideas and share my knowledge with other students.*

She recognised the importance of persistent hard work and spoke about 'pushing myself to work harder' and 'I was telling myself that this is the way to university'.

In reflecting on her June exam performance, Zanele committed herself to finding improvement strategies. She resolved to establish study groups and to 'read with understanding'. She suggested revising previous exam papers to 'give a green light of how the exam would like in future'. Karabo took responsibility for her poor exam results and also demonstrated an internal locus of control when she declared, 'There was no one to blame but myself; I didn't study enough'.

Despite serious financial constraints and family obligations, students remained positive and showed a willingness to rise to the challenges. Using her spiritual sayings, Zanele vowed to see 'my scars as stars and my mistakes as my credits'. It is clear that her 'investment' in her studies paid off for her at school in terms of her strong sense of self worth and personal achievement discussed in the analysis of student identity. This attitude is evident in her reflection on the research group process when she expressed her determination to overcome the 'communication breakdown' in her group by developing a 'unique presentation'. She suggested that her group had become 'strong and courageous' by working together creatively.

Analysis of borderline achievers

Students in this group showed evidence of resourcefulness and creativity in dealing with a range of difficult issues. Lindiwe was able to overcome some her financial problems at school when her Business Economics teacher offered to pay for her textbooks. This motivated her to concentrate on her studies and apply for a number of scholarships to 'better myself'. Further evidence of resourcefulness was that all students in this group believed that participating in study groups at school had enhanced their learning experiences. As mentioned previously, Sipho faced difficult circumstances at his school in rural KwaZulu Natal. He described the conditions in the outdoor classroom and how when it rained, 'there was no way to learn except to leave'. He vividly explained how he had to stand or sit on large stones when there was a shortage of desks. He overcame many of these obstacles (discussed in section 2), and was able to exhaust the necessary channels to gain entry to Wits. This required major effort on his part as well as the ability to use available, though limited resources to his advantage.

The only two students from this group who reflected on their performance in the June exams were Joe and Mabe. They both accounted for their efforts to attend extra classes before the exams and the importance of investing in learning at university. Joe stated in his interview with the researcher (October 200x), after failing the June exams, that 'nothing will stop me!'

He displayed a stronger sense of self worth as far as mastery over academic skills was concerned when he said,

> *I am extremely confident. Actually, now I started reading from the moment I started second semester. I'm going to keep on reading for exams but everything that was taught since the commencement of this semester still exists in my mind.*

He was alluding to his improved strategies he learnt on the course for absorbing and memorising information.

Joe's recognition of the importance of motivation extended to his views about resourcefulness. He said in his biographical questionnaire,

> *I was eager to learn and succeed (even though) there was no teacher to help us because of the strike. I showed my diligence to pass my matric and I and other students managed some group studies on our path of matric studies.*

These responses suggested the capacity to handle situations resourcefully.

4.3.2 Using university support structures and resources

Analysis of solid achievers

Students in this category recognised the importance of using educational facilities and resources optimally. They all opted to register for the extended four-year curriculum with two foundation courses rather than the three-year mainstream programme. They understood the usefulness of additional time in order to 'ignite' their skills and 'broaden' their knowledge. In addition, two of the students spent a year upgrading some of their school subjects showing their capacity to find alternative ways of reaching their educational goals. In terms of using available materials, Maloko described how helpful she found the Humanities prospectus because of its explanations of how to 'become responsible' and 'understand the different paths to follow'. Enslin *et al.* (2006:439) argue that such evidence 'suggests that the qualities of resourcefulness will stand the candidate in good stead in the very likely event of experiencing challenges and difficulties during the course of University studies.'

In contrast, Zanele and Karabo believed they could complete their degrees in three years, which is interesting in the light of having been placed on a four-year curriculum (Zanele completed in five years). In the case of Zanele, her choice was justifiable in that she had already completed a three-year diploma at the Technikon.

Karabo's decision to opt for three years may have indicated an unrealistic view of her own ability to cope and the lack of recognition of the usefulness of additional educational support and structure.

Analysing borderline students

Students in this group opted for the four-year curriculum like their solid counterparts, which illustrated their willingness to use available resources and courses established to enhance student learning at university. Mabe selected the four-year programme because 'I need to show my good effort of work-rate to get a good-rewarding capabilities'. This showed understanding of the usefulness of investing in extended learning time. In interviews with the researcher (October, 200x), a number of students across the board discussed the importance of consulting widely 'with fellow students and lecturers' when problems occurred or when there were conceptual 'hiccups'.

4.3.3 Solving dilemmas: community service

Analysis of solid achievers

A question in the biographical questionnaire that yielded thoughtful responses was 'Do you believe that all university students should do community service (work without pay) after graduation? Yes/No. Give your reasons.' Some students in this category provided well-reasoned and logical arguments justifying community service. Thabo pointed out the benefits of 'uplifting the country's economy' and promoting job creation. Maloko acknowledged that students 'will not be able to look after themselves if there is no income', but she highlighted the importance of skills development for communities. Bramley discussed the necessity of paying the university back for its 'wonderful financial assistance'. None of these students, despite their own circumstances of financial disadvantage and lack of resources (three of them have unemployed parents and one lives off a grandparent's disability grant) was opposed to the idea of community service in principle. They did not allow their own difficult situations to influence their views on the issue.

Some students in this group held the view that one needs to prioritise one's family regardless of other factors or concerns. Zanele, for example, related this issue to her own situation and did not support doing community service without pay. She said,

No, because some of them are coming from poor families where they are bread winners which means that their relatives are depending upon them, so it won't be easy for them to work without pay.

Karabo responded similarly by pointing out that the university 'demand pay back after your studies'. Her autobiography provided a lengthy account of her family's dire financial situation and a description of the numerous chores she had to do at home – 'going to the river and fetching water and wood, cooking for supper, ploughing' and so on. She says it was 'like a culture, it was a disgrace for you to be found staying/sitting at home without doing those jobs. We were all expected to go and help.' This suggested an overwhelming sense of responsibility to her family that extended beyond her schooling years.

Analysis of borderline students

Not all students in this group displayed the same level of resourcefulness in their responses to problem-solving tasks. This may be because of language difficulties discussed earlier as well as students' fixation on the financial and resource constraints in their lives. Their responses to the question about community service and whether it should be 'done without pay' after graduation yielded pragmatic and even desperate responses. In this instance, James said that students should not do community service as,

They have to pay back the money to TEFSA, Companies and all who supported them during their studies.

In the same vein, Angie revealed her own neediness when she said,

No, because you have to eat and some family matters need money which by that time will need your attention as a family member who works.

What emerged was a strong sense of responsibility to one's extended family especially once one had a qualification.

Problem-solving methods from members of this group were limited and offered surface solutions. There was mostly a negative response to the question concerning community service after graduation. The view expressed was that students should be

looking for work to ‘assist their families with what they need’ (Joe). Mabe was the only student who outlined some of the advantages of doing community service such as ‘the good role of leadership and strong influential character’.

4.3.4 Comparing factors of resourcefulness

As mentioned in the previous analyses, students in solid and borderline categories articulated narratives of themselves as confident, successful students. Through a number of responses to tasks and activities, they displayed the will to perform well and invest in their studies. A combination of strong learner identity and resourcefulness influenced the decision of the selection committee to admit these students to university in the first place. Resourcefulness involves a further dimension as it reveals whether students are able to use external and internal resources productively to achieve their purposes. Evidence of this quality was manifest in the way students used resources to cope with life challenges and whether they could think laterally and creatively in order to solve problems (using realistic strategies). Effective problem-solving relies on students’ capacity to see beyond their own difficult situations or contexts to deal with issues.

In terms of the first indicator of resourcefulness, students from both groups showed evidence of being able to use available resources confidently to address problems. Examples of these were job-finding skills, exhausting various channels to come to university and asking teachers and family members for advice on how to achieve certain goals. As regards educational accomplishments, students formed study groups and used them effectively in the absence of teachers. Most students had upgraded their matric subjects in order to obtain university exemption. At university, they recognised the importance of enhanced educational support in the form of extended curricula (foundation courses). It emerged that solid students displayed the strongest tendency to draw on their own resources and take responsibility for their learning while borderline students tended to focus on religious sources of comfort and sayings from famous people to guide them through various difficulties.

Tishman, Perkins, and Jay (1995:69) discuss the notion of cognitive resourcefulness that ‘allows students to resourcefully manage their thinking during complex thinking tasks. It helps them to seek solutions and alternative approaches on their own.’ The

authors stress the importance of a creative and independent thinking disposition rather than passively waiting 'to be told what to do'. It has emerged from an analysis of affective factors in relation to university success categories that the solid achievers in the *n* + 1 category were able to think ahead and plan strategies for solving various problems. The remaining students were unable to let go of their issues in order to engage with the challenge of their tasks. Generally students in the *n* + x category showed a reluctance to move out of their comfort zones and provided very few strategies for dealing with problems presented to them. As discussed in the conclusion to the section on investment, Isiaah stood out as a borderline achiever who had the capacity to open up to new experiences and learn from his mistakes. In the final question in the biographical questionnaire, which asked students to say if they had any information to add to their forms, most students attempted to convince the Admissions Committee to accept them in fairly general terms with sentences like:

> *You won't be sorry if you take me.*
>
> *I won't let you down.*
>
> *I think I am suited to this.*

Isiaah, on the other hand, made some constructive, well-reasoned suggestions to the committee when considering potential candidates:

> *I think the admissions committee should consider only the outstanding candidates and if you are not successful they should inform you in time in order to be aware of the situation. They must also not respond to candidates for just fulfilling their needs.*

5 Key Affective Differences between Solid and Borderline Achievers in Relation to Success at University

What has emerged clearly from the analysis of affective factors is that all students selected for the case study, to a greater or lesser degree, showed evidence of strong emotion and passion described as the 'manifest form of the will to learn' (Barnett 2007:60) especially when they described how they managed to deal with various obstacles on their journeys to university. They used emotive words and language that characterise the discourse of motivation, determination and hard work. Perkins (1992:115) refers to Scheffler's writing (1991) on 'cognitive emotions' that highlights the role of feelings such as 'love of truth, commitment to fairness, zest for

exploration' because they 'serve the agenda of thinking'. Similarly, Paul (1990) differentiates between 'strong sense' and 'weak sense' critical thinking. Paul stresses that one may be skilled in the craft of reasoning and argumentation but the arguments are weak 'without an authentic commitment to fairness, without openness to genuinely divergent points of view'. Strong sense reasoning involves the passionate language of commitment, open-mindedness and thoughtful reflection. The qualities of identity, investment, resourcefulness and commitment discussed in this chapter may have contributed towards students' development of strong thinking dispositions.

The key differences then between students in the solid group who obtained their degrees in the expected four years (*n + 1*) compared to *n* + x were not necessarily the dispositions and qualities themselves, but how these tendencies were translated into handling more challenging, problem-related tasks. Not only did students in the *n* + 1 category demonstrate strong dispositions towards an 'ontological commitment' to their studies, but they showed the capacity to process information at higher cognitive levels on the basis of these dispositions. Tishman *et al.* (1995:38) argue that good thinkers can be characterised by their 'thinking dispositions – their abiding tendencies to explore, to enquire and probe into new areas, to seek clarity, to think critically and carefully, to be organised in their thinking and so on.'

Poor thinking dispositions may have been due to students' inadequate language use that affected their ability to articulate their ideas. Consequently, they would be less convincing to their audiences. It is important to bear in mind that there were students with poor language ability who did become successful achievers in the long term. At what point in the year were they able to 'take-off' and benefit from the various teaching interventions on the Foundation Course? To address this question, it will be essential to analyse students' cognitive and language development over the year as well as their reflections on their own process of academic development in relation to a range of tasks on the Foundation Course in subsequent chapters.

Cottrell (2001:28) argues that for students to 'take off' academically at university, they need to change their internal narrative or 'state of mind' to one of 'self-belief, understanding and trust in the learning context'. The purpose of my research was to investigate whether the teaching and learning interventions experienced by students at

university were able to reinforce their attributes and cultivate their thinking dispositions. One way of establishing this was to focus on students' processes of thinking in the form of the reflections students wrote during the Foundation Course to see how they were able to develop their ability to think about their learning. Tishman *et al.* (1995) point out that, in contrast to abilities, thinking tendencies are patterns in a person's thinking across many thinking situations and take time to develop and manifest. It is therefore important to monitor these thinking dispositions as they develop over the course of the Foundation Course discussed in Chapter Seven. If, as Barnett argues (2007:20), the will to learn is 'the foundation of educational energy', what possibilities exist in the Foundation Course for nurturing student potential and encouraging students to learn optimally from the pedagogical interventions of the Foundation Course? The following chapter unpacks the various dimensions of the course pedagogy that allowed students to engage at increasingly higher levels of cognition and meta-cognition.

CHAPTER FOUR
PEDAGOGICAL PRINCIPLES AND PRACTICES OF THE FOUNDATION COURSE

1 Introduction

The primary aim of this research is to understand what facilitates the development of higher order thinking of students in the Foundation Course at Wits University. The study draws extensively on Vygotsky's (1978) ideas about the ZPD to understand the relationship between the social environment (in this teaching situation) and the development of higher order or abstract thinking. I investigate factors within the Foundation Course itself to see how students develop within the ZPD over their first year of study. This chapter focuses on the pedagogical principles and practices of the Foundation Course, and unpacks, in particular, the scaffolding of learning tasks for students which make it possible for them to 'internalize external knowledge and convert it into a tool for conscious control (Bruner 1985:25). In subsequent chapters, I analyse student writing in response to the range of teaching mediations within the course (Chapters Five and Six) as well as their reflections (written and oral) on their own development (Chapter Seven). This chapter will give an indication of the specific nature and qualities of the scaffolding on the course that elicits different levels of engaged, participatory and higher order thinking processes.

I intend examining social, historical and cultural factors that contribute to the development of higher order thinking in a particular teaching situation by adapting theoretical constructs such as social constructivism (Biggs 1999), scaffolding (Bruner 1985, Tharp and Gallimore 1988, Bayer 1996), cultural tools (Wertsch 1998, Smagorinsky 2000), mediation (Daniels 2001), modelling (Wertsche and Bivens 1992, Bayer 1996), community of practice (Lave and Wengar 1991) and others within the ZPD for broadening current understandings of student learning. As discussed in Chapter One, foundation course students from predominantly working-class backgrounds, gained entry to the university via the alternative admissions process. During the time of this study, they were generally regarded as lacking in something – skills, competencies, conceptual knowledge and general knowledge. Their previous schooling in township or rural schools was regarded as inadequate for university study and this under-preparedness was believed to set students up for failure. I investigate the development of these students on this course in the context of views critical of

cultural and social deficit models (Starfield 1994, Cummins 1996, 2000, and Biggs 2003) in order to reveal a far deeper and more informed way of seeing students. More recently, for example, research suggests that first year university students develop 'interim literacies' as they make the transition from primary discourses (home) and school literacies to academic literacy (Paxton 2007:47).

An interesting question is the extent to which and in what ways these 'new students' have become successful in particular teaching situations at university. While some of them may under-perform in mainstream classes and are viewed as unable to cope with the conceptual complexities of university level classes, they appear to thrive in certain learning situations providing supportive, scaffolded learning experiences. In contrast to the view that students are empty vessels waiting to be filled at university, social constructivism argues that 'people are abundant in the resources of their experience which they bring to situations that are intentionally about creating learning in learners' (Brockbank and McGill 1998:4*).* The broader question is whether certain learning situations elicit the kinds of high-level responses expected of successful university students. Does the Foundation Course, for example, foster the right socio-cultural conditions for student learning and transformation to occur? Furthermore, how effective are the various forms of scaffolding in promoting student learning? Of particular interest to me is the way in which students in the different categories (borderline and solid), negotiate their understandings differently in response to the course mediation.

In addressing these questions, I begin this chapter by outlining the key theories of teaching and learning relevant to an analysis of the Foundation Course. Although the course adopts a predominantly socio-cognitive, situated approach to its pedagogy, it has been influenced by developmental, constructivist models of student learning in higher education that recognise the cognitive and affective dimensions of learning. I examine the implications of both the developmental and socially based perspectives in order to make sense of the pedagogical data within the Foundation Course. I focus in particular on the range of scaffolding and mediational methods that play a role in student development thereby providing a foundation for my analysis of student writing and reflection in subsequent chapters. In order to give a holistic and critical analysis of the pedagogy, I combine the work of a number of theorists as no theory on

its own enables a nuanced, sophisticated assessment of the course's pedagogical practices. The challenge of this chapter is to make explicit the theories that 'inform the social construction of pedagogic discourse' (Daniels 2001:6).

2 Key Theories of Teaching and Learning

2.1 Developmental and hierarchical models of learning: learning as the construction of understanding

Piaget's (1952) early stage theory of intellectual development holds that holistic structures unfold in the same sequence irrespective of cultural background; a theory that has been adapted to understanding student learning in higher education. From this perspective 'skills' and language have been fore-grounded in curriculum innovation. In addition, taxonomies describing levels of student performance (Bloom 1956, Biggs and Collis 1982, and Perkins 1992) have been used extensively for designing 'outcomes-based' courses and materials. These frameworks describe how student performance grows in complexity during the course of mastering tasks. Students' readiness or not to cope with academic tasks is framed in terms of levels and structures of skills required to perform particular academic tasks. This view supports Piaget's theory about the natural development from lower to higher states of learning development (Miller 1989)[1].

Perry (1970) extended Piaget's developmental studies of young children to the development of abstract thought in university students by interviewing students throughout their college years. His study documents students' progress firstly from a basic dualism, regarding knowledge as facts that are right or wrong to multiplicity in which students realise they are entitled to their own views. Thereafter students move to an understanding of all knowledge as relative (generalised relativism) through to a committed personal position. Perry's research demonstrates that it can take years for students to work from a position of requiring dogmatic answers to more critical, self-reflective approaches and the articulation of argued positions. What is not clear in this study is the extent to which learning experiences and the social environment promote or inhibit student cognitive development. Although Belenky's scheme (1986),

[1] It also takes into account Piaget's later constructivist theory of knowledge, which highlights a more relational view of development (Daniels 2001:37).

replicated with a group of women, confirms similar stages through which students reflect on their experiences, her scheme takes cognisance of issues of power such as the silencing of women students (Brockbank and McGill 1998).

Prosser and Webb (1994:125) describe a 'second-order' perspective in research into student learning in higher education. This 'phenomenographic' approach to research focuses on describing the experience of learning from the viewpoint of the student[2]. The research suggests that the way students conceive of the learning tasks affects their approach to learning in that situation and subsequently in the outcomes of that learning task. There is acknowledgement that individuals learn differently and that teachers need to tailor the pedagogy to match student approaches. Based on qualitative interviews with students, these studies also describe conceptions of learning, ordered in a developmental hierarchy, through which it is assumed students will move during their time at university (Biggs 1982, Entwistle and Ramsden 1983, and Marton and Saljo 1984). They perceive students as moving from lower level quantitative conceptions of learning to more qualitative processes of abstraction. These different ways of understanding learning are seen to underpin two basic approaches to learning: a 'surface' approach in which the student's intention is to memorise the text, and a 'deep' approach in which the student's intention is to understand the meaning of the text.

My analysis of student writing and reflection in the Foundation Course has been influenced by these characterisations of approaches to learning and levels of thinking as they herald a shift away from 'blame the student' conceptions to more multifaceted accounts of their learning. Consideration must be given, however, to Haggis's (2003:91) concerns about the unquestioned assumptions about normality made by developmental models of approaches to student learning in higher education. Haggis questions the claim made by Prosser and Trigwell (1999:4) that without exception, deep approaches to learning and 'ways of understanding which include more complete ways of conceiving something are more likely to result in high quality learning outcomes'. She opposes a generalised model of teaching and learning which

[2] This is achieved by allowing students 'to create their own constructs and meanings in describing their learning as well as recognizing that learning and knowledge are created within a social context' (Brockbank and McGill 1998:33).

removes the individual learner from the richness of his/her multiple contexts. It constructs the learner as a human being without agency who is being moulded to handle the complexities of university study. Haggis (2003: 98) She draws on Webb (1996:27) who problematises the notion of developmental and hierarchical models of learning by saying, 'Stage theories do not give us a view of human nature as is, but instead they give us a normative view from the perspective of their authors… the highest point to be reached according to each stage theory is that which accords with the author's self-perception and cultural experience.'

Concerns have also been raised that developmental frameworks can result in static conceptions of student development. Bruffee (1993:158), for example, in his critique of the absence of social constructionist thinking in certain descriptions of the undergraduate experience suggests that these stages of development are 'the mental structures, cognitive frameworks and procedures of higher order reasoning sought by cognitive research'. Similarly, Wertsche and Bivens (1992:206) critique 'individualistic assumptions' that these stages exist 'in roughly the same form across cultural, historical and institutional contexts'. They propose that research into student learning is not simply to discover the 'real' capabilities of students, but to draw attention to the social bases of their achievements. My research attempts to address these critical concerns by examining the development of student writing and patterns of reasoning in several situated tasks rather than generalising about their performance as a whole.

2.1.1 Implications of the developmental model

As mentioned above, developmental frameworks are useful resources for formulating learning outcomes and for assessing students' levels of understanding in specific assessment tasks. From this perspective there is a strong focus on the movement between hierarchical stages as information is processed at increasingly higher levels. Cottrell (2001), for example, analyses the process of equilibration as the key element of Piaget's model of learning in higher education. She argues that for students to progress to more sophisticated ways of thinking, they need to be receptive to disequilibrium (a dissatisfied awareness of limitations in our existing ways of thinking) and to be able to manage or 'contain' short-term confusion.

Wertsche and Biven (1992:204) discuss Piagetian analyses of the role of social interaction with peers as allowing children to 'overcome the egocentric tendencies that characterize early thought… and (create) conflict in individuals' cognitive systems'. They point out that the analysis of this interaction between peers is 'ultimately grounded in analytic units tied to the individual'. This contrasts with a Vygotskian analysis of the social interaction with adults, which promotes cognitive growth discussed in the next section.

2.2 Socially-based models of learning: Learning as co-constructed understanding in the ZPD

For both Piaget and Vygotsky, learning is a matter of active construction, but Vygotsky's writings highlight the significance of the social environment in facilitating higher order functions in the individual. Development does not come from the child's spontaneous maturation alone, but after the age of two, is strongly influenced by social, cultural and historical sources in which knowledge is actively co-constructed. Interpersonal behaviours and beliefs become intrapersonal cognitive processes as learning and knowledge are created within a social context. Learning is not an essentially individual enterprise and involves a communicative process whereby 'cognitive, social, perceptual, motivational, physical, emotional, and other processes are regarded as aspects of sociocultural activity rather than as separate, free-standing capabilities or "faculties", as has been traditional in Psychology' (Rogoff 2003:237).

In conceptualising the relationship between learning and development from a Vygotskian perspective, there has been a shift away from the 'domain of crude determinism' (Daniels 2001:28) to a 'dynamic interplay' between mediational and self-generated activities. In my view, Vygotsky's (1978:86) notion of the ZPD provides the most productive framework for my understanding of students in transition at the university in terms of the effects of teaching and learning:

> It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.

The first level is the actual developmental level (level of development of mental functions that has been established as a result of already-completed developmental

cycles like students' matriculation exam and university admission tests). The second level is the potential developmental level, which involves the functions that are in an embryonic state and are in the process of maturing. Vygotsky hoped that the concept would give educators a much better indication of each learner's true potential. Daniels (2001:56) aptly points out that the ZPD is the 'theoretical attempt to understand the operation of contradiction between internal possibilities and external needs that constitutes the driving force of development'.

The ZPD is the region where instruction and learning take place beyond what the learner can do alone in the zone of actual development (ZAD). With enough assisted practice, the strategies for completing the task become part of the student's zone of actual development. From this social perspective, the development of abstract modes of thought requires specific instruction in learning contexts.[3] It is here that the concept of 'situation definition' (Wertsche 1984) is most usefully applied. It requires the teacher and student to negotiate an intersubjective situation definition that differs from both their ways of understanding the situation. The student must fundamentally redefine her definition of the situation (corresponding to the ZPD) in order to make the transition to a new one. This requires giving up her existing situation definition in favour of a qualitatively new one closer to that of the teacher (Wertsche 1984). Intersubjectivity is created through language that is appropriate for the developmental level of the learner.

In concluding this section, I support Light and Littleton's (1999:93) suggestion that what is needed is an approach that respects the fundamentally social nature of cognition yet does not dismiss the status of individuals as 'agents in their own social construction'. Vygotsky recognised the role of intrinsic factors but suggested that a complete understanding of cognitive development requires a study of the psychological tools the culture provides.[4] From this perspective, as Rogoff (2003:237) suggests, the acquisition of knowledge or of skills takes a more active form and develops as 'people learn to use cultural tools for thinking (such as literacy

[3] McLane (1987:268) qualifies this point by saying that the extent to which the ZPD is negotiated depends on 'the nature of the specific activity, on the mode of social interaction and the kinds of communicative processes utilized, -and on the particular context that is created'.
[4] 'If one changes the tools of thinking available to the child, his mind will have a radically different structure' (Vygotsky in Crain 1992:200).

and mathematics) with the help of others more experienced with such tools and cultural institutions'.[5]

2.2.1 Implications of social theories of learning: scaffolding, mediation and situated learning

A Vygotskian perspective emphasises the need for the teacher or mentor to structure activity and to support learning from one stage to the next in the belief that good learning is ahead of actual development. Teaching therefore creates possibilities for developing student potential rather than focusing on their actual developmental levels. What follows is an analysis of how students arrive at a shared understanding with their teacher through a process of 'mutual construction' (Light and Littleton 1999:92)[6]. In particular, it analyses how the principles of scaffolding, mediation and situated learning are enacted in the Foundation Course.

2.2.1.1 Scaffolding and mediation within the ZPD

The metaphor of scaffolding as a form of mediation represents the special quality of the guidance or collaboration through language and other semiotic tools. The teacher provides a temporary scaffold to support the process of students building an edifice. Post-Vygotskian interpretations of scaffolding mostly emphasise the 'negotiated scaffold' (Daniels 2001) in which the collaborative teaching methods allow learners to construct meaning rather than being on the receiving end of a 'one-way' transfer of knowledge and skills. Bruner (1985:24) describes the educational possibilities of individual students negotiating with knowledgeable teachers to advance their thinking.

> If the child is able to advance by being under the tutelage of an adult, or a more competent peer, then the tutor or the aiding peer serves the learner as a vicarious form of consciousness until such time as the learner is able to master his own action through his own consciousness and control. When the child achieves that conscious control over a new function or conceptual system, it is then that he is able to use it as a tool. Up to that point the tutor in effect

[5] John-Steiner and Meehan (2000:32) expand on the role of semiotic mediation (psychological tools) in assisting learners to 'internalize cultural knowledge' and 'enhance cognitive activity'.
[6] Light and Littleton (1999:6) question the Piagetian approach of examining the effects of 'socio-cognitive conflict' on individual cognitive development. They show how learners performed at higher problem-solving levels as a result of collaborating with more experienced people.

> performs the critical function of 'scaffolding' the learning task to make it possible. In Vygotsky's words, to internalize external knowledge and convert it into a tool for conscious control.

Several studies (Edwards and Mercer 1987, Tharp and Gallimore 1988, Bayer 1996, Light and Littleton 1999 and Hammond 2001) are premised on the role of scaffolding in creating the ZPD. Tharp and Gallimore (1988) see progression through the ZPD in terms of a series of stages. At first, student performance is directly assisted through various forms of scaffolding until they reach a point at which they take over the role of 'scaffolder' in relation to their own learning. Eventually learning becomes automatic and increasingly involves less 'self guidance'. Edwards and Mercers (1987) use Bruner's concept of scaffolding to show how the class teacher in schools, by carefully guiding class discussion, 'can establish and maintain a focus of shared attention, provide children with a language in which to describe their own experiences and, using that language, build up a body of common knowledge about the topic in hand' (Edwards and Mercers 1987:10). In all these studies there is a shift away from the 'rigid scaffold' climbing-frame metaphor described by Daniels (2001:60) associated with behavioural teaching methods.

Scaffolding principles and practices have also been applied to a number of studies in a higher education context to address the needs of diverse groups of students. Bayer's study (1996:165) suggests that in order for students to 'achieve enhanced levels of intersubjectivity and… to assume responsibility for their learning', they (teachers) need to find ways of taking students through a process of expanding their knowledge base so that they can engage students in increasingly sophisticated activities. Similarly Cottrell (2001:19) proposes that teachers help students to identify and clarify what they already know and use this knowledge as a basis for the next step in learning. She says, 'Whenever we speak of "transferable skills", for example, we need to be aware of the need for a teacher or mentor to scaffold the process of recognizing, applying and articulating in one context the skills acquired or required in another'. In a South African tertiary teaching context, Craig (2001:88) describes her application that aims at addressing the socio-historical or contextual constraints on education. She suggests taking students directly to unfamiliar tasks, 'and then scaffolding their engagement with that which they need to know or do in order to assist them in their struggle to

master the unfamiliarity'. Ultimately, previously unmastered processes of completing a task are brought into their ZAD so that students can perform the task independently.

What is unclear in some of these studies is the extent to which students actively reconstruct and transform their ideas as a result of the interplay between the social and the individual. For example, do students merely list and combine ideas in the form of 'shallow internalization' described by John-Steiner and Meehan (2000:35) or do they synthesise their ideas creatively while engaging in dialogue and knowledge production. In the section below, I reflect critically on the nature of the scaffolding and mediation in the Foundation Course pedagogy while describing the curricular, meta-curricular tasks and teaching activities. My subsequent analysis of students' writing and reflections determines the extent to which they shifted to higher levels of cognition as a result of their participation in the course pedagogy. There are a number of characteristics of mediated learning that will be explored in my analysis of the courseware. In essence, socio-cultural views of psychology offer the most useful interpretations of mediation for my analysis because of their emphasis on 'co-construction', 'joint mediation', 'mediation in context' and 'non-determinism' (Daniels 2001:14). According to Greenberg (2000:3), mediated learning occurs when, 'a more knowledgeable person assists a less knowledgeable person to label, compare, categorize and give meaning to a present experience as it relates to prior and future ones'. As students relate their personal knowledge to ideas expressed by the mediator, they make advances in learning that eventually move the ZPD to a higher level. It is necessary at this point to examine these 'situated' mediational models for allowing students to become active agents in their own learning.

2.2.1.2 Situated approaches to learning

A key characteristic of the situative perspective is its theoretical focus on interactive systems that are larger than the behaviours or cognitive processes of individual agents (Greeno 1998).[7] Such theorists (Brown, Collins and Duguid 1989, Barton, Hamilton and Ivanic 2000) have described this move beyond 'computational models' of mainstream cognitive psychology to situated views of learning that do not separate knowledge to be learned from the situations in which it is used. This implies

[7] Underpinning situated views of learning is the assumption that individual 'cognition is typically situated in a social and physical context and is rarely, if ever, decontextualised' (Butterworth 1992:41).

interactive approaches to learning that draw meaning from very specific situated learning environments.[8] A situated approach does not involve mere teaching *about* learning, but is about students *becoming* effective learners in particular situations. Brown *et al.* (1989: 32) show how situations 'co-produce knowledge through activity'. Students become 'cognitive apprentices' as they acquire expertise in a range of 'skills' valued by the community rather than being viewed as successful or inadequate based on their ability or preparation.

This approach to participation in shared cultural practices reflects a move away from 'language repair' work to acknowledging variation of discourses and genres across the curriculum. New definitions of English for Academic Purposes (Hyland and Hamp-Lyons 2002:3), for example, refer to language instruction that 'focuses on the specific communicative needs and practices of particular groups in academic contexts. This means grounding instruction in an understanding of the cognitive, social and linguistic demands of specific academic disciplines'. More recent literature on academic literacies has attempted to shift interest away from 'skills' to issues of power and identity within institutions. Lea and Street (1998:159) distinguish between three approaches that have characterised academic work: the add-on 'skills' approach, the 'socialization' approach and the 'academic literacies' approach. They critique the 'socialization' approach by saying,

> Despite the fact that contextual factors in student writing are recognized as important, this approach tends to treat writing as a transparent medium of instruction so fails to address the deep language, literacy and discourse issues involved in the institutional production and representation of meaning.

Having raised similar doubts about the generalisability of writing skills from one context to another, Benesche (2001:23) highlights the centrality of 'context' in her discussion of the history of English for Academic Purposes. She proposes a more situated approach to teaching and learning, which requires 'context-sensitive curricula based on classroom research'. The move to integrate thinking with contexts of thought is the foundation of the socio-cultural approach. It turns from 'examining

[8] Gee's framework (2000:6) is congruent with a situated one as he suggests that situated meanings are 'rooted in embodied experience in the material and social world'.

general abilities of individuals to examining specific cultural activities in which people think' (Rogoff 2003:241). In this thesis, my approach is in line with Rogoff's view that it is necessary to find appropriate methods for examining how students change their ways of participation through a range of pedagogical activities. My analysis of the course pedagogy seeks to understand possibilities for students to transform their involvement within the Foundation Course.

3 The Foundation Course: A Situated Case Study

Granville and Dison (2003) argue that the Foundation Course became increasingly situated in students' current experiences as it moved away from its role as a Traditional English for Academic Purposes (EAP) Course in the late 1990s. It allowed students to shift from observers to participants as they became more active and expert in the collective activity of learning. My examination of the course pedagogy demonstrates the apprenticeship of students in new 'tools of the trade' in a community of practice (Lave and Wengar 1991:64). The course, as it provided both intellectual and affective support for 'initiates' into the academic community, can be described, as per Benesche 2001, as a Critical EAP course. There was a common purpose among students as they all had to fulfil the requirements of the course in order to proceed with their degrees. Benesche (2001: 94) describes the possibilities for cooperation and community building in critical EAP courses. She suggests that students develop a sense of membership of the class as '*subjects* of learning, not objects of teaching'.

3.1 Foundation Course development and structure

The course lecturer, Stella Granville, is a member of Applied English Language Studies (AELS) at Wits and was the coordinator of the Foundation Course till its closure in 2007 (see Chapter One). In my capacity as Teaching and Learning Advisor in the Faculty of Humanities, I have worked collaboratively with Granville since 2000 to research various aspects of students' learning, in particular the development of students' meta-cognition. We conducted research into students' learning and incorporated a number of strategies into the course to assist students to manage their thinking and learning more systematically. Unlike courses where the curriculum remained static, course developers on the Foundation Course took the opportunity to revise existing approaches and materials on an ongoing basis. Course design involved

the formulation of learning outcomes, the selection and sequencing of texts and tasks and extensive materials development.

General plenary lectures held once a week were attended by approximately 200 students registered for the Foundation Course. Students were divided into dedicated tutorial groups, which met for at least three periods per week after the general lecture. The course was taught by a team of experienced AELS lecturers and tutors each taking responsibility for a tutorial class of about 30 students.

3.2 Description of curricular and meta-curricular tasks and teaching activities used in the Foundation Course

I have organised my description of the tasks and activities used in the Foundation Course into sections corresponding to its three phases (Granville 2002). The first phase (autobiography) took into account students' home/school experiences and their pathway to university. Student writing on this task were analysed in the previous chapter. In the second phase (comparison), the comparative assignments had as their content the differences between school and university and the exploration of the experience of being a first year student. Student writing for this phase is analysed in depth in Chapter Five. In the third phase (argument), students began to prepare for reading and writing academic arguments. In addition, the students engaged in a small-scale research project on a topic of their choice in the research phase. Both argument and research writing are analysed in the Chapter Six.

In 200x students were required to complete a self-reflection questionnaire linked to most of the course writing tasks. This intervention was prompted by ongoing research conducted into student learning in the Foundation Course by Granville and Dison suggesting that meta-reflective activities promoted a high level of engagement from students. The theoretical underpinnings of these task-related reflection activities will be explained in more detail in Chapter Seven when student reflections are analysed in depth.

In Appendix A, I provide a detailed analysis of the **content** and learning outcomes, **pedagogy** (how teaching and learning activities were mediated) and the **criteria** used for assessing student responses to the questions. Not all tasks and reflections have

been analysed in the data analysis as they fall beyond the scope of this thesis. The reading portfolio, for example, forms part of and feeds into the research project, but is not a key writing activity in its own right. In Appendix A I include a brief analysis of the June and November examination papers although I do not analyse students' written examination performance in this thesis. The following is a summary table of the key curricular and meta-curricular tasks incorporated into the Foundation Course:

Table 4.1 Curricular and meta-curricular tasks

	CURRICULAR TASKS + Where analysed in thesis	**META-CURRICULAR TASKS + Where analysed in thesis**
PHASE 1: Autobiography	1. Autobiography ***Writing analysed in affective chapter***	
PHASE 2: Comparison	2a) Comparison between school and university ***Writing analysed in Chapter Five***	Reflection on comparison between school and university ***Reflections analysed in Chapter Seven***
Comparison	2b) First draft: comparison of universities (Agar and Moyo**)** ***Writing analysed in Chapter Five***	Feedback handout (tutor's and students' comments) *Reflections analysed in Chapter Seven*
Comparison	2c) Second draft: Comparison of universities (Agar and Moyo) ***Writing analysed in Chapter Five***	Reflection on essay in relation to set feedback criteria ***Reflections analysed in Chapter Seven***
P*HASE 3: Argument*	3. Argument essay on polygamy ***Writing analysed in Chapter Six***	
EXAMS	June exam	Post-exam reflection ***Reflections analysed in Chapters Three and Seven***
		Reflection on second term ***Reflections analysed in Chapters Three and Seven***
	Reading portfolio (3 assignments)	Reflection on reading portfolio
PHASE 4: Research	4) Research projects ***Writing analysed in Chapter Six***	Reflection on research project ***Reflections analysed in Chapter Seven***
		Final course evaluation
EXAMS	November exam	

4 Analysis of the Pedagogy

I have derived several mediational strategies from my observations of Granville's tutorial sessions for most of 200x. The purpose of the teaching programme was for students to master academic literacy in a scaffolded and highly structured learning environment. Students were engaged in numerous reading and writing activities throughout the year and learnt pragmatic strategies for coping with increasingly challenging academic tasks. Although many of these principles are implicit in the learning materials, I have fore-grounded the lecturer's method of mediation and

approach to scaffolding to highlight the key features of teaching and learning. I wished to examine the specific nature and degree to which scaffolding operated to further student learning on the course. These methods were not necessarily implemented in the same way in other tutorial sessions of the Foundation Course although there was an attempt to standardise the teaching via regular weekly course planning sessions. Of interest is the use of both teacher and student generated texts for all the devices mentioned below.

4.1 'Upping the ante' (Bayer 1996) by using a range of scaffolding devices

In my analysis of the teaching in the Foundation Course, I show how the lecturer played a mediating role by structuring students' experiences via text-mediational scaffolding. Before describing these interventions, I examine the theoretical base of the key instructional concepts I use in my analysis. Wertsche and Bivens (1992:208) have outlined the effects of instruction on learning in terms of modelling and text-mediational views of scaffolding. They firstly depict modelling as a process in which there is a 'transfer of the locus of control or regulation' so that tutees organise their thinking based on the tutors' instructions and questions. Eventually, the tutees take over and internalise this 'regulative role' (Bayer 1996:166). Both Wertsche and Bivens (1992) and Bayer (1996) point to the possible limitations of placing tutees in the role as passive participants and highlight studies exposing the pitfalls of modelling if teachers are cast as the sole determiners of the teaching agenda. This approach may result in an inability of students to reason and think and in the predominance of 'repetitive discourses' elaborated on in Chapters Five, Six and Seven. Rather than promoting imitative learning behaviours, teachers need to give students 'the actual experience of engaging in dialogue with others' (Wertsche and Bivens 1992:210). I will show how the approach to modelling adopted in the Foundation Course addressed some of these concerns along the lines of 'reciprocal teaching'.

Bayer (1996) has applied these interpretations of scaffolding to her own teacher development context to illustrate their strengths and limitations. In 'shared knowledge scaffolding', course lecturers create joint activities for students to reorganise and reframe their own thinking. This alternative view of scaffolding assumes that all participants need to generate new meanings by active engagement in the learning

process (Wertsche and Bivens 1992). This is beyond a 'univocal function' that focuses on conveying meanings to students placed in passive roles, but draws on Bakhtin (1981) to describe this process as involving multiple voices.

> Taking the dialogic function of text into account means that spoken utterances, written utterances and other forms of text are viewed in terms of their capacity to be thinking devices or objects to which one can respond. (Wertsche and Bivens 1992:212)

Bayer (1996:167) proposes that 'in dialogic texts the notion of mediation is central'. Students use their everyday experiences to make connections to new concepts and ideas. She characterises these 'instructional conversations' as creating the ZPD, 'Rather than preplanned, scripted or didactic, these conversations are based on the assumption that the students may have something to say beyond the "answers" already known by the teacher' (Bayer 1996:167).

The key mediational devices discussed in detail below are interactive modelling and various scaffolding devices which are the methods underpinning most of the course scaffolding.

4.1.1 Interactive modelling

In reflecting on concerns expressed about modelling as over prescriptive and top down (Wertsche and Bivens 1992), in this context, I would argue that the form of modelling practised in this course mostly promoted high level engagement with course concepts. Students worked productively to 'unpack' various dimensions of the models presented to them for the autobiographical and comparative tasks. As they were required to articulate how and why certain phenomena existed, they did not simply copy the argument structure of the extracts or essays given to them in tutorials. Zamel (1992:466) warns about texts presented to students focused on 'getting the definitive meaning'. She argues that students feel inadequate as they 'come to see writing as a matter of (re)presenting the right set of ideas or the correct interpretation'. It is essential, therefore, to model the reading and writing of texts by engaging with 'overt discussion about the language and genre conventions of such texts and how these conventions arise out of history and relate to current practices' (Gee 2000:11). This supports Bayer's (1996:175) view that the intent is not to lead novices through a

narrowly defined prescribed sequence, but to 'assist novices in the co-construction of shared situation definitions so that they can enter a particular domain'.

For the autobiographical phase of the course, there was a predominance of explicit modelling in the mediation of learning materials. The examples of autobiographies presented to students were accompanied by a range of carefully structured traditional comprehension-type questions as well as explicit skills questions integrated into the theme. Probing students' understanding of the differences between narrative and academic texts is an example of preparatory exercises leading to the autobiography. The following questions reflect the higher order challenge they encountered to identify factors that distinguish narrative from academic texts:

- Which text aims to describe an event and life experience?
- Which text aims to analyse another text and to present an argument, which is then supported by various examples and details?
- Which text uses the language and structure of narrative and which text uses the language and structure of academic writing?

In the research phase, in order to understand the discoursal requirements of a research project, students carefully scrutinised McCormick's article on *Children's use of language in District Six* (1986). They described the methods she used to collect her data, reflect on her interpretations of the actual data and summarise her conclusions. Interestingly, guide questions were inserted into each section of the text to help students understand how information was divided up in the paper. For example, after the first section students were asked the following:

> In your own words, write two sentences spelling out the aims of the research project reported in this paper.
>
> The next section of the paper, as you can see, is entitled <u>The Speech Community</u>, but we are not giving you this section of the paper. What kind of information do you think will be included in this section? Write your thoughts below.

Furthermore, students were encouraged to reflect on how these ideas might be useful for their own research projects and how they resonated with their own experiences. The following prompt illustrates this form of reflection:

> Do the facts reported above accord with your own experience of using two languages at school, and of using both standard and vernacular forms of the same language?

Modelling around student-produced texts occurred during class feedback sessions when the lecturer handed back students' school-university essays. She gave them the full text of the 'best' student comparison to use as a basis for comparing with their own essays. She explained aspects of the model in detail, particularly language features of academic generalisation and evidence. The following introduction from the student-produced model was crucial in showcasing how categories were signalled and structured.

> **Generally** the mandate of schools and universities is to provide education, though at different levels. Oxford dictionary defines school as an institution for educating pupils. **On the other hand** a university is defined as educational institution of advanced learning and research, which awards degrees. **However,** there are **both** differences and similarities in their: admission requirements, educational cost, teaching styles, learning styles and last but not least the social life. These are but a few of those aspects involved in learning. How do these attributes then compare in school and university environments?

Through classroom dialogue, students were alerted to different conventions of academic discourse: the broad initial statement addressing the topic, the comparative markers used to signal similarity and difference, the outline of the categories to be discussed in the essay (one category per paragraph) and a final question to launch into the comparison.

Modelling as a form of scaffolding applied to the text types introduced on the course as well as to educational strategies used for processing course tasks illustrated below. Interviewing students to elicit information for the South Africa-Zimbabwe comparison was accompanied by a series of sample questions on the category of accommodation. The following extract illustrates this modelling:

If for example you have a category ‘accommodation’, then brainstorm a series of questions such as:

- Is your room comfortable?
- Do you have to share with someone else?
- Do you have to prepare your own meals?
- Is it difficult to work without interruption?

‘Process’ scaffolding was also incorporated to guide students to compare their own first year experiences with those of a fellow student. They were told explicitly how to compare using an example of a comparative table.

Table 4.2: Similarities: psychological factors

YOU	YOUR PARTNER
I am too shy to speak in class in case I say something that will make others laugh at me.	I am too shy to walk into the library in case I show how uncertain I am in using the OPEC catalogue.

Table 4.3: Differences: psychological factors

YOU	YOUR PARTNER
I enjoy trying out new experiences at university.	I prefer to do things I know I am good at; I won the best debater at school and I have joined the debating society at Wits.

A final illustration of the modelling of ‘how to do research’ in the argument phase of the course occurred when the lecturer demonstrated for students how to formulate a research question on the language of learning and teaching. She suggested a number of survey questions they could ask each other in their research groups to establish whether mother tongue learning is the best way to succeed as a learner in South Africa. A sample of these questions is:

- What is your mother tongue?
- What medium of instruction did you experience in primary school?
- What language did your teachers use to help you understand?
- What would have been better for you?

This unfolding questioning process equipped students to decide on the appropriateness of such an issue for their own research as well as to identify the most effective methods of formulating research questions. Further manifestations of this

integrated approach will be showcased in the discussion of 'integrating reading and writing competencies' below.

These interactive forms of modelling described above would be compatible with those described by Wertsche and Bivens (1992:209) who identify some of the complex processes involved in the transition from 'intermental functioning to the intramental plane'. They support the social interaction patterns of 'guided participation' (Rogoff 1990) and 'dialogic' orientations to academic literacy (Lillis 2003) that involve ongoing dialogue between tutors and tutees rather than a simple uncritical transfer of information from one to the other. The intention is for the tutees to become full participants in the dialogue as instructional support is gradually removed.

4.1.2 Scaffolding devices

A number of pedagogical strategies within the course were used to promote higher order thinking. As discussed previously, they functioned to generate new meanings 'that can serve as a bridge between everyday experience and formal instruction' (Wertsche and Bivens 1992:214).

4.1.2.1 From the known to the unknown

A key pedagogical principle in the Foundation Course was to bring into consciousness students' prior knowledge as 'they may not explicitly realize what they know about a particular topic or issue' (Cummins 1996:76). A number of educational strategies were used to build on students' background knowledge to provide a foundation for new learning. This method of 'shared knowledge scaffolding' predominated as students were given opportunities to talk to each other in 'instructional conversations' (Bayer 1996) and exchange ideas and prior experiences about various conceptual issues throughout the course. For example, after completing their summaries in the autobiographical phase of the course along the lines of the teacher's approach to note-making, students were required to compare their own notes with those of their partners. The cooperative method allowed students to pool their knowledge throughout the course. The lecturer's role was to make connections between the different groups in the plenary session in order for information to become public for the whole class. The course pedagogy, like Paxton's (2007:50) teaching has highlighted the role of prior discourses in scaffolding the acquisition of new academic

discourses. Paxton for example shows how students contextualise and re-articulate rhetorical questions from the 'older literary forms' in their current academic writing. Similarly, students draw on associations from prior discourses and experiences to 'assist them in building new concepts'. Paxton's research (2007:50) shows that 'students' situated meanings are important because they can provide them with a framework for learning new concepts'.

The importance of 'shared knowledge scaffolding' is that students are working inductively to develop an understanding of higher order principles and categories. Although there was variation in the content of the topics and tasks, the scaffolding structure remained constant. Students were enabled to construct paragraphs into a comparative pattern as a result of the snowballing process: working individually and then in groups to brainstorm ideas about differences between taxis and buses like spaciousness, overloading, smell, noise levels and risk; exchanging ideas with others in the plenary and guidance from the lecturer to categorise similar ideas.

Granville (2002) claims that the research project was 'grounded in an exploration of issues close to students' understandings and experience, as multilingualism is a normal part of their everyday knowledge'. The project was an attempt to affirm for students their existing resources of knowledge and experience in language issues, 'Students love to talk about the meanings of their names and the effect these meanings have on their lives' (Granville 2002:7).

Students formulated examples of survey-type and open-ended questions, which they tested out on each other before making relevant changes. In my analysis of student writing and reflections in the data analysis chapters, I assess the extent to which they assimilated and benefited from this range of scaffolding processes.

The use of examples was a persistent scaffolding device for bringing students closer to academic discourse. Students were solicited to produce their own illustrations of concepts and pedagogical frameworks in written and oral form. They were also encouraged to draw on familiar resources such as *True Love* magazine, church choirs and soccer teams to reflect on cultural practices. In some instances, like in the South Africa-Zimbabwe essay, students were expected to interact orally with the set of

criteria provided in terms of their own research findings. Similarly in the research phase of the course, the lecturer drew on the students' own linguistic experiences to generate language definitions. A number of useful disciplinary concepts emerged in an observed class discussion on finding one's way around Johannesburg. One non Zulu-speaking student described his taxi journey with a driver who spoke nothing but Zulu. Students used this example to discuss the notion of 'linguistic manoeuvring', 'Tsotsitaal' and 'passive and active multilingualism'. By generating explanations, fresh examples and justifications, students built up a 'mental image' (Perkins 1992:79) of linguistic concepts. This pedagogical approach supports Perkins' 'performance' perspective on understanding that requires students to go beyond a state of 'possession' to one of 'enablement' (Perkins 1992:76).

From my observation of the weekly lectures, there was a significant attempt on the part of the lecturer to use current news items and issues to illuminate aspects of academic argument for students. Constitutional issues such as the rights of AIDS patients to acquire antiretroviral drugs and the merits of smoking in public places were incorporated to demonstrate how to critically evaluate 'valid' claims and evidence. The lecturer also introduced everyday analogies to showcase aspects of academic discourse. The process of weighing up evidence was compared to seeing a mountain from different perspectives and angles. Students extended this analogy creatively by considering the consequences of 'not seeing the other side of the mountain' when formulating a counter argument. The symbols of road signs became a thread throughout the course to represent the signalling and linking of ideas. In the essay feedback sessions, students expressed the view that they had found the signal image particularly useful as a learning device as they were immediately alerted to their inadequate signposting.

4.1.2.2 From everyday to academic language: Academic language mediation

Theories about academic literacy have been applied to second language contexts in the field of academic development in South Africa (Thesen 1997, Starfield 1999). In the Foundation Course, surface language errors were seen to be connected to deeper problems of structure and understanding the academic discourse. In the teaching situation the lecturer constantly paraphrased student responses and labelled their ideas

using specialised vocabulary. Through the process of relating their understanding of concepts to 'broader categorical schemes', students were assisted to make connections between their 'composite base level categories and the superordinate level categories in that domain' (Bayer 1996). Gee (2000:15) would describe this as 'scaffolding in the acquisition of expanded forms of social language'. Drawing on Tomasello (1990), Gee (2000:15) argues that 'grammar by its very nature, regardless of what social language it is used within, is a perspective-taking device, learned in part by the human capacity to run simulations of experience (even from someone else's experience) in our heads'.

Although 'lifeworld languages' may be a starting point for the acquisition of any later language, Gee (2000:18) argues that everyday language 'tends to obscure the details of causal, or other systematic, relationships among things in favour of more general and vague relations'. Using the scaffolding principle, in the Foundation Course, academic language was used to assist students to see that there are different perspectives from theirs. A vivid form of language scaffolding used to guide students reading the McCormick article (1986), were the following inserted comments:

> The kind of detailed account given above is widely used in reporting sociolinguistic research. When reporting your research you should choose similarly detailed accounts to make your general points more vivid.
>
> You will see that in the conclusion, the author re-states her findings, and makes generalisations. She also gives her own perceptions of the roles of different languages and dialects in South African society.

In the guided reading exercises, students were encouraged to adopt strategies for dealing with difficult vocabulary and for finding the argument structure. They were also alerted to issues of academic language and style by finding examples of passive voice, impersonal pronouns and formal vocabulary. Language played an important labelling function in assisting students to distinguish concepts from each other. In the research phase, students built their understanding of vocabulary in groups by differentiating between 'words about language' like language repertoires, language variety, lingua franca and speech communities as compared to 'words about research' like quantitative research, counter patterns, dominant trends and case studies while

they sifted through data gathered by students in the class. The lecturer actively encouraged the use of this linguistic terminology when students spoke in class. The following dialogues illustrate this form of academic language scaffolding:

> Student B: I grew up speaking Afrikaans to people in Pretoria. I only spoke English at school but I struggled with it…
> Lecturer: Was that the **medium of instruction?**
> Student B: Yes.
>
> Student C: The **language repertoire** of my group is Tsotsitaal and Sotho.
> Lecturer: What is the difference?
> Student C: I speak **formal** Sotho with my parents and with my friends it's **informal**.

With input from the lecturer they were able to reflect on and generalise about language practices and variety change patterns. Gibbons (1991) quoted in Cummins (1996:82), talks about promoting academic language development through the strategy of reporting back. In moving from the concrete group experience to more abstract language use, learners must 'include sufficient information within the language itself for the meaning to be understood by those who did not share in the original experience'. This approach to developing academic language does not merely encourage students to 'appropriate academic discourse' by simply reproducing the conventions and linguistic forms representing the different disciplines (Zamel 1992:488). Instead, it supports Zamel's proposal to immerse students in

> reading, writing and language, by engaging them in rich course material, by providing them with multiple and extensive opportunities to inquire into, raise questions, about, critically examine this material, by inviting them to see connections between their own perspectives and course content…

4.1.2.3 Creating an explicit academic literacy agenda

The integrated method for developing academic reading and writing skills in the Foundation Course intended to move away from the isolated, de-contextualised skills approach towards developing content-based meta-cognitive knowledge. Teaching and learning activities were set up to help students cope with the linguistic and cognitive

demands of university study. What follows is a discussion of how several curricular aspects have been integrated into the course.

a) Integrating reading and writing competencies

Throughout the Foundation Course, there was a conscious attempt to explore possibilities for connecting reading and writing and for using writing to probe and work with texts. This is in line with Zamel's contention (1992:468) that writing activities have not made a significant contribution to reading development in teaching programmes because of their add-on, peripheral nature. Rather, writing should become a 'unique opportunity for discovering and exploring these contributions and connections, for it allows the reader to dialogue with a text and find a particular way into it'. Examples of these 'interpretive strategies' (Zamel 1992:471) are found in the following prompts inserted into textual material by the lecturer:

> 1. Skim text C to get a general idea of what it is about.
>
> 2. Then read the whole text. As you read each paragraph underline the main idea (usually the first sentence in each paragraph). Underline any other important words, phrases or sentences.
>
> As you read, write key words and phrases in the margin. This is called **annotation** and is a very useful technique for active reading. I have made summary notes in the margin for the first two paragraphs, and would like you to continue in the same way.

Throughout the Foundation Course, there was a conscious attempt to explore possibilities for connecting reading and writing and for using writing to probe and work with texts.

There were several instances in the comparative and argumentative phases of the course of scaffolding through carefully structured processes of previewing articles. This encouraged critical reading practices as students were required to 'underline main ideas', 'write down abbreviations', 'state the purpose of the introduction and conclusion', 'write marginal notes…' and so on. Students practised the skill of categorisation after identifying categories and sub-categories of student experiences from the Agar and Moyo readings. An example of a useful prompt for facilitating this transfer to their own writing was

Make marginal notes (annotations) to signal key points – those that you think are good examples that could be used in your essay.

As discussed in the modelling section above, numerous research articles were discussed with students in class in terms of their research questions, methodologies, argument structures and conclusions reached. The following example shows how additional prompts were used to guide students through the McCormick article (McCormick 1986) *Children's use of language in District Six*:

- Describe what methods McCormick used to collect her data for this project?
- Do some of the behaviours reflected in this data, remind you of the language practices in your own speech communities? Describe these giving at least one example.

These questions represent an embedded academic literacy approach characteristic of the course pedagogy. In preparation for writing tasks, students were required to become 'mini discourse analysts' (Hyland 2005) by unpacking essay topics and generating ideas for planning and structuring coherent responses. Clear guidelines were provided on the different genres and academic texts with suggested structure and layout. A vivid example of this is an outline of the research report accompanied by specific information required for each section of the report: aim and scope, description of data collection procedure, statement of results, discussion and analysis. In class, examples of reports from the previous year were introduced as a basis for discussion about different aspects of the research. The main purpose of using these extracts was to highlight the shift from descriptive to analytical and interpretive writing. Some examples showed more advanced analytical thinking while others remained at a fairly descriptive level. The following example from a research project used in class illustrates how the student-researcher analysed reasons for parents' attitudes towards English. After listing a series of reasons parents give for choosing English medium schools, the student-researcher concluded:

> *Our research team has come to the conclusion that people develop either positive, negative or neutral attitudes to a language based on its advantages and its shortcomings. We have found that the majority of our respondents have*

> *positive attitudes towards English. The reasons might be based on the fact that communication is mostly in English. A lot of information is published in English, newspapers are written in English, even in tertiary institutions such as Wits, English is the medium of instruction…*

The student-researcher attempted to generalise about findings rather than provide lists of reasons that had not been analysed. In class, students expressed the view that the practice of identifying shifts and gaps in thinking about the data had been advantageous for reflecting critically on their own research findings. A final point is that lecture content in the Foundation Course repeatedly referred to cross-disciplinary argument structures and evidence production as a way of facilitating transfer of academic literacy skills to other disciplines. The extent to which this was achieved will be assessed when student writing and reflection are analysed in Chapters Five and Six.

b) Integrating assessment criteria

A key pedagogical principle in this course was the engagement of students with teaching and learning activities centred around scaffolded assessment tasks. Students were taken through various iterations of task completion through which they were assisted at various levels. After input and modelling, the goal was to allow the students to do as much as they could on their own, and then to intervene and provide appropriate assistance when needed so that the task could be successfully completed. The course coordinator with the team of course lecturers argued forcefully that the socio-cultural context in which learning occurs, and the way in which something is learned, were necessarily a part of the learning, both individually and collaboratively.

The developmental principles of assessment have been fore-grounded by Foundation Course lecturers over the years as a key mechanism for promoting student learning at the Wits University (see Chamberlain *et al.* 2004). Many staff development workshops and symposia have been organised by teaching and learning specialists to critically evaluate existing assessment policies and to formulate creative strategies for diversifying assessment practices. For each of the tasks analysed above, assessment criteria were made explicit to students in one form or another. These criteria were not merely presented in written form but were actively mediated through various forms of

oral and written feedback as discussed in the interactive modelling section above. Granville claims (2002:22) that all the assessment procedures were integrated into the work of the course, 'The examination questions all relate directly to the work done in the course on language and research processes'. She draws on Biggs' (1996) concept of constructive alignment to illustrate the inter-relatedness of all aspects of the course – the learning outcomes, pedagogy and assessment practices. She believes that the formative assessment procedures feed into and enhance summative assessment (examinations).

The multiple forms of feedback (oral, one-to-one, feedback sheets, group feedback written annotations, modelling etc) described by Granville and Dison (2003:15) were seen as part of the 'holistic programme of multiple and recursive cycles of thinking and reprocessing…'. This approach to assessment supports Dison and Rule's contention (1996:30) that 'assessment practices play a pivotal role in helping students to move into the discourse of a subject rather than barring the way'. For the research projects, the balance of individual and group marks underlined for them the importance of 'getting it right' so that they could formulate, implement and present sound research projects together in order to construct individual reports based on the collaborative venture. Students were alerted to the importance of developing individual styles of writing distinct from the group presentation notes. Although they were required to draw on the same data sources as their fellow group members and show the results of collaborative work, they were encouraged to use their own language expression and interpretations.

When I analyse student writing in subsequent chapters, I show how these criteria were integrated into tasks to facilitate student understanding of the learning outcomes. The course adopted a process approach to teaching writing, which emphasised the cyclical nature of writing through a drafting process (Paxton 1995, Prosser and Webb 1994, and Zamel 1985). Students assessed each other's performances by means of guidelines such as clarity of thought, organisation and selection of information, group participation, audience involvement and use of visual material. Through constant exposure to writing, students were encouraged to move into academic discourse and become familiar with university literacy practices. This approach to the assessment of

writing is congruent with Rose's (1985:29), who cites the work of Shaughnessy (1979:11) to argue that:

> The most error-ridden prose arises from the confrontation of inexperienced student writers with the complex linguistic and rhetorical expectations of the academy. She reminded us that to properly teach writing to such students is to understand 'the intelligence of their mistakes'.

It is evident from the approaches to assessment described above that teaching and assessment are focused on the potential of the learner rather than on blocking students' entry to the discourse.

c) Integrating different forms of representation

As discussed with reference to the comparison phase of the course, a chief activity was for students to work with visual and spatial material in order to learn increasingly complex processes of categorisation. Visual support and graphic organisers such as maps and spray diagrams were introduced to facilitate comprehension. In the research phase of the course, a set of materials was developed to facilitate students' ability to analyse qualitative data by scrutinising visual patterns. The following sample of questions illustrates the process students underwent to identify different shapes and colours in visual material:

> Look carefully at pictures below:
>
> Identify the three different patterns contained in the square. Give names to each type of shape.
>
> Arrange the shapes into groups, for example, Group one: the three circles shape occurs four times in the middle of the design…

After students identified dominant shapes and patterns they were told how 'finding patterns – recurring themes, issues, and ideas that surface in the data' related to principles of qualitative data analysis. Conversely, they were alerted to the phenomenon of finding counter patterns when 'subjects' responses may not fit into the major patterns identified'. Students were told how to find patterns and themes in their own data by drawing columns and developing their own coding system. To consolidate this process, the lecturer discussed an example of the childhood literacy

practices of three AELS students from which students could deduce how to organise experiences into categories.

The skill of analysing quantitative data for their research projects presented a further opportunity for understanding different forms of representation. After being given a number of examples from newspapers of information presented in graphical form, students were required to compare the visual with the verbal representation. Thereafter they were expected to present new information from an attitudinal survey in the form of a table and a bar graph before answering analytical questions on the findings such as: 'Who expressed greater dissatisfaction with co-educational schooling' and 'Can these findings be generalised? Why or why not'. Such prompts expected students to reason at an abstract level and assisted them to present their research data in visual form for their final oral presentations. In the assessment of their presentations, their visual material was weighted equally with the content criteria such as clarity and organisation of information.

d) Integrating meta-level questions

The lecturer wanted students to become more aware of their strengths and weaknesses by reflecting on their own writing. This was the start of an ongoing process of task-related reflection as students addressed meta-level questions that related directly to their engagement with the task. This teaching intervention (the meta-curriculum) described in detail in Chapter Seven goes some way towards addressing concerns about the absence of reflective thinking in a course where scaffolding is defined entirely in terms of the teacher's interests. After the weekly lectures at the start of the week, students were often asked to reflect in oral and written form on key issues in the lecture as well as on their note-making strategies. Examples of questions were:

- What interested or surprised you in the lecture?
- What did you learn that was new to you?
- What was the relevance of this lecture to our course?
- What questions do you have about the lecture?
- Did you manage to take down the key explanations?
- What alerted you that something was important in the lecture?
- How easy or difficult was it for you to take notes in this lecture?

More specific content-directed questions required students to assess whether they had noted relevant contextual information and explanations about the political and educational influences on Mamphele Ramphele's life in the autobiographical phase of the course. Students were given opportunities to exchange strategies with their peers by referring to note-making practices in other disciplines and learning contexts. They focused on methods for structuring notes systematically, developing abbreviation systems, identifying semantic markers and linking ideas in relation to students' preferred learning styles. Furthermore, they discussed challenges they faced in class such as inaudible lecturing, active listening, not knowing how much to 'copy' from overheads and how to cope with distractions.

It is apparent from my classroom observations that critical, meta-level questioning in the classroom played a major role in stimulating student thinking processes and 'upping the ante' of classroom discussions. A clear illustration of this in the comparative phase of the course was when the lecturer conducted a task analysis with students by raising a number of penetrating, meta-level questions. Some examples of these with reference to the essay topic were:

- What action has to be taken to answer this question?
- What if your own factors/categories are not the same as Moyo's?
- How do you explain the differences between Moyo's findings and your own from the interviews?

Students became animated in the ensuing discussion and appeared highly engaged and thoughtful in their responses to these questions. The research phase also encouraged students to analyse their own responses to various textual questions. The lecturer asked them to 'think about what you could have done better', 'How could you improve?', 'Is it good enough to look only at this paragraph?'. She also asked them what they did first, second, third and so on. For assessment purposes this was particularly useful in challenging students to compare their own writing to those of their peers or models presented in class. During the reading modelling process, there are many instances of the lecturer asking the class to reflect on aspects of her own reading approach. She would ask them, 'Have I paraphrased the key points in the

Slabbert article?', 'What do you think I've been highlighting?', 'How have I identified her research methods?', 'Why did I choose this?', 'Where did I find this quote?' and 'Can you see my own comments and responses to the article?' When students began gathering data for their projects, questions probing how the data helped them answer the research question facilitated their shift into more abstract, generalised modes of discussion. One case of this was students weighing up possible causes of multilingualism after sharing experiences about their parents who did not speak the same language.

Grayson (1993) argues that this conscious integration of strategies for promoting 'mindful abstraction' (Salomon and Perkins 1989:4) enables students to become aware of their thinking processes and 'is likely to yield more competent, independent learners'. One clear manifestation of this in the Foundation Course was the use of meta-cognitive reflection as a key strategy for helping students engage more actively with feedback on assessment tasks. Granville and Dison (2003:1) suggest that giving students time for active reflection on the feedback, 'allows the students **themselves** to make the connections between the goals of learning, the classroom activity and the feedback on the work they have done'.

5 Critical comments on the scaffolding devices used in the Foundation Course

5.1 Benefits of 'shared knowledge scaffolding' in developing students' higher order thinking

According to Granville (2002) the purpose of the writing assignments was to give students access to academic discourse in an unthreatening environment. It is evident that human relationships were prioritised as an essential component of teaching and learning in the Foundation Course. The strength of small classes allowed students to talk and question freely and supported them in their transition from school to university. The interactive, dialogic approach served to value students' prior experiences and beliefs in the process of developing their academic literacy skills.

For all the above scaffolding methods, there is an assumption on the part of the lecturers that optimal learning occurs via student collaboration, an ethos strongly established in all discipline-based foundation courses (Chamberlain *et al.* 2004). Thus

the learning benefits described above were seen to be best achieved when students were appropriately supported and challenged within their working groups. The real value of practice became evident when students spent extended discussion time in their groups grappling with disciplinary and generic discourse principles. As discussed earlier, sharing with peers allowed students to pool their knowledge and make information public to the whole class. The role of the lecturer was to allow connections between different groups and paint a picture of what seemed to be emerging as composite theories.

In their groups, students were enabled to move to the next level not only through prompting on the part of the lecturer, but through exchanging experiences and ideas with their peers and learning to give and receive feedback. The clearest example of this was in the research groups when students were given opportunities to observe patterns and counter patterns emerging from the group data. They were required to reflect on why, for example, some group members were 'more multilingual' than others. The process of identifying similarities and differences regarding language practices, beliefs and opinions heightened student understanding of conceptual issues and enhanced their academic literacy practices. This was mostly achieved when students commented critically on each other's research questions and methods. The lecturer cued them to remark on the clarity, language, nature and user-friendliness of questions as well as potential knowledge gained for the research project. She nudged them away from focusing on issues of delivery and 'catching each other out' towards grappling with conceptual issues.

The particular strength of 'shared knowledge scaffolding' is that students have potential to move beyond their existing 'lifeworld language' (Gee 2000) to a point where they understand different forms of representation. The 'embodied experiences' they had in the Foundation Course would enable them to 'display the fuller forms of social language' as evidenced in their writing and reflections (Gee 2000:22). It was hoped that the explicit focus on the cognitive skills of describing, categorising, comparing, analysing and critiquing would enhance students' consciousness of what they were doing and how they were implementing language and learning skills in the Foundation Course and other contexts.

The inductive processes that were recycled throughout the course related closely to Bayer's description of her approach to 'text-mediational scaffolding'. She argues that the 'knowledge base generated from shared knowledge scaffolding is used repeatedly to handle increasingly complex and broader processes of categorization on the basis of their anchored knowledge' (Bayer 1996:171). The outcome was to shift students' responsibility over their learning by beginning with what they knew about a topic such as differences between school and university, participate in activities that extended the topic (conceptual and language activities) and then reflect on what they had done to negotiate new meanings. The course thus represented a 'social practices approach with its emphasis on social meanings and identities' (Lea and Street 1998:159). The key question for this thesis is whether students were able to carry out other academic tasks and apply these processes independently in other learning contexts, an issue I will explore in my analysis of student writing.

5.2 Limitations of scaffolding devices used: closing down students' thinking capacities

The challenge in designing a teaching programme is to provide a balance between lecturer input and 'what the students are doing' in the learning activities (Biggs 2003). In the context of the Foundation Course, the particular form of 'shared knowledge scaffolding' and 'modelling', while eliciting increasingly sophisticated and high levels of student engagement with course concepts, did not necessarily address all the concerns raised by Wertsch and Bivens (1992) about the over-regulated nature of course mediation. My chief question regarding the implementation of these sound pedagogical principles is the extent to which students were able to develop their own thinking capacities and take control of their academic development consistently through the course. It may be the case that students from the solid category, who already displayed elements of relational thinking in their early writing tasks, benefited the most from the course scaffolding unlike borderline students who had difficulty moving beyond multi-structural writing[9].

[9] See Chapter Two for methodological discussion of Biggs' SOLO taxonomy and Chapters Five, Six and Seven for detailed analysis of students' levels of understanding with reference to the SOLO taxonomy.

Common wisdom in the field of higher education is that students become passive when the cognitive demands in course texts and materials are too high. Tertiary teaching pedagogical handbooks and courses encourage lecturers to structure teaching programmes according to students' cognitive levels of development and academic readiness (Cummins 2000, Biggs 2003). It is ironic that in the case of the Foundation Course, despite the predominance of text-mediational scaffolding described above, students became passive in certain teaching situations. From my observation of tutorial sessions throughout 200x, certain factors seemed to limit possibilities for generative learning and may have contributed to a state of inertia on the part of certain students.

Although the materials were open to flexible interpretation by the different lecturers, in their existing form, there was a strong 'teacher' voice which may have stifled students' initiative and allowed them limited room to manoeuvre. An illustration of the over abundance of lecturer input was the inclusion of answers to the questions in some of the worksheets. On the one hand, students may not have read the important points highlighted by the teacher; on the other, they may have read the teacher's 'answers' and 'clues' before attempting their own responses to the questions. The danger of 'over scaffolding' is in not affording students adequate opportunity to formulate their own ideas and think through the issues. As Gee (2000) suggests, students need supplemented discussions where they take longer turns, expand their language, and make clear their reasoning and its connections to what others have said. Biggs (2003:27) points out that constructive alignment in which there is consistency between learning outcomes, pedagogy and assessment to promote deep learning does not do the work for the students by 'spoon-feeding… which puts a stranglehold on the student's cognitive processes'. Rather, the teacher should 'act as broker between the student and a learning environment that supports the appropriate learning activities'.

If too much information is presented to students through the materials, the concern is that they are not practising the academic language sufficiently. Cummins (1996:72) concurs that if students are to develop their intellectual and academic abilities, 'instruction must evoke intellectual effort on the part of students, i.e. be cognitively demanding'. Cummins (1996:80) suggests that teachers 'focus on generating extended student responses and higher level thinking skills' without compromising basic

comprehension abilities. Similarly, Grayson (1993:4) advocates the more active use of information in a problem-solving manner if knowledge is to be transferred to other learning contexts successfully. She suggests that 'knowledge acquired initially must not be inert' (Grayson 1993:4).

From my classroom observations, students appeared to 'shut down' when required to talk *about* various approaches to studying in an academic context. I noticed students ceased taking notes when the lecturer expounded on *how to* listen and take notes simultaneously, *how to* 'think and link', the differences between top-down and bottom-up reading processes, *how to* annotate texts, *how to* identify signpost words and so on. Students became noticeably more interested when they were involved in contextualised tasks without the lecturer's assistance like highlighting signal words and mapping out the structure of a text rather than discussing principles at an abstract level. A striking example of this was the contrast between students working through 'grammar of comparison' exercises from a standard academic literacy textbook (Hamp-Lyons and Heasley 1994) and their considerably higher levels of concentration when applying the language of comparison to generate categories for comparing taxis with buses. Similarly, when students analysed the task words of the South Africa-Zimbabwe comparison essay topic, they participated enthusiastically to the lecturer's prompts by suggesting useful synonyms and sub-questions for exploring the limitations and scope of the question. This response contrasted with their somewhat muted comments while listening to an explanation of the general ingredients of topic analysis.

Finally, despite the introduction of a set of meta-level questions accompanying most of the assessment tasks which required students to think about *how* and *to what extent* they had improved their reading and writing skills, it is not clear whether this process assisted them to assume more responsibility for their learning. The collaborative tasks encouraged students to use available resources and each other to fulfil the assessment tasks, but there were inconsistent mechanisms in place to 'increase the probability of a shift in control' and transfer of academic literacy skills (Bayer 1996:181). Given that the ultimate Vygotskian goal of a scaffolding process is to provoke learning and transformation within each individual, it remains to be seen whether the elements of the course scaffolding contributed as a whole to higher order learning and thinking

during the course. These constraints need to be considered in terms of my analysis of which students in the case study benefited the most from the course pedagogy. The concern is whether the course catered only to students who had already demonstrated the capacity to extend their thinking and writing in response to teaching and learning activities.

6 Concluding Comments

After examining the pedagogical principles and practices of the Foundation Course, it is evident that this approach to identifying and building upon student strengths, contrasts with typical deficit models of teaching described by Biggs (2003) and Cummins (2000) which fore-ground and stigmatise students' weaknesses rather than focus on 'student writing as meaning making and contestation around meaning' (Lea and Street 1998:159). This heralds a shift from highlighting cultural background and language ability as the causes of perceived deficit in students to concentrating on students' responses and interactions with the course pedagogy.

It has been important to understand what scaffolding means in this context as it has implications for eliciting the kinds of learning and thinking expected of students on the Foundation Course and beyond. The intention is to allow students to function independently of the lecturer using their increasing competence in academic literacy to handle the disciplinary demands of other learning situations at the university. As Cummins (1996:72) states,

> The crucial dimension in helping students succeed in cognitively demanding tasks and activities is the contextual support that is activated in the learner (e.g. motivation, prior knowledge etc.) and embedded in the instruction.

Furthermore, as Barnett (2007:116) proposes, in teaching situations like the Foundation Course, there is potential for teachers to create a 'pedagogy of space' in which students bring themselves into new states of being. This requires dispositions and qualities from teachers like the Foundation Course coordinator who are committed to their subjects as well as to giving their students 'air and space to become themselves'.

From an analysis of the scaffolding on the course it appears that this form of 'text-mediated scaffolding' was set up to shift students to new and higher levels of engagement with and reflection on the course tasks and activities. It should, consequently, have shifted students to relational, critical modes of argument within this academic setting. It is thus interesting to see how students have in reality handled these opportunities to develop 'a level of mutual understanding' with the course lecturer and their more capable peers (Bayer 1996:182). These are key questions for the subsequent data analysis chapters where it will be important to ascertain the extent to which students in the different success categories (borderline and solid) have been able to master language to negotiate new meanings and handle the cognitive challenges of the course tasks independently. Have they been able to 'try on the discourse' through a process of apprenticeship (Angelil-Carter 2000:36), as well as use the 'meta-level and linguistic skills… to critique various discourses throughout their lives' (Gee in Zamel and Spack 1998:57)? An analysis of student writing and reflections as well as an exploration of the 'throughput rates' of case study students in subsequent chapters should shed some light on these complex questions.

CHAPTER FIVE
ANALYSING COMPARISON WRITING

This chapter adapts existing cognitive frameworks discussed in Chapter Four and analyses the levels at which different students write in response to comparison tasks in the Foundation Course. A key question is how students engage with the pedagogy and assessment of the Foundation Course in order to advance their academic thinking and writing. Campbell *et al.* (1998:451) argue that it is essential to apply learning theory concepts to student essay writing because 'deficiencies in undergraduate essay writing are not so much related to problems of mechanics and basic skills as they are to higher order thought processes and the ability to analyse information critically and develop arguments.' I examine the development of student capacity to compare information from various sources in relation to how well they performed in the Foundation Course, as well as at university as a whole.

I focus on two key comparative tasks given to students in the Foundation Course: the first, the school-university comparison, which is designed to scaffold the second more academic essay, the South Africa-Zimbabwe comparison. For each comparative task, I firstly describe its purpose and how it was mediated in the classroom before explaining how I have adapted the SOLO taxonomy to accommodate its specific task requirements. I subsequently present a detailed analysis of the solid and borderline students using categories that have emerged from the process. I consolidate the analysis by including comparative tables of student performance followed by a critical discussion of the method of analysis as well as patterns that have emerged in student writing and cognition. Unlike Chapter Three, where there was a more explicit comparison between solid and borderline achievers, this analysis selects particular extracts from students across achieving groups to show contrasting ways of handling content, organisational and language issues.

1 Adapted SOLO Taxonomy Used to Assess Levels of Performance in Comparative Tasks

As far as comparisons on the Foundation Course are concerned, the SOLO taxonomy (Biggs and Collis 1982) can be translated into four levels of understanding which correspond with Perkins' hierarchical levels of understanding (1992). I also use Chan's sub-levels (2002) applied to the SOLO taxonomy to identify subtle differences within the levels of operation. As discussed in Chapter Two, level 1 is a uni-structural response in which student responses focus on one relevant element serially. There is no relationship between facts or ideas and understanding is nominal. A multi-structural level is one in which several relevant independent elements are used in sequence. Students extrapolate from simple information or use simple, linear logic to compare information. They have acquired the routine skill of comparing and their organisation of material follows the 'add-on, shopping list' logic associated with this level of description. Logical connectors in both levels 1 and 2 are used to join ideas and are usually of an additive nature such as 'and', 'another', 'also' and 'in addition'. In neither of these levels are elements of information integrated into a coherent whole or systematically related to one another. These quantitative modes correspond with Perkins' (1992:84) content level of understanding involving 'knowledge and know-how concerning the facts and routine procedures of a subject matter'.

Level 3 signals a shift to 'relational' thinking as students go beyond listing information and begin to address the central purpose of the comparison that addresses the topic as a whole. The elements are integrated into a coherent structure as the student analyses relations between elements of information that have been organised into clear categories. As the student no longer lists discrete pieces of information, the logical connectors become more varied and signal the complex relationships between ideas. According to Perkins (1992), this level of understanding necessarily includes the activities of justification and explanation.

The final level of abstraction, level 4, requires students to grasp abstract relationships between categories and find implications beyond the parameters of the task. According to Hattie and Brown (2004:6) 'the learner is forced to think beyond the given and bring in

related, prior knowledge, ideas, or information in order to create an answer, prediction, or hypothesis that extends beyond the given to a wider range of situations.' Students create new knowledge in the process of designing plans for comparing information. Perkins' 'inquiry level' also concerns knowledge about the way results are challenged and new knowledge is constructed in the subject matter. It must be noted that not many of the essay tasks in the Foundation Course require students to function at this abstract level of reasoning though certain students show potential to do so.

I now explore how these four levels can be applied to the two comparative essays given to students in the Foundation Course: the school-university comparison and the South Africa-Zimbabwe comparison.

2 School-University Comparison

In the second month of the Foundation Course, students were given an essay assignment in which they had to compare school with university. They were provided with classroom support in the form of scaffolded activities specifically focused on the 'skill' of comparison. Additionally, they were given accompanying language work, which included the use of markers in comparison and contrast (such as 'similarly', 'in contrast', 'however' etc), how to structure paragraphs, and how to work with categories and sub-categories relevant to the comparison. After the students had written the comparisons, they received feedback consisting of annotations on their essays. They then analysed a model assignment written by a previous Foundation Course student that fulfilled all the criteria of a well- structured comparison. The lecturer took them through the process of generating criteria for writing a comparison and students examined their own writing in relation to the model. During this feedback process, students were given a number of meta-level questions to prompt them to reflect on how they had written their comparisons (see Appendix A for a detailed account of the pedagogy for this task).

2.1 Method of analysis

In the detailed analysis below, I show how differently students used facts, information or ideas in the various modes of functioning described above in the SOLO taxonomy. In the

analysis of this task, unlike the later tasks, there was an emphasis on the formation of students' own ideas. At that early point in the year, as discussed in Chapter Four, there was recognition of students' own understandings and 'lifeworld language' (Gee 2000). Although they were beginning to acquire academic language, students needed massive exposure (often for the first time) to the words and grammar of this language. This school-university comparison task was seen as the first step, after the autobiographical phase, in assisting students to master systematic relational language. I have chosen to include extensive detail for the following analysis to effectively unpack the implications of the different levels for student learning and understanding. My approach thus provides illustrative material for each level that can be usefully compared with subsequent adaptations for analysing student writing. In order to preserve the linguistic forms of students' original writing, I provide all quotations in italics without quotation marks. Since the focus is on higher order thought process rather than mechanics and basic skills (Campbell), I do not use 'sic' to indicate difficulties in understanding student meaning.

I now analyse how students handled ideas in terms of three criteria: content (density, depth and connections), structuring ideas (categorisation, introductions and conclusions) and language of connection (expression).

2.2 Content criteria

2.2.1 Density of ideas

In the realm of ideas, there were striking differences in the way students elaborated on a category relevant to the comparison. This is apparent in how students did a cost-comparison between school and university. The following uni-structural response (Lindiwe) contained low idea density,

> *School tuition fees are affordable to many learners. This can be supported by the fact that that there are many learners in school than there are in university and other institution of higher learning.*

Many students functioning at this uni-structural level discussed their ideas mostly in relation to one conceptual issue with limited vocabulary. The following example reveals

a narrow interpretation of the cost issue, though the student (Imelda) has provided some examples,

> *Cost at university is very high. School fees are very expensive and you have to buy textbooks on your own whereas at high school the fees are less expensive and you get stationery and textbooks with that money you have paid.*

It is apparent from the next account of cost factors that the student (Thabo) was functioning at a low to moderate multi-structural level of understanding. Though he retained a simplistic quality of cognition, there was a quantitative increase in the amount of information he discussed as he increased the number of points and examples to bolster his argument. His analysis was multi-structural at this point because of his tendency to list relevant ideas in long, rambling sentences.

> *Regarding the cost, the school is cheaper than the university. Many students pay for a minimum of R5 000 at school per annum whereas at the university the amount is estimated above R10 000 depending on which courses are you are studying and to some of the students who reside in university the amount can even go beyond R20 000 depending on the residence you live.*

Similarly, Lebogang gathered an interesting list of cost-related factors for her moderate to high multi-structural comparison.

> *Universities are much more expensive whereby students have to look for accommodations because they come from far places, and those accommodations are expensive. Those who are traveling spend much money on transports. That is why most of people do not go to universities, especially blacks because they come from poor communities. Whereas in schools the fees are low, students just walk to school and during lunch, they walk again to home and have lunch and go back to school again.*

Though her idea density was high and her points were all relevant to the topic, the paragraph did not address the issue of cost as a whole. She ‘retains the sequential

description of topics characteristic of uni-structural essays' (Campbell *et al.* 1998:453), but the ideas were not discussed in direct relation to one another.

Bramley was the only student in the case study who, in this first comparative task, examined the implications of issues like cost for both school and university. He wrote at a similar multi-structural level to previous students, but made a declaration about the decision to attend school or university at the start of the paragraph before elaborating on specific practices regarding cost. His ability to pick up many related issues and elaborate on them using fairly sophisticated vocabulary placed his paragraph at the high multi-structural level of description.

> *In contemporary world taking a decision to go to school is very easy decision to be taken, as far as education expenses is concerned, because at school we are only required to pay a school fund which amounts at for example, R80.00. Exercise and textbooks are for free. Whereas taking a decision to study at university is difficult but an important decision because this is determined by the standard of the tuition fees, accommodation fees, textbooks and other misalleneous charges.*

Though the internal cohesion and language expression of the paragraph were poor, he had a clear overview of the topic, showed elements of integration, and used the conjunction 'whereas' to relate one idea to the other.

2.2.2 Depth of ideas

In examining depth of ideas, I focus on two categories of topics in students writing: surface topics and abstract topics.

2.2.2.1 Surface topics

Surface topics refers to writing that engages with the content on a highly concrete level. Thus certain students who interpreted the topic at this surface level provided detailed physical descriptions of school compared to university. Joe's notion of security, for

example, focused on the physical structure of the buildings, drawn from his own experiences of schooling in a rural area.

> *The school is structured in a unsafety way in which the learners and school itself are not safe; the roof can be taken by thunderstorm easily as it is roofed with zinc… The university is the best institution regarding safety as most universities are structured first with bricks and they are double storey with tiles on top of the roof.*

He listed numerous items related to these concrete comparisons as did Angie who detailed different times students attended class.

> *At school we attend at the same time… we all have the same break, morning study and afternoon study… at university we don't attend at the same time, others attend in the morning while others in the afternoon.*

Similarly, Sipho gave the specific times for teaching periods, tea breaks, lunch breaks etc for both school and university. These students interpreted the topic literally and provided lengthy examples of tangible and even tactile points of similarity and difference like the price of stationery and the texture and colour of school uniforms. What differentiated uni-structural writing from a multi-structural approach is that they reproduced highly specific details without making general points about the topic of comparison.

Many students chose narrow and superficial topics for inclusion in their comparisons. Some of these related to issues of school rules, lesson times and uniforms and may have shown the strong influence of school-type issues and identities on their writing. One example of this was Imelda's very limited discussion of school uniforms.

> *At high school students wear their school uniform weather they like it or not it is a rule of high school while at university students wear clothes which they prefer or clothes of their choice.*

It must be noted that even though the more concrete and surface type topics lent themselves to a one-dimensional (uni-structural) handling of the subject matter, some

students have taken a more nuanced approached to tackling these topics. Their descriptions went beyond a mere listing of information and examples relevant to the topic at hand. The following account of school rules and discipline by Thabo focused on issues of responsibility and self-discipline.

> *At university studying and learning is the responsibility of students. At school the student is obliged to attend all his classes and usually corporal punishment enforces that rule by being practiced whereas at the university, the student is recommended to attend all his classes including lectures and not obliged and there is also punishment of not writing examinations.*

Thabo's account, though organised in a serial, multi-structural way, did attempt to tackle more abstract issues of obligation and responsibility. It can therefore be classified as high multi-structural since he elaborated on his points and began relating the topic to the overall theme of the essay. Similarly, Lebogang contrasted the discipline styles of school and university by highlighting harsh punishment at schools, '*where they punish students by beating them if they did not do the schoolwork or failed to come to school*'. After describing disciplinary practices at school, Lindiwe also argued that at university, '*There is no lecturer who is going to punish a student because they did not write their homework or have failed a test…*'

In contrast, many students operating at the uni-structural level merely itemised a series of punishable offences. Examples of these were: '*Students get punished if ever they are late for school or did not do their homeworks or being noty*' or '*Teachers mark class register at school once a day because we attend all subjects at one class for the whole day…*' The following student expressed disgust at the behaviour of university students.

> *At university you can do what ever you so wish even if it is bad at your own expenses and no one can be after your bad behaviour. Such as making noise inside the class, getting out of class during the lessons and before the end of period, not writing some homework and assignment, not attending some classes etc.*

He concluded that school is '*the best educational institution regarding the behaviour of students… because there is punishment for breaking the constitution.*' Joe appeared distressed that university allowed such *bad behaviour* and seemed overwhelmed during his transitional period as a first year student. His lengthy description therefore reflected his overriding concern with discipline issues but did not assist him to address the comparison directly or to integrate his ideas.

Regardless of the choice of topic used by students for the comparison, one is able to discern whether students were handling the issue at a uni- or multi-structural level of processing. Many of these students were not yet actively constructing meaning or discussing issues beyond levels of surface description at an early point in the year.

2.2.2.2 Abstract topics

Certain students selected abstract topics for discussion that had been introduced in class during the preparatory stages of this assignment. One such topic that highlighted different levels of student performance was that of 'teaching styles'. There was a range of responses from students regarding this issue from uni-structural to relational modes of operating. Bramley provided one of the more sophisticated responses when he said,

> *At school traditional styles are perpetuated whereby a teacher teach and pupils imitate e.g. if a teacher explain the term 'soil erosion' in certain way. You are also suppose to write the same meaning you are taught. In contrast with university because teaching styles are contemporary. When lecturer teach, our sole purpose is to listen and when lecture provide us with explanation, we have a prerogative to challenge his expectation and come up with ours as long as we appreciate and can also substantiate our objections to his explanation.*

His description revealed an understanding of the expectations of tertiary study and gave insight into the implications of these different styles of teaching for student learning. The writer identified strongly as a Wits student when he used the pronouns, 'we', 'us' and 'our'. He showed an ability to compare information on a small scale as well as to generate an argument relevant to the essay as a whole. The above paragraph

demonstrated this student's potential to operate at a relational level of understanding in this essay.

Sipho also described the consequences of independent thinking at the school level although his writing was personal and strongly influenced by speech and colloquial language. In the paragraph below, Sipho did not elaborate on how this information was related to the broader question at hand and so remained at a low multi-structural level. Unlike Bramley's insider account above, Sipho distanced himself by talking generally about 'students'.

> *No argument with a teacher. When you do that, teacher is going to leave the class and tell you to teach because you know much than him. However at university students have to make notes in themselves while a lecturer is talking. Students are allow independent thinking.*

Lindiwe wrote two separate paragraphs on this topic, which also revealed her emphasis on 'knowledge-telling' and an inability at this point to integrate separate pieces of information.

> *In many schools, teaching is done in a manner where the teacher imparts knowledge to the learners. Although this method is in the process of being eliminated, it is still prevalent in many schools. However, even if learners are coming from such background, when they reach university level, they are subjected to the lecturing method which many universities use.*
>
> *The lecturing method differ from the way in which students are taught in high schools in that the learner/student has to find out by himself many of the concepts discussed in class.*

She was operating at a moderate multi-structural level as she made a number of relevant points about teaching styles. However, her ideas were repetitive and vague and she failed to elaborate on these ideas or identify their relationship to the essay topic.

Below is a response to this topic that appeared to have a singular uni-structural focus and identify merely one relevant element.

> *The school learners rely on their teachers. In contrast university students are critical towards what the lecture says or does. Unlike the school learners who depend on their teachers whereas university students are more independent.*

In this example, Mabe showed a simple understanding of the issue derived from a class discussion that raised this issue for comparison. Although he had not expanded his ideas or generated his own meaning, he did move towards abstraction by attempting a conclusion from two related points. His writing was mostly uni-structural but did show potential to shift to higher levels of abstraction by setting his ideas up relationally.

2.2.3 Forming categories

Most students identified broad categories and provided examples to illustrate the points of difference in paragraphs on topics like cost and diverse teaching styles mentioned above. As a result of the large emphasis on categorisation and paragraphing in the course pedagogy, students had learnt to separate the categories of comparison into paragraphs and to arrange relevant material accordingly. Nevertheless, very few students had developed the skill of labelling their categories clearly.

The sentences of paragraphs listed below illustrate poor labelling or signalling of the categories under discussion. It is evident that students had not made their topics explicit to the reader. These sentences can be classified as either uni- or multi-structural depending on how much detail was provided. They cannot be situated at the relational level as they require the reader to deduce the main issue and did not connect general to specific information. The writer dived headlong in to the detail. After each of the sentences, I have written in bold the possible main topic of the paragraph.

When studying at university you are considered as decent minded person who is on the brink of world of work and shaping the structure society in which we belong whereas

studying at school people disrespect you turn blind eye to you and do not even think that one day you will be just like those studying at university. (Bramley)
This paragraph is about attitudes towards students.

At school if people do not understand the English story, teacher will explain it in Tswana. (Angie)
This paragraph is about the language of learning and instruction.

At school teachers teach and give notes to learners every time. (Sipho)
This paragraph is about teaching styles.

In schools, there are students from one community speaking the same language sharing culture. (Lebogang)
This paragraph is about socialisation in the different institutions.

Paragraphs that were well able to signal key issues for the reader were not necessarily relational as they may merely have provided the label without explaining how the separate pieces of information related to the comparison. In the following two examples, the first sentences indicated that there was a general topic connected to a range of facts, ideas and examples: admission procedures and access.

When considering admissions procedures, the school has a fast and short operative system unlike the university that undergoes a specific (complex) system for admission procedures. (Thabo)

Furthermore, getting access into a university is not as simple as being admitted to many of the schools we have in our country. (Lindiwe)

It must be pointed out that very few students provided signals for their paragraphs and these were the only two clear examples I could find.

2.3 Structuring ideas

2.3.1 Connecting ideas within paragraphs

This section considers the way students connected their ideas to the various topics and categories of the essay which were relevant to the comparison such as cost, teaching styles, uniform etc. In this section, I address the extent to which students integrated separate pieces of information within the topics or categories to address the question (internal cohesion). In the next section, I examine the extent to which students related the topics to each other and to the broader theme or argument of the essay (external coherence).

Lack of internal coherence was apparent in several paragraphs. As far as admissions practices are concerned, besides mentioning only one relevant piece of information, Angie did not explain how her ideas related to the category under discussion.

> *At school before registration, they only remove you from previous school or pre-school whereas at university they need a matric certificate passed with exemption and of points are not qualified, we wrote selection tests and if we passed it, they registered us and gave us student cards to show that we are students and accepted to the university.*

Her writing revealed a simplistic, subjective quality of cognition characteristic of uni-structural essays and conjured up physical associations with admissions processes. The following example characteristically began with a general statement followed by a simple listing of points relevant to the topic of admissions procedures.

> *The admission procedures at university and school are different. At university you could find that before admission, you are suppose to obtain certain points. You are suppose to write a selection test before they could admit you. They also admit you with only exemption whereas at school you could find only pass is needed.*

Imelda's low to moderate multi-structural paragraph on admissions illustrated her understanding of the differences but remained vague and unsubstantiated.

> *Admissions procedures of school and university are very different. At university you have to apply first and write selection texts if you pass, is then that you can be accepted and come to university and register, before then you have to come to orientation. Whereas in high school you can go and register without application. There are no orientation weeks in high school.*

Her lack of punctuation underlined the serial organisation of information. The key difference between low and high multi-structural answers was in the increased quantity of ideas relating to the topic. At a more sophisticated level, an example of a high multi-structural response to the question has been included below. The student, Thabo, increased the number of examples identified while addressing both institutions regarding admissions procedures.

> *The school requires you to pay your fees and submit some information about your academic results and also admits everyone to register for membership while the university firstly requires you to have a matriculation exemption and secondl**y**, you will have a to pass a selection test which you will be required to write. Thereafter passing your selection test, you will then qualify for studying at university although some people qualify by mature age exemption which is people over the age of 23.*

In the paragraph, he added information to show how students were admitted to school or university. Even the last point begins with 'although' but was followed by a further point about admission requirements. Though these ideas were all relevant to the topic, the paragraph retained a sequential description of topics. The ideas had not been integrated by the concept of a 'relational' system.

Bramley compared admissions at the two institutions in a significantly more relational way when he made a general point about the differences at the start of the paragraph before elaborating on specific practices.

Different educational institutions use different admissions criteria – at school they are not much strict because they only need passes whereas at university… they check whether your matric points meet their prescribed points, and that your wishlist causes of study correspond with your matric subjects eg you cannot expect to enter the field of engineering with history and geography. It is emphatically unlike at school where there is no specific subjects for attaining senior certificate.

He reconstructed the information to develop his comparison more systematically. He was beginning to explain some of the admissions criteria, for example that curricular choices influence one's selected field of study at university. Biggs (2003:40) would describe this account as a change in the quality of the student's thinking as he was operating at a level at which 'understanding in an academically relevant sense may appropriately be used'.

2.3.2 Broader structuring of ideas between paragraphs

In the examples above, it is apparent that students were not proficient at integrating ideas across paragraphs to form a coherent structure. As discussed above, their paragraphs mostly consisted of a separate collection of facts related to a particular topic without addressing the question as a whole. It is rare to find topic sentences which related to issues in the rest of the essay other than including chronological signals like, 'In the first place…', 'The final difference...' etc. It is therefore useful to investigate students' introductions and conclusions as they revealed, more than any other aspect of the essay, the extent to which students conceptualised the entire structure of the essay.

2.3.2.1 Introducing ideas

Students mostly followed a formulaic low multi-structural pattern in their introductions to the first comparison as they provided a 'disorganised collection of items' by listing the categories they intend discussing in their essays.

University and school are both learning or educational institutions but they differ according to some categories as I will discuss them as Administration, Admissions procedures, Teaching styles, Cost and structure.

Thabo focused on the 'what' of the essay and did not indicate 'how' he would address the topic. This approach was surprisingly more advanced than that of certain students operating with a singular focus who mentioned that there were similarities and differences without specifying categories of comparison. Impressively, a couple of students included background information or highlighted the purpose of educational institutions to motivate their discussion like, '*both institutions offer learning skills, so that students can get knowledge to help them in future*' or a more sophisticated one from Bramley, '*School and university are communities where knowledge is sought and imparted. And it is the places where multitudes of students spend their brief lifetime*.' These introductory comments can be classified as high multi-structural as they offered a broader perspective on the topic, but did not elaborate on how the topic would be explored in the essay.

There is some evidence in the other introductions of the ability to generalise about issues emerging from the comparison. Imelda, for example, stated in her introduction, '*Even though they* [school and university] *both offer learning skills, they differ in their values and significance*.' She inferred the key points of difference from her analysis.

2.3.1.2 Concluding ideas

The conclusions all followed a similar format as students were made aware of the importance of a consolidating statement that allowed them to reflect on their comparisons as a whole. Interestingly, these final paragraphs mirrored a similar pattern to the thinking in their essays. For example, Imelda's concluding statement was consistent with her one-sided analysis of the differences between school and university. She offered her view that '*university offers best prestigious education which enables a student to work with their higher profession*' without mentioning school. Similarly, in her essay, her description showed a strong leaning towards discussing university education. Lindiwe provided a more balanced multi-structural view when she elaborated on why university was more exciting, but '*demands more effort from the students as a result of the library, laboratory*

and other facilities'. There was an attempt to draw on various points she discussed in the essay.

Based on their school experiences of essay writing, many students used the concluding paragraph as an opportunity to give their own views or explore advantages or disadvantages of the topic. Lebogang, for example, suggested that universities were '*helpful because if a person is much qualified he or she will get a decent job, earning good*' salary which was off the point of the comparison. A number of students responded on a positive emotional level to university by describing it as 'exciting' and 'thrilling', but generally failed to link this to issues discussed in the essay.

Though students understand the importance of tying the ideas together in a generalised form, they often made broad remarks that bore little relation to points discussed in the essay. The following example typified this generalised approach, '*This shows clearly that there is a big difference between the school and the university which even make them to be on different levels in terms of education standard*.' A similar but more nuanced conclusion about the importance of education was, '*Both students at varsity and school have a goal in common – to be educated despite the quality of education*'. Furthermore, there was a tendency to mention issues in the conclusion that were not been explored in the essay, '*School and university are nearly the same, but university is where responsibility and experiences of life are found*'. When students related to ideas from the essay, they generally listed a series of points at a low multi-structural level.

The difficulties students experienced integrating several aspects into a conclusion will be discussed more fully when I analyse student writing in the argument phase of the course.

2.4 Language of connection

A number of language difficulties are evident in the examples of sentences and paragraphs selected above. These issues include poor sentence boundaries, the lack of pronoun agreement in sentences, unclear use of pronouns for reference and poor punctuation. In this section I focus on the way students were able to link their ideas using

the language connectors taught on the course as it is a relevant skill for addressing this comparative essay topic.

A classic uni-structural use of language in the comparison was the complete absence of connectors or link words. The following extract demonstrates the shopping list of ideas without linking words, which resulted in a collection of fragmented points.

> *School facilities at high school are there but they are not many they do lack some important facilities. At university they are a whole lot of educational facilities and amenities. They are a lot of shops, restaurants, sports facilities that have been provided for the convenience, comfort and enjoyment of students.* (Angie)

Some students began 'trying on' (Angelil-Carter 2000:36) the language taught in the course, but revealed their uncertainty about the meaning and use of many of the conjunctions. Some examples of this, highlighted in bold, were:

> ***Even though*** *university is the biggest educational institution* ***but*** *the behaviour of students is very bad compared to that of the learners at school.*
>
> ***Unlike*** *the school learners who depend on their teachers* ***whereas*** *university students are more independent.*
>
> ***Because*** *the studies at school required less amount* ***whereas*** *the university demands more funds.*

Most students in this case study attempted to use the language connectors taught in the course appropriately and join their ideas using connectors like 'and', 'because' and 'whereas' to illustrate their ideas. An example of a moderate multi-structural approach was the following extract from a discussion of teaching styles (Maloko).

> *University has more teachers than school* ***because*** *of the number of students.* ***Both*** *institutions have teachers* ***however*** *at university they are called lecturers and tutors. At university students are expected to make their own notes* ***whereas*** *at school notes are given to students.* ***Both*** *teachers from university and school are qualified* ***however*** *teachers from the university are more qualified because they*

*prepare students for their careers. At school teachers are called by their first surname **but** at the university they can be called by their names or surnames.*

Despite the correct use of language connectors, the 'feel' of the passage remained sequential and rambling. The ideas accumulate as the student articulates particular differences between school and university but information had not been integrated to address the question.

Thabo performed slightly better in his ability to combine ideas, but retained the serial, listing style.

*At school the student is obliged to attend all his classes and usually corporal punishment enforces that rule by being practiced **whereas** at the university, the student is recommended not obliged to attend all his classes including lectures **and** there is also a punishment of not writing examinations if one has not attended for more than two classes…*

Students had not yet learnt how to use relative pronouns to combine sentences and the repetition of certain key words like 'high school' or 'facility" contributed to the sense of the endless shopping list.

The best examples of combining ideas using logical connectors were those of Lebogang's (high multi-structural) and Bramley's (moderate relational) below. Both extracts 'got to the heart' of the comparison by identifying and elucidating on the relationship between ideas.

*At school the students don't socialize much **because** the classes are small and they do not change classes, only teachers go to different classes depending on what they teach**. On the other hand**, universities have large classes which are like halls, different buildings that deal with different courses… there is too much socializing because it is a diverse place.* (Lebogang)

*At school, we regard a teacher's knowledge on a subject as absolute. **In contrast**, at university **because** we have different understandings on subject matter, we*

*learn a lot through questions **since** we do not regard his knowledge as final.* (Bramley)

This last extract by Bramley shows how he used language connectors to relate his choice of topic (attitude to teacher) to the purpose of the comparative essay.

2.5 Tabular analysis of student performance

The following is a tabular analysis of each student in the case study and makes an assessment about their level of understanding according to the modified version of the SOLO taxonomy. The criteria used above, such as density and depth of ideas, connecting ideas and the language of comparison, provide important insights into students' modes of functioning in the various dimensions. It is interesting, for example, that certain solid achievers displayed relational thinking in one area, but operated uni-structurally in another. The purpose of these tables is to determine if there is a connection between how students conceive of their own learning in the reflections (to be analysed in Chapter Seven) and the level of processing in their writing. It also provides a more textured framework for using the SOLO taxonomy to assess student writing. Though the breakdown of criteria may appear to be atomised, the analysis of performance in areas of content, structure and language contributes to a richer and more global picture of each individual student in his/her success category.

I take this analysis further by assessing how useful it has been for evaluating student performance knowing how students succeeded both in the Foundation in English course as well as in the degree as a whole.

Table 5.1: SOLO taxonomy applied to solid achievers

Students	Density of ideas	Depth of ideas	Connecting ideas	Broader structuring of ideas	Language	Global assessment
Thabo	Moderate multi-structural	Moderate multi-structural	High multi-structural	Low multi-Structural	High multi-structural	**Moderate to high multi-structural**
Maloko	Uni-structural	Uni-structural	Low multi-structural	Uni-structural	Moderate multi-structural	**Uni-low multi-structural**
Bramley	High multi-structural	Low relational	Low relational	Low relational	Moderate relational	**Low relational**
Lebogang	Moderate multi-structural	High multi-structural	Low multi-structural	Low multi-Structural	High multi-structural	**Moderate multi-structural**
Imelda	Uni-structural	Uni-structural	Low multi-structural	Moderate multi-Structural	Low multi-structural	**Low multi-structural**
Karabo	Uni-structural	Uni-structural	Low multi-structural	Low multi-Structural	Uni-structural	**Uni-structural**

Table 5.2: SOLO taxonomy applied to borderline achievers

Students	Density of ideas	Depth of ideas	Connecting ideas	Broader structuring of ideas	Language	Global Assessment
Isiaah	Low multi-structural	Low multi-structural	Low multi-Structural	Low multi-Structural	Low multi-structural	**Low multi-Structural**
Lindiwe	Uni-structural	Moderate multi-structural	Low multi-Structural	Low multi-Structural	Low multi-structural	**Low multi-Structural**
Joe	Low multi-structural	Uni-structural	Low multi-Structural	Uni-structural	Uni-structural	**Uni-low multi-Structural**
Angie	Uni-structural	Uni-structural	Uni-structural	Low multi-Structural	Uni-structural	**Uni-structural**
Sipho	Low multi-structural	Low multi-structural	Uni-structural	Low multi-Structural	Uni-structural	**Low multi-Structural**
Mabe	Uni-structural	Low multi-structural	Low multi-Structural	Low multi-Structural	Uni-structural	**Low multi-Structural**

2.6 Discussion of School-University Comparison

A number of issues have emerged from this analysis of the first comparative task regarding the method of analysis and student performance. The construction of the table allows me to refer easily to information and has illuminated my understanding of the patterns of cognitive growth across success categories.

2.6.1 Method of analysis

The modified SOLO taxonomy has provided me with a rich, highly elaborated picture of student performance in terms of individual strengths and weaknesses as well as the case study as a whole. My intention has been to create a multi-dimensional picture of student cognition in response to selected course tasks through the year. A key question emerging from the analysis is the extent to which tertiary educators are addressing the 'problem' of higher order thinking in students coming to university through alternative admissions routes. The analysis therefore raises a number of issues about the calibre of such students and critically examines the capacity and pedagogy of educational programmes, like the Foundation Course, for enabling students to shift to more analytical modes of operation in the ZPD. These issues will be discussed in depth in the concluding chapter of the thesis, Chapter Eight.

Creating a multi-dimensional picture of student cognition presents several challenges. The main challenge is how to best focus on each aspect separately. It proved far more difficult applying notions of density and depth to the analysis than examining students' ability to link, structure and express their ideas. The latter organisational areas are the more obvious measure of student capacity to compare ideas. Biggs (2003) discusses the notion of 'addressing the question' as the key indicator of relational modes of operation. This is far too broad when faced with a variety of tasks and task demands. For example, in a comparative task, does addressing the question simply involve the skill of structuring information into categories and linking ideas to answer the question or does it involve both 'the what' (ideas) and 'the how' (how ideas are structured and connected)?

In order to address these concerns, I have unpacked the meaning of 'content' in this context, and focus on the density and depth of ideas as they emerged as key points of difference in the way students write. By rereading the student texts, I could differentiate low from high performers by looking at the depth and breadth of ideas themselves before examining the way they were organised and pitted against each other. It is interesting that even the ideas themselves were governed by organisational concerns. A student may have

had a number of relevant points on a particular topic but the analysis was determined by the way those ideas were used to address the comparison.

As far as the method of analysis is concerned, aside from assessing each student individually on the basis of the SOLO taxonomy (criterion referenced), it has enriched my ability to compare the way students in a success category have handled particular content and organisational criteria (norm referenced). For instance, one can evaluate the density of students' ideas in a particular writing task as this may raise issues for how this aspect of the course was mediated. If it emerges that all students have difficulty with idea density, it provides an opportunity to develop strategies for handling this challenge. An analysis probing reasons for this difficulty may assist course developers to improve pedagogical or assessment practices, if either is found lacking.

2.6.2 Student performance

As mentioned above, I divided the analysis into the two success categories (solid and borderline) of students in the Foundation in English course. I also referred to student success at university as it raised interesting observations about patterns of cognitive performance. To reiterate, the school-university task did not lend itself to an extended abstract level of functioning and none of the students displayed this type of thinking early in the year.

2.6.2.1 Solid performers

A number of trends have emerged from doing the analysis of students' writing. Certain students in the case study showed consistency in their ability to articulate and organise information in addressing the comparison between school and university. Amongst the solid achievers, Thabo and Lebogang operated uniformly at a multi-structural level to slightly differing degrees at this point in the year. It is useful to see whether student reflections on their approaches to the comparison matched their performance on the actual task (see Chapter Seven). Bramley functioned at a qualitatively higher level than his peers in the success category as he was already comparing information by using academic language relationally. It is worth noting that he is the one student who managed

to complete his degree in three years instead of the specified four. Two of the students who performed poorly in terms of idea density and depth took an additional two years to complete their degrees ($n = 3$ instead of $n + 1$), although Maloko is in the $n + 1$ category despite showing limited thinking in all areas other than language expression.

2.6.2.2 Borderline performers

Interesting trends surfaced with this cohort of students. Firstly, none of the students emerged beyond the low multi-structural level as far as the density and depth of their ideas was concerned. There was only one consistently multi-structural student, Isiaah, who managed to obtain his degree in the expected time frame ($n + 1$). Secondly, certain students like Joe, mostly operated at the uni-structural level but displayed elements of multi-structural thinking. In Joe this manifested in his multidimensional description of different aspects of school life. Although his expression was poor and his selection of topics was derived from more physical, school-based topics, he showed potential to benefit and learn from the course scaffolding. He was awarded the prize for the most improved student on the course at the end of the year but was an $n + 3$ achiever.

Like the solid group, the key areas of strength for this cohort of students were the structuring and linking of ideas. Again, this relates directly to the huge emphasis on categorisation, signalling and combining concepts in the teaching and learning activities. Four out of six students are categorised as weak (uni-structural) in their language expression as they struggled to use language connectors taught on the course to join their ideas. The immediate relevance of this comparative task, incorporated early into the foundation year, has yielded a set of rich and detailed data as students drew on their own experiences and resources to address the comparison. Of interest will be subsequent analysis of student writing for a task that is more removed from their own experiences.

3 South Africa-Zimbabwe Comparison

The purpose of the school-university comparison assignment, which I described and analysed in some depth, was to prepare students for the demands of the first major essay

comparing experiences of education in Zimbabwe with South Africa. Students received the following for this essay task:

> Write an essay in which you compare and contrast expectations and realities experienced by a selected group of first year students at Wits this year (including yourself) with those investigated by Moyo (1995) at the University of Zimbabwe. Use the following categories to write your essay: socio-cultural factors, financial factors, educational factors and psychological factors. Using the above categories, analyse the similarities and differences between the experiences of current first year students at Wits with those researched by Moyo (1995).

Students were also encouraged to integrate ideas from an article by Agar (1990) evaluating first year students' experiences at Wits University. After analysing the essay topic in class, students practised the skills of classifying and comparing in preparation for the assignment. They were introduced to the rules of evidence, referencing, plagiarism, argument construction and other aspects of academic literacy. A reading framework was set up in tutorials for analysing the Moyo article. Students were expected to interview other students and then gather and organise their interview data in order to evaluate the similarities and differences between their peers and those described by Moyo and Agar, using the specified categories and sub-categories.

According to Granville and Dison (2005) while students wrote the first draft of this essay, they were given support for this in lectures, tutorials and class discussions. They had to master new skills of selecting and organising the interview data and reading and evaluating Moyo's paper. The high-order challenge in this task was for students to learn to synthesise their own data with Moyo's and to present their work using acceptable referencing conventions. Students were not required to formulate an argument at an extended abstract level of understanding. Extensive feedback was given after the first draft had been marked out of 20. Students were given an opportunity to respond to the tutor's feedback on the feedback sheet (see Appendix C).

As discussed in Chapter Four, in the Foundation Course, assessment was used as a developmental tool and not only as a means of judging students at the end of the course. Process writing was one such method of giving students opportunities to incorporate feedback into their writing. After writing the final draft of the comparison between the universities, students completed a table, which required them to reflect on the writing progress they had made in relation to the essay criteria. Students were given a mark out of 50 for their final versions of the essay.

3.1 Analysis

3.1.1 Method of analysis

In the analysis of the South Africa-Zimbabwe comparison I continue to use the modified SOLO taxonomy to assess student capacity to compare information. This comparison is a more 'cognitively demanding' (Cummins 2000) task as it required students to draw on a variety of sources (Moyo 1995 and Agar 1990) and their own interviews, to assemble information for constructing the comparison between South Africa and Zimbabwe. In the previous task, students were encouraged to show their ideas and knowledge about the subject matter, to which they could easily relate. As the tasks became increasingly 'academic' and required more distanced analysis, as well as relied on voices from other sources, content became reliant on 'immutable authoritative discourses' (Angelil-Carter 2000:46). This higher order task expected students to synthesise as well as compare and contrast their own findings about first year students with that of Moyo and Agar.

In preparation for the task, students had ongoing exposure to reading and writing activities which allowed them to 'distance themselves from their own perspectives and simulate the perspectives the other person is taking, thereby coming to see how words and grammar come to express those perspectives' (Gee 2000:14). Both in the course pedagogy and in the lecturer's feedback, the central mechanism for helping students synthesise their own data with Moyo's was in the formation of categories and sub-categories. The emphasis on categorisation and the language of comparison (signalling) was an important step in allowing students to see things more holistically. Its purpose was to enable students to learn an expanded academic language for handling this

challenging task. The process of forming categories indicated the extent to which students were able to function relationally and to 'take on' perspectives other than their own.

I have therefore placed categorisation at the heart of the analysis of student performance on this task. In terms of content, I apply the analysis to the way students represented (or reproduced) different perspectives on student experiences at university. This involved notions of idea density and depth, but were of a different order. Rather, it focused more on comparing these experiences from different textual perspectives (Moyo 1995, Agar 1990 and their fellow students). I assess, firstly, **what** (the content of) different perspectives students selected for their categories and sub-categories from the various sources; secondly, **how** students compared the different experiences within the categories (organisation) and thirdly, **how students signalled** the categories by integrating the language structures taught on the course. In all these areas, the overriding concern is whether students generated clear categories and sub-categories as a vehicle for representing the various perspectives.

3.1.2 Shifting modes of operation

Before giving examples of students' changing patterns of writing in response to the lecturer's feedback, a worthwhile exercise has been to map out the typical structure of the comparison essays in the three key levels: uni-structural, multi-structural and relational so that the shifts can be clearly articulated. This template can be adapted for tasks that require careful unpacking of the different levels of understanding.

Essential to this analysis is student capacity to shift modes of operation from the first to the second drafts of their essays. The section after the tables showcases a few students' changing levels of understanding (mostly solid achievers) before examining the performance of all students against the backdrop of the school-university task. My selection of fewer cases allows me to avoid a lengthy recounting of shifting levels of operation. As mentioned in Chapter Two on methodology, I needed to find the most creative mechanism for characterising student writing in response to the different tasks.

Of paramount importance in this analysis is student cognitive growth as they engage with course pedagogy and feedback.

3.1.3 Uni-structural pattern

Content

- Information mostly from own personal experiences (represents one perspective)
- Limited reference to findings from Agar's and Moyo's research
- Generalised, non-specific statements of findings from interviews, e.g. *Every student have to buy prescribed books on his/her own which is a problem for me*
- Insufficient elaboration to support findings (low density)
- Unclear identification of sources of information (the lecturer repeatedly writes, 'Where did this information come from? Did this come from interviews?')

Organisation and language

- Main topics or categories not structured into paragraphs
- Vague references (poor signalling), to categories and sub-categories at the start of the paragraph
- Formulaic introduction and conclusion does not highlight key issues raised in the essay.
- Limited or incorrect comparing of findings using logical connectors.

3.1.4 Multi-structural pattern

A key difference between uni- and multi-structural processing is in how students structure their categories into paragraphs to address the comparative task. There is an increase in the number of factors discussed but ideas are not yet integrated into a coherent whole to address the question.

Content

- Relevant information from more than one source but mostly from personal experience (represents multiple perspectives)
- More details, examples and relevant quotes to support findings (higher density)
- Clearer identification of sources of information, e.g.
  Three out of five students I interviewed had the same problem of tuition fees;
  Agar also comments on the fact that…

Organisation and language

- Categories not structured into paragraphs.
- Clear signalling of sub-categories in relation to broader categories, e.g. *With regard to educational factors, I will firstly discuss time management as one of those factors which contributes to the failure of first year students*
- Compares findings using grammar and structure for comparison
- Introduction gives outline and purpose of essay and conclusion highlights the main findings

3.2 Shifts to different levels of functioning

3.2.1 From uni- to multi-structural functioning

The majority of students fell into this category as they were able to raise the standard of their writing from a low fail (an average of 5/20) for their first drafts to a mark between 25 and 30/50 for their final essays. The key aspect that changed was students' ability to relate sub-categories of information to the broader categories mentioned in the task. The first drafts mainly consisted of isolated statements lacking any clear relation to each other. In their final drafts, students used semantic markers to connect information from different sources.

The following provide examples of this shifting pattern:

Maloko's first draft paragraphs about educational factors (additional examples and details have been cut):

> *The first category is education. Student who take time acknowledging their difficulties with acclimatizing to university delay seeking help and see a need for help after failing the first exam. (Agar 1990) Correspondingly the student interviewed at Wits 2002 who is stressed with workload. He is depressed and desperately need help because he has not passed any test. He doesn't know of any support unit this is because he did not attend the orientation week so he does not know… this shows that students who do not attend the orientation programme struggle with understanding the university and has the negative effect on academic performance.*
>
> *Students from Zimbabwe found new teaching style frustrating. (Moyo, 1995) Likewise 4 out of 5 students from Wits found it difficult to take notes and concentrate at the same time. The reminding student did not find it difficult because he saw the new methods as a challenge. This is also because her father was ones at university. Similarly a student from Zimbabwe had preknowledge from relatives about university. However his brother told him that assignment were difficult but he found them easy.* (Moyo)

The majority of students who were interviewed had problems with poor time management and difficulties with language in textbook and from lectures and that increased the workload because they need extra time to understand the language use…

The lecturer's frustration surfaced when she made the following comments to this student, 'These paragraphs are not effective as you have not divided them into sub-categories', 'Very muddled paragraphs', '(you need to) signal different categories' and 'Explain the category in your own words'. She was surprised at the writing in the light of all the preparatory activities mediated in class. The student obtained 4/20 for this draft. These paragraphs displayed uni-structural, single-focused thinking. Despite the fact that many of her ideas were relevant to the topic, there was a limited understanding of how the ideas fitted together in categories. The lecturer questioned her ideas about orientation week, 'What is your link with Agar in this paragraph?', as the student sidetracked into a simple cause-effect analysis of non attendance at orientation week. She repeated this pattern in the second paragraph when she lost the essence of the comparison by sidetracking about relatives' prior knowledge about university. She was unable to make a general point about these experiences and construct meaning relevant to the comparison. She attempted to make connections between issues such as time management and language difficulties, but continued to rehash many of the issues in a convoluted form.

In terms of the structure of ideas, the lecturer alerted the student to her inability to relate the sub-categories like time management and teaching style to the broader category of education. She had failed to explain the links between these ideas or to label the sub-categories appropriately.

Final draft paragraph on education:

The following is one sample of how the student changed her style of writing in the final draft of the comparison in response to the lecturer's comments**:**

> *The first category is education.* ***This category focuses on factors such as new teaching styles, learning styles and time management. Students interviewed at university of Witwatersrand in 200x and Agar's study in are similar because they found new teaching styles difficult****. Furthermore they found it difficult to concentrate and take notes at the same time. However KG from university of Witwatersrand saw new methods of teaching as what they have expected from a university. According to Moyo (1995) a student 'expected to be given individual attention and be treated like an adult"(Moyo, 1995 p.8). In contrast LM, a student from Wits was amazed by individual attention given by tutors. She expected university to have lectures only and no small groups of class (tutorials).*

Maloko made strides in her ability to combine separate pieces of knowledge to answer the question. Not only did she signal the sub-categories (stressed by the lecturer), but her exposure to the grammar of comparison assisted her to make some general claims about education (sentence three) and combine ideas directly using conjunctions correctly. She still concentrated mainly on the perspectives of individual students, but began to understand the requirement of integrating information into a coherent structure. Her ideas were not limited in themselves; she merely needed practice in mastering the academic language relevant to analytical thinking. She obtained $25^{1}/_{2}$ out of 50 for the final essay, characteristic of a low multi-structural answer.

Most importantly, Maloko showed a willingness to learn from her mentor's critical comments and 'to let go' of her 'lifeworld' (Gee 2000) language which is no longer useful for handling this cognitively challenging task. This feedback may have been more significant for her academic development than the teaching and learning activities (see Chapter Six on how students connected with feedback). Affective factors discussed in Chapter Three may have accounted for the different levels of engagement with the feedback.

Some students in this category of improvement made even more dramatic shifts from their first to second drafts. Lebogang, for example, produced a first draft without drawing

together the main points from her findings and filled with long rambling sentences mostly unrelated to the topic. She also included numerous unsubstantiated generalisations. The lecturer commented that she had 'simply presented a whole lot of (her) own general, unfocused views about education'. The following paragraph on financial factors was one such example:

> *Most of the black students struggle to attend at university because of finance because they do not have information about bursaries and financial aid. Those who are attending get help from financial aid and bursaries which helps them to pay for their tuition, transport, accommodation, food and pocket money. But it is not easy to get a financial aid and it also takes time because the staff gives students who have passed very well then the rest will be processed later. Lack of money makes studies difficult because students cannot buy prescribed books.*

This paragraph merely provided information about the obstacles of financial aid from the student's own interviews. Unfortunately, it failed to compare information from different sources (Agar 1990 and Moyo 1995) even on a small scale. The lecturer pointed out the student's poor distinction between categories as well as her inability to use sources and reference information.

Striking differences were apparent in her final draft paragraph on financial factors.

> *With financial factors, statistics show (Agar, 1990 p 2) that "almost all black students struggle to get financial aid or bursaries, accommodation and have problems with transport" This is because blacks are poor and cannot afford to pay for tuition fees, pay the rent and use reliable transport because all are expensive. As a result this has negative effect because they cannot buy prescribed textbooks and perform badly.*

She incorporated the suggestions made by the lecturer by using expert sources of information to substantiate her points. In her subsequent paragraph, Lebogang used her own interviews to illustrate some of the points made above. In so doing, she demonstrated the consequences of financial difficulties on students' chances of success. Her answer was still rated at a low to moderate multi-structural level as she failed to

elucidate on the relationship between ideas. However, her conclusion hinted at the possibility of relational type of thinking emerging as it improved on the rambling series of points listed in the first draft conclusion.

> *The conclusion is that Moyo (p 15) and Agar (p 5) both have similar ideas. 'That academic staff should have interest on students problems" And they should address them quickly before studies begin so as not to affect them. "The students also need much support from schools before going to tertiaries." Agar suggests that for student problems to be solved institutions together with academic staff need to be changed.*

Lebogang did not have the confidence to represent these ideas in her own words. In response to the marker's feedback she still wished to transmit the experiences of expert writers in the field rather than write from her own perspective.

Although students in this category may have included interesting details, examples and quotes in their first drafts, they did not identify main categories and sub-categories or signal to their readers what these categories were. This affected their ability to compare ideas within categories and to structure their paragraphs. As mentioned above, the key shifts were organising and sorting their findings into categories and sub-categories and beginning the process of comparing findings from the two main sources using the grammar and structure for comparing taught on the course.

3.2.2 Remaining uni-structural

It is apparent that certain students were not able to benefit from the lecturer's critical feedback comments regarding categorisation. In her first draft, Zanele made no mention of the broad categories in her paragraphs. She said, '*According to my interviewees it was not easy to cooperate at university more especially during the first few weeks. They were very much disturbed to get the venues…*' Besides the choice of concrete topics about 'thick study packs' and 'unfriendly people', Zanele showed a limited capacity to develop a clearer understanding of the essay requirements from the feedback. She merely slotted in the words, 'Education category' at the start of the paragraph and provided an atomistic

series of isolated statements based on her own and Moyo's research findings, from which she quoted large chunks. She transmitted these experiences separately but was unable to represent them in relation to each other.

3.2.3 Remaining low multi-structural

Some students improved their language expression and ordering of ideas in the final essays, but continued to function multi-structurally. In her first draft, Angie muddled her sub-categories and though she did use data from her interviews, it was not clear what was similar or different from Agar and Moyo's findings.

> *I interviewed five first year students at Wits 2002. Out of them, three have a problem with accommodation, because university did not accommodate them. Those three students live at townships and they travel everyday. Similar Agar and Moyo both said that student used public transport and they had to traveled many kilometers and spend more hours on the way before they arrived on the campus. Those three first year students, one of them uses a taxi and the other two uses a train. They left home early in the morning and arrived late which means they do not have enough time top study because they are always tired, whereas Agar said that,"students had limiting the time which can be devoted to studies…".*

The paragraph gathered ideas together about accommodation and transport without providing a coherent structure or explicit comparison. She mostly wrote a formulaic and rambling response to the accommodation problem.

The following paragraph illustrates how the same student used language more productively to describe accommodation problems in the second draft. While her writing 'tightened up', it retained the same simplistic quality of cognition.

> ***Firstly, I will discuss accommodation as a socio-cultural factor****. I interviewed five first year students at Wits 2002. Out of them, three students have a problem of a place where they can stay because university did not accommodate them. These three students live in the township and they travel everyday. One of them uses a taxi and two use a train.* ***Similarly*** *Agar (1990) and Moyo (1995)both said*

that student used public transport and they had to travel many kilometers and spend more hours on the way before they arrived on the campus. …

3.2.4 From low/ moderate multi-structural to low relational

The extracts below, mostly taken from Thabo's writing, illustrated shifts to relational writing in terms of students' capacity to categorise and compare information. In their first drafts, some of these students already managed to present information in a logical order and provide clear categories for the main findings. This allowed them to begin the process of comparing from the two main sources for which they obtained between 10 and 14 out of 20. Their challenge in the second draft was to become more expansive in the ideas they represented by giving detailed evidence to support the findings.

Thabo's idea density and depth were consistently high, but he did not master the skill of manipulating and reconfiguring his ideas for the purposes of addressing the comparison. Angelil-Carter (2000) has highlighted how hard it is for the novice writer of academic discourse to develop his/her own authorial voice especially when drawing on a range of sources. The following example of Thabo's paragraph on educational matters in his first draft, was characteristically 'patchwork'.

> *Regarding educational problems, poor time management was common problem among all the students involved in the essay including myself. Moyo (1995) stated that "a number of inexperienced first year students spend the first few months of their university experience floating from day to day without any planned educational programme of study.". they only realize they could not cope with work that has to be accumulating at the later stage of year, especially after the mid-year exam. New modes of teaching is another heavyweight challenge to box with which also causes frustration. Some of the students complaining about lecturers that lecturers are moving too fast they don't whether you understand the chapter or not unlike the teachers at school used to do to them.*

Thabo followed a set pattern of comparing findings from the two main sources in relation to specific categories and selecting relevant and interesting evidence to support his ideas.

He did this by relating his own interview data to the points made by Agar and Moyo for each category. Though he described broad categories in the pattern outlined above, the result was a lengthy, multi-structural shopping list of points with no differentiation between sub-categories. Thabo continued to list a range of issues such as lecturing pace, lack of textbooks, students' 'overestimated abilities', and note-making difficulties, all tenuously connected to 'education'.

A further characteristic feature of multi-structural thinking was when students gave more weight to their own experiences than those described by the theorists (Moyo 1995 or Agar 1990) regarding the issues at hand. Thabo, in his first draft, described the context he grew up in where, '*people felt jealousy and even hate you for talking English to them taking you as if you think you are knowing too much than them*'. On three occasions, Thabo asserted that Agar or Moyo had not addressed particular issues without explaining this assertion, for example '*Moyo (1995) does not mention anything about financial difficulties*'.

In the final essay, Thabo responded to the feedback by naming the sub-categories in response to the criticism that these had been omitted from the first draft. When discussing time management, he said, '*Concerning the issue of education, the students tend to have various problems. The most common problem among students is time management (Agar, 1990; 4)*'. *Al*though his style was formulaic and forced, it provided a framework for the discussion of each category. It was less a list of points and more a set of related ideas. Biggs (2003:48) would describe this level of involvement as relational as it is 'not just an understanding of boundaries but of systems'.

He also provided more substantial evidence from the texts in relation to categories in the final version of his essay. He selected relevant quotes from both Agar and Moyo to bolster his 'argument'. But the change in Thabo's writing can be seen not merely in terms of the amount of detail he provided; there was a qualitative shift as he engaged with the writers' claims. An example of this is when he challenged Moyo's analysis of note-making difficulties as the students' problem with 'keeping pace with the lecturer'. Thabo

attributed the note-making problems to the lecturers who 'did not even bother to ask them whether have they read their notes or not'. Though the point is not clearly expressed, he connected his ideas to Moyo's by using the phrase, 'in contrast' and contributed a fuller and more nuanced perspective on educational factors affecting academic performance.

Thabo absorbed the lecturer's feedback and managed a more analytical, distanced view on the topic. Though he retained an account of his own experiences and provided lengthy examples of issues raised in his second draft, he integrated these at a higher level of involvement. When he raised difficulties with note making, he explained the challenges in dealing with the lecturer's foreign accent and the large class of students in International Relations, '*I could not even hear any single word that he was saying… I was afraid of asking a single question where I could not understand because of too many students*'. He provided relevant anecdotes to underline the concerns he raised in the essay.

Thabo's final essay introduction and conclusion both improved significantly. Unlike his formulaic introduction in his first draft where there was an absence of an essay outline or structure, he specified how he would address the task more directly and the areas he would cover in the essay. Impressively, he outlined the **purpose** of the comparative task in understanding '*about the performance of students especially blacks in different South African universities*'. He foregrounded the mismatch between students' expectations and the realities they faced at university and argued that his comparison between students in the different contexts would shed light on 'these talks' (about student performance).

His conclusion shifted from a general statement about responsibility in the first draft to one that explained the realities students face at university in contrast to their high expectations. He suggested two strategies for addressing high student dropout rates: high school preparation for university study where '*students need to be taught to be independent learners*' and subject (curriculum) guidance at university. This indicated the actions he wanted to orchestrate as he '*comes to grips*' with the challenges students face at university. He showed mastery and control over the essay question as he analysed the

similarities and differences between the experiences of students at the different universities.

Thabo used the grammar and structures for comparison taught on the course but he continued to restrict his use of conjunctions to ‘another’, ‘similarly’ and ‘also’. The omission of connecting words may have been linked to his non-signalling of sub-categories to the central themes of the essay. The student obtained 67% for his final essay, which was a step-down from the 70% for the draft because he had not edited out the grammar and sentence level errors. Even though he engaged at a higher level of understanding with the essay task, the lecturer’s expectations were higher than the first draft in terms of his presentation of findings and use of language. It is uncertain whether these criteria were made explicit to students during the assessment process.

3.2.5 From high multi-structural to moderate relational

According to Vygotsky (1962)

> As the child’s intellect develops, it is replaced by generalizations of a higher and higher type – a process that leads in the end to the formation of true concepts. The development of concepts, or word meanings, presupposes the development of many intellectual functions: deliberate attention, logical memory, abstraction, the ability to compare and to differentiate. (In Cummins 2000:60)

This ability to generalise at higher levels of cognition applies similarly to tertiary level students as they learn to describe phenomena in increasingly abstract and analytical ways. The student, Bramley, at that early point in the year in the Foundation Course, showed potential to think relationally and would probably have operated at an extended abstract level if the task had required this type of engagement with the material. The most striking aspect of his first draft essay was his capacity to synthesise the two readings with his own interviews, a skill most students started mastering in their final versions only. Bramley’s weaknesses were his confused organisation of categories and his poor language expression. The lecturer repeatedly pointed out his ‘incorrect use of connectors’, ‘poor

signalling' and 'imprecise language'. The paragraph below best characterises these strengths and weaknesses. He obtained 11/20 for the first draft essay.

> *Under socio-cultural factors Agar (1990) indicated that there were students who had expected to find an accommodation on campus but faced reality of not getting it. In contrast Moyo (1995) argues that in view of great demand for university education, authorities try to accommodate most students secure the points required for admissions. Conversely my respondent (SM) maintained that she was also looking forward to be accommodated however she did not get it.*

At first glance, this paragraph seemed no different than previous multi-structural accounts of vaguely connected experiences. Bramley fell short in all the areas described above, especially with regard to formulation and signalling of sub-categories and his misuse of grammatical markers. One aspect that distinguished him from other students was his attempt to reconstruct information from the data sources by paraphrasing rather than quoting extensively. Another difference was his emergent ability to draw the separate ideas together in some organisational pattern and refer implicitly ('*students who had expected*') to the topic.

Bramley addressed the shortcomings pointed out by his lecturer by improving his expression and signalling of categories in the final draft paragraph. He added an introductory sentence to the paragraph, '*With regard to socio-cultural factors, I shall start to discuss about accommodation.*' He also remedied his incorrect use of conjunctions throughout the essay.

An indication that he had 'taken off' in his final draft is that he moved beyond the formulaic presentation of the different experiences (seen in the above paragraph). There was a confident flow to the writing and he made meaning by using his own words to represent the various ideas. Below is his account of different perspectives on note making.

> *Still under educational factors students come to the university with lots of expectations about note making. Moyo (1995) argues that some first years had*

expected to be given prepared notes or to have notes dictated like at high school by teacher, however it was unpleasant to discover that they were expected to fashion their own notes during lectures. In contrast, one of my respondents,(SG, 2002) said, 'I have never even expected to be given some notes at university, so it was pleasant for me to discover that at least they give some notes which could be helpful when I read". Some students adjust and develop good attitude to academic work.

Not only had he made numerous technical adjustments to his writing, but he was beginning to engage at a deeper level with the ideas relevant to his essay question. The student distinguished between different expectations of note making emerging from the two data sources. He showed that he was able to make these 'generalizations of a higher type' (Vygotsky 1962) in his framing sentences.

3.3 Tabular analysis of student performance

In this section I analye the performance of each student for both drafts of the South African-Zimbabwe comparison. My intention is to discern the extent to which they shift their levels of understanding in response to the course pedagogy and lecturer feedback (the impact of the pedagogy will be explored in more detail in the Chapter Seven when students reflect on changes they have made). The focus on content, organisational and language aspects of the modified SOLO taxonomy enables me to gain a sense of students' emerging ability to use academic language to address various aspects of the comparison.

In particular, I focus on the way students represent the different experiences of first year students at university from the three data sets. The essay question required them to draw this information together into categories and sub-categories of comparison, which became the key organising principle for my own analysis. Unlike the school-university comparison, this task required a more academic and 'distanced' engagement with the reading and interview material. It elicited student ability to analyse and synthesise information to address the question holistically. As mentioned previously, an extended

abstract response is not possible within the constraints of the comparison. Of interest to this research study is the comparison of students' writing on the two comparison tasks as it contributes to the 'bigger picture' of how students learn on the Foundation Course. Know-how into how students succeeded in the Foundation Course and in the degree as a whole assists the process of reflecting critically on how the SOLO taxonomy has been adapted to cater for different educational purposes.

Table 5.3: SOLO taxonomy applied to solid achievers

Students	**Representation of perspectives in categories (content)**	**Organisation of categories and sub-categories (structure)**	**Signalling of categories (language)**	**Global assessment**
Thabo *Draft 1*	Moderate multi-structural	Low Multi-structural	Moderate multi-structural	**Moderate multi-structural**
Draft 2	Low relational	Moderate relational	High multi-structural	**Low relational**
Maloko *Draft 1*	Uni-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	Low multi-structural	Low Multi-structural	Low Multi-structural	**Low Multi-structural**
Bramley *Draft 1*	Low relational	Low multi-structural	Low multi-structural	**Moderate multi-structural**
Draft 2	Moderate relational	Low relational	Low relational	**Low to Moderate relational**
Lebogang *Draft 1*	Uni-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	Moderate Multi-structural	Moderate multi-structural	Moderate Multi-structural	**Moderate Multi-structural**
Imelda *Draft 1*	Uni-structural	Low multi-structural	Uni-structural	**Uni-structural**
Draft 2	Low multi-structural	Moderate multi-structural	Low multi-structural	**Low multi-structural**
Karabo *Draft 1*	Uni-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	Moderate multi-structural	Low multi-structural	Moderate multi-structural	**Moderate multi-structural**

Table 5.4: SOLO taxonomy applied to borderline achievers

Students	Representation of perspectives in categories (content)	Organization of categories and sub-categories (structure)	Signalling of categories (language)	Global assessment
Isiaah	Low Multi-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	High multi-structural	Low multi-structural	Low multi-structural	**Low to moderate Multi-structural**
Lindiwe *Draft 1*	Low multi-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	Low multi-structural	Low multi-structural	Low multi-structural	**Low multi-structural**
Joe *Draft 1*	Low multi-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	Moderate multi-structural	Low multi-structural	Low multi-structural	**Low multi-structural**
Angie *Draft 1*	Low multi-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	Low multi-structural	Low multi-structural	Low multi-structural	**Low multi-structural**
Sipho *Draft 1*	Low multi-structural	Uni-structural	Uni-structural	**Uni-structural**
Draft 2	Low multi-structural	Uni-structural	Low multi-structural	**Low multi-structural**
Mabe *Draft 1*	Low multi-structural	Low multi-structural	Low multi-structural	**Low multi-structural**
Draft 2	Moderate multi-structural	Moderate multi-structural	Low multi-structural	**Moderate multi-structural**

3.4 Discussion of South Africa Zimbabwe comparison

3.4.1 Method of analysis

As far as the method of analysis is concerned, the adaptation of the SOLO taxonomy has proved to be an instructive tool for analysing students' developing cognition in the South Africa-Zimbabwe comparison. Its flexibility comes to the fore when applied to a range of cognitive tasks. In the school-university comparison, the analysis was much more on the breadth and depth of ideas students formulate for handling a semi autobiographical comparison, whereas in the South Africa-Zimbabwe comparison, the focus was more on how students assemble and manipulate ideas from various sources to address the essay question. As students became more deeply involved in academic discourse, their own

position in relation to the task changed as they were expected to represent a range of perspectives on the issue. It is consequently necessary to tailor-make the taxonomy to meet these task requirements. This adaptation process will be critically discussed in the conclusion in Chapter Eight.

As mentioned earlier, the central principle of the South Africa-Zimbabwe analysis was student ability to organise information from the three data sources into categories and sub-categories. This made it possible for me to visualise a continuum of student responses to the essay question in terms of content, organisation and language. On the one (uni-structural) end of the continuum was a predominantly subjective account of a student's own experiences of university with scant reference to other perspectives on the subject. The students' ideas were broadly organised around the key themes of the essay topic in a haphazard, rambling structure. At the other (relational) end of the continuum was a connected, integrated account of a range of different experiences drawn from the course texts and student interviews. The experiences were thematically organised into sub-categories, which in turn related to the broader groupings of ideas. Throughout the essay, the student connected these concepts to the issues of 'expectation' and 'reality' stated in the essay topic. The middle ground response was a formulaic listing of different perspectives, which had been structured into categories. Equal weight was given to the different data sources but the issues were not elaborated or sufficiently explained.

3.4.2 Student performance

In the South Africa-Zimbabwe analysis, focusing on the different specifications of SOLO taxonomy has allowed me to produce a more detailed and multi-faceted analysis of student performance as it changed from first to final drafts in response to course mediation. Student areas of strength and weakness are easily diagnosable and it has become possible to devise educational strategies for addressing difficulties. These are designed to target specific issues, even though all aspects are interrelated.

3.4.2.1 Comparing solid and borderline performers

In comparing the performance of solid and borderline students on the basis of the modified SOLO taxonomy, clear distinctions have emerged. For each of the essay drafts, there was consistency between the content, organisation and language aspects for both groups of students. Likewise, students in both groups produced weaker first draft South Africa-Zimbabwe comparisons than the school-university comparisons, a phenomenon that will be explored further in terms of the cognitive demands of all three tasks. Most borderline students were unable to shift beyond low multi-structural levels in the way they represented ideas. They mostly remained static in this area whereas all solid achievers shifted at least one level in their final essays in terms of the essay content. Three students moved at least two levels up the content cognitive ladder. This finding will be examined against the backdrop of students' affective qualities discussed previously in Chapter Three and investigated in Chapter Seven. The way students use their qualities of resourcefulness and determination to engage with the lecturer's feedback, for example, may well have determined the extent to which they improved their performance.

Language was an area of improvement for all the borderline students. This may be attributed to the intensity with which language structures and grammar were taught in preparation for this essay. There was a greater change in the capacity to organise categories amongst the solid achievers (some made substantial changes). I question why certain borderline achievers made no progress in this area despite the enormous emphasis placed on categorisation (see Chapter Four on pedagogy).

In terms of success categories at university, students in the $n + 1$[1] category improved in all dimensions of their writing. Isiaah was the only $n + 1$ student in the borderline category who improved as far as idea representation was concerned. This suggests his capacity to engage with the feedback and to benefit from the course scaffolding despite his overall borderline pattern. It is important to investigate the progress in the next phase

[1] With the inclusion of the extended curriculum in the form of an additional structured year, students who took an additional year to complete their degrees were classified ***n* + 1** students.

of the course of the two ‘solid’ achievers, Imelda and Maloko, who both moved up one level in terms of their conceptual understanding but performed differently in the degree as a whole. Poor ‘throughput’ results from Imelda contrast with Maloko’s success as an *n* + 1 achiever. Similarly, students like Joe and Mabe, who showed great promise in their writing in this phase of the course, did not fulfil the expectations of the course coordinator. The former was in the *n* + 3 category, the latter dropped out of university. On a positive note, Thabo and Bramley continued to go from strength to strength in this task. From examining their learning profiles, it is not surprising that they continued to handle the challenges of tertiary studies and performed well in their degrees as a whole.

My analysis of the comparison phase of the course has provided me with a basis for understanding how students interacted with the course mediation as ‘under prepared’ new university students who were eased into increasingly complex task demands via the careful scaffolding process discussed in Chapter Four. In the next chapter I focus my attention on the argument phase of the course. I apply a similar analysis of student writing using the modified SOLO taxonomy. When I examine the research reports in Chapter Six, I assess the extent to which students in both categories analysed and interpreted their data in relation to the report criteria. The key question is whether they were able to meet the challenges of the higher order argument and research section of the course by transferring the cognitive and linguistic strategies they learnt in the first phase to discursive academic writing.

CHAPTER SIX
COGNITIVE ANALYSIS OF THE ARGUMENT AND RESEARCH PHASES OF THE COURSE

The challenge in the argument phase of the course was for students to continue to engage with their own ideas through writing. Crème and Lea (1997:100) argue that 'although it is true that when you write for university you have to draw on what others have said, this does not necessarily mean that you have to give up your own ideas.' The Foundation Course topics and processes lent themselves to engagement with writing tasks and created possibilities for 'ownership of material and authority in writing' (Crème and Lea (1997:104). There was a supposed shift from personal to academic writing in this phase of the course as documented in Chapter Four on pedagogy. This writing was characterised by analysis and evaluation of information from a wide range of sources compared to personal writing, which relied solely on the writer's experiences and feelings. Nevertheless, as Kamler (2001:83) argues, it is important not to dichotomise personal and academic writing as opposite poles of the writing spectrum. She contends that 'argumentative writing is no less constitutive of the writer's subjectivity than writing which explicitly focuses on the writer's personal experience.' An approach to the teaching of writing, regardless of the genre, needs to pay attention to issues of identity.

In this chapter I examine student performance in two pieces of writing: the first is an argument essay on the pros and cons of polygamy, the second is a research report on multilingualism in South Africa. As in Chapter Five, I firstly describe the purpose of the task and how it was mediated in the classroom before explaining how I have adapted the SOLO taxonomy to unpack its specific task requirements. I subsequently contrast the performance of the solid and borderline students using categories that have emerged from the process. I consolidate the analysis by including comparative tables of student performance followed by a critical discussion of the method of analysis as well as emerging trends in students' ability to assemble an argument and construct a research report. Illustrations of students' writing in both tasks are integrated into the analysis of the assessment criteria.

1 Argument Essay on Polygamy in South Africa

Students wrote an essay in which they were required to argue a position on a topic about polygamy. They were guided through a similar process of scaffolding as that described for the comparative essay. Activities included structuring the essay, writing coherent paragraphs and integrating relevant quotations from the literature into their writing. The particular focus was the ability to take into account counter arguments relating to polygamy and to construct a convincing argument using appropriate evidence.

As discussed in Chapter Four, Granville argues (2002:104) that in this phase of the course students began to prepare for writing and reading academic arguments, 'This involves moving outwards and leaving the immediate domain of students' personal experiences at school and university.' The argument essay required students to use the conventions of academic discourse via a topic that reflected their interests. They needed to understand the nature of academic evidence, the use of specialist academic language and referencing conventions. It was also assumed that as most students were registered for at least one social science course in the Faculty of Humanities, they would have been exposed to discursive texts that used appropriate evidence to formulate academic arguments.

1.1 Method of analysis

The SOLO taxonomy is applied differently to the argument phase of the course as the focus shifts to the way students explain both sides of the argument. Students needed to unpack the reasoning behind the different perspectives on the issue as well as justify their own position convincingly. Gee (2000:14) points out, 'At a certain developmental level children have the capacity to distance themselves from their own perspectives and simulate the perspectives the other person is taking, thereby coming to see how words and grammar come to express those perspectives.' The test of this task (it was written under open-book test conditions) was to gauge the extent to which students could apply the essay writing skills and new practices of the discourse they had learnt on the course to develop a line of argument in response to the polygamy debate.

The topic of this essay in particular highlights what Angelil-Carter (2000:43) says is a 'problem of prior authoritative discourses which conflict with the new authoritative discourses'. Students had a great deal of knowledge about this topic, but needed to combine their own ideas with those of the 'authoritative discourses' (Angelil-Carter (2000:44). Imelda made a well-reasoned, passionate case against polygamy but did not use evidence validated by the discipline to formulate her position. She said,

> *I get so annoyed to hear people talking about "our culture". Such claims are contradicting to me. How come that someone claims a certain part of culture and live the other part? If people want to practice polygamy, I expect to see them going in details practicing the whole culture. They should not wear clothes, they should wear animal skins, go hunting and sleep on the floor. No electricity for them and transport. Ox wagons must be used and then I will start recognizing them as cultural people. Why do they have to hold culture only when it comes to women? The only word suitable for these men is that they are selfish. They do not want to accept what they have.*

Crème and Lea (1997) suggest that in order for personal writing to be taken seriously, it has to be set in a broader academic framework. This writer, Imelda, was concerned with her own ideas and feelings but did not draw on evidence to substantiate her assessment of polygamy. On the other hand, Bramley over valued the sociological ideas he 'selected' from an unacknowledged source to theorise about polygamy. His own voice and viewpoint were absent when he argued,

> *Noting further that polygamy constitutes patriarchy which from sociological point of view is termed as system of stratification were men have more power over women. As a result many women feel unloved and alone.*

The lecturer criticised him for not using his own words. What Crème and Lea (1997:99) say applies to Bramley's problem of not 'bringing his own good work into what he sees as the university requirements… He is not really giving himself the chance to use what he knows and can do already in his writing'.

The key principle governing my analysis of the argument essays is students' capacity to develop a **thread of argument** on the topic of polygamy**.** In terms of content, this involved the ability to select substantial evidence (the 'what') to explain both sides of the argument critically (the 'why' and 'how') as well as for students to support their own position. The skill of organising the information became crucial to constructing an argument as students needed to make explicit the relationship between their argument and the opposing argument (counterargument). It was essential for students to use connecting devices to explain the different viewpoints on polygamous relationships. As they needed to show how they used examples from different sources, the skill of referencing played a major part in this argument phase of the course.

1.2 Analysing content of the argument

1.2.1 Using evidence to explain both sides of the argument

A range of evidence was selected by students to present both sides of the argument. On the one hand, students functioning uni-structurally provided minimal evidence to support their claims. Below are some examples of evidence from popular magazines or vague, unclear sources of information (as discussed in the Chapter Four, the lecturer gave them permission to use a wide range of text types to address the question).

- *'Argument in favor of polygamy is that **latest studies** has shown that polygamy decreases divorce rate because a woman cannot divorce the husband if she knows about the other wife and accepting her.'*
- *'Shadow Twala in her article from **Pace magazine** believes that polygamy can decrease the spread of aids because the wives may be faithful to the husbands.'*
- *'Also, **Mike Mangena** stated that polygamy worked for our forefathers. Furthermore no man would go to their first wife and men don't have time to go from this house to another. However, **Shadow Twala** reports that polygamy would work if man can afford to maintain two or three wives.'*
- *'I think also polygamy reduces divorces among the families. According to **Pace magazine** it can also be good for shaky marriages.'*

These isolated, jumbled statements do not contain adequate explanations for expressing the different views on polygamy. Students learnt to use evidence to back up their ideas (in bold), but failed to explain the relevance of these examples to represent a position or further their argument. As Crème and Lea (1997:110) contend, 'An important feature of academic writing is that it often moves back and forth from generalizations to particular examples that support the generalization.' This process of generalizing is absent in these students' essays.

A multi-structural response to the question, the level at which most students were operating, provides several examples to support the argument and show a simple cause-effect understanding of some of the ideas. In the following extract from Moloko's essay, there is more of a link between the evidence and the issue of polygamy but knowledge is organised in a repetitive, serial way.

> *Polygamy causes poverty because not every man who practice it can afford it. All men just do it for their musculine status. As Shadow says, polygamy could work if a man can afford it. Therefore polygamy cannot be practiced as it increases poverty. FAMSA and POWA argue that polygamy is an abusive measure for women who are in need of financial support. Polygamy can cause fights within wives and children.*

The example below shows how another student, Lindiwe, becomes more engaged with the debate. She paraphrases points from the Internet to oppose the argument.

> *However, even though polygamy can help to decrease the rate of divorce, there could be a conflict between the wives and the children which can lead to jealousies and rivalries which will always draw people apart. (internet article, 23rd Feb, 1995).*

The limitation in the essays of students functioning at this level is that they do not produce a consistent line of argument. Bramley manages to set different commentators on the subject against each other. However, his writing reveals multi-structural thinking in

its presentation of numerous ideas that are not organised into a coherent argument structure.

> *According to Biola, extracts from internet, in polygamous marriage there is mass poverty and more people have been educated under western standards and values. However, Matunda argued that what polygamy did in old Africa was to give a home to most women and children.*

He does not explain adequately either how the phenomenon of 'mass poverty' enhances the argument against polygamy or the ways in which polygamy gave a home to women and children in the past. This can be contrasted with the following paragraph written by Lebogang showing evidence of the beginning of low relational thinking.

> *In contrast to polygamy, Lulu from People opposing women abuse have different reasons (against) polygamy (Isithembu article). She argued that polygamy is a form of abusing women. As most of them do not have any choice but to engage into it, for instance men took advantage that women are economically insufficient. In order to be away from absolute poverty, polygamy is the only solution.*

Besides expanding on the information she has drawn on from POWA, Lebogang shows an understanding of the importance of using evidence to construct and extend the argument against polygamy. One paragraph that provides 'strong-sense reasoning' (Paul 1990) is that of Thabo's below. He represents an argument that supports polygamy.

> *The other advantage of the polygamous marriage it reduces the rate of unmarried women and thus reducing the exposure of women to poverty. As the statistics from the HSRC showed that in South Africa 50% of all women live in poverty as compared to the 30% of men and this* ***is because of*** *the situation that the women found themselves facing* ***as a result of*** *carrying the responsibility of being the household head.*

Although the statistics are not adequately referenced, he shows an understanding of supporting the argument using authoritative material. Before providing statistical information on women's vulnerable economic status, he explains how polygamy can

address the issue of poverty. He uses connecting devices (in bold) to show cause-effect relationships. He links the concepts of ‘household head’, ‘unmarried women’ and ‘responsibility’ to arguments in favour of polygamy. This is superior to other accounts of polygamy as it consolidates and integrates the evidence selected to begin producing a coherent argument. It can thus be classified as a moderate relational mode of operation.

1.2.2 Taking a position on the topic

In the process of 'trying on' and 'parroting' academic discourse (Angelil Carter 2000 and Crème and Lea 1997), students do not integrate the material they use into their own thinking. Crème and Lea (1997:100) argue that in order to 'negotiate and work with the demands of university writing… this produces "imitation" writing.' This tentativeness results in varying degrees of willingness to take a position on this topic though students are specifically instructed to do so in the essay. Many students avoid discussing their own views in the introductions but are prepared to commit themselves in the conclusions. A confident position emerged from Thabo's essay when he said in the conclusion,

> *In conclusion I can say polygamy is not rig*ht *because mostly it is a manly thing which gives men to exercise more power over women which is a clear example of gender inequality.*

This was a fairly standard approach to concluding the essay as students wished to make their mark, often fairly dramatically, at the end of the essay. Moloko argued that polygamy '*promotes sexual immorality*' and Bramley described it as a '*liability rather than an asset in the economic system*'. Joe went further to generalise about the virtues of monogamous practices while Lindiwe declared, '*Polygamy is our culture, we do not kill it because of the economy or some problem, we have to handle it until the end of the world'*. None of these endings is able to conclude in the way Lebogang does. She stated her view (below) by summarising some of the issues raised in the essay and referring to the central idea.

> *In conclusion polygamy is not a good thing today when we focus on present economy, spread of diseases and rights of women. It is not like olden days when people were agricultured and depending on food production. Men need to have limited kids to financially and parently look after.*

1.3 Analysing the organisation of the argument: developing a thread of argument

This was the weakest aspect of the essay as most students had not developed a coherent argument structure containing both sides of the argument leading to their preferred position. There was a predominance of comments from the lecturer about these structural shortcomings, 'These paragraphs are not coherent', 'Some good points but essay unstructured – no clear line of argument!', 'No connection between points', 'Paragraphs are jumbled and very incoherent' and 'Too many different and unrelated points in one paragraph'. None of this feedback appeared to help students to fix their work.

Surprisingly, students did not use the principles of categorising they had learnt in the comparison phase of the course to group similar ideas into paragraphs. Not only was there an absence of connected ideas within paragraphs, there was little sense of how the argument took shape in the essay as a whole. Isiaah's difficulty with structuring his thoughts was revealed in the following typical pattern:

- General introduction outlining essay intent to weigh up the two positions.
- Large paragraph containing several unrelated, unexplained factors '*in favor of polygamy'* like reducing the divorce rate, cultural practices and aids prevention.
- Unconnected paragraphs listing ideas and quotes warning of the '*dangers*' of polygamy. He mentioned the consequences of polygamy such as neglected wives, hatred in the family, AIDS and financial problems.
- Concluding statement opposing polygamy.

The above structure provides no engagement with the ideas from the different perspectives. Divorce, for example, is mentioned in separate parts of the essay as an effect of both polygamous and non-polygamous marriages, but is not integrated into a full discussion on the topic. Another illustration of this is Lebogang's account of the spread of sexually transmitted diseases. When she discussed arguments in favour of polygamy, she claimed that the AIDS rate was reduced because, '*A man cannot sleep around with strangers and transmitting diseases to everyone*'. When outlining the arguments against polygamy, she raised the possibility that the wives of polygamists were not being honest

and were sleeping around. She said, '*There is one* [wife] *who can come with the disease* [AIDS] *into the family*'. There is no connection between these separate, but related thoughts, a pattern characteristic of multi-structural thinking. Students have not managed to categorise or link their ideas thematically.

There is little evidence of students marking different aspects of the essay using logical connectors. The shift from the counter argument to the argument is not obvious in most of the essays, which merely 'lump' similar ideas together. Very few students use markers at the start of paragraphs to signal the main issues. As a result, a paragraph had to be read thoroughly in order to get the gist of it. At best, contrastive conjunctions like 'however' and 'nevertheless' are used to denote oppositional thinking in topic sentences. At worst, students used headings like 'Against polygamy' and 'In favour of polygamy' to signal the topic of the paragraph, without explaining why and how their list of generalised points related to the topic.

A few students show potential to operate relationally when they opposed an argument directly. This mostly occurred within, and not across paragraphs. Joe built an argument within his paragraph on family relationships that showed an understanding of how to counter existing arguments.

> *It is often argued that polygamy is a good practice in the family because it strengthens the relationship of our families. However, I disagree with this idea. According to me, it causes conflict between the families. Good evidence has been given by Biola from the internet who states that she is from a polygamous family. Her father had six wives and there was always a war between the families.*

Interestingly, most students have a clear sense of the generic purpose of introductions and gave an overview of their essay even if they omitted their own approach to the topic. They made convincing claims like, '*The aim of this essay is to try to focus on the advantages and disadvantages that polygamy brings to our society*' and '*… lastly, I will come up with a standpoint or position about polygamy*'. But none of these aims is fulfilled in the essay.

1.4 Analysing the language of argument: using connecting devices to show cause-effect relationships

A key factor holding students back from writing clear explanations is their difficulty in explaining the link between the examples they use and the main idea. As a result, students often produced serial points about the topic that had not been clearly connected or explained. The examples of poor explanations provided above can in part be attributed to students' inadequate linguistic resources for extending ideas in the form of giving reasons and elaborating. A clear example of this is when Maloko states her opposition to polygamy:

> *My position is being against polygamy because it is abusive to women, only in favour of men. Children and women depend on one breadwinner (men). Polygamy causes fights within families for men's belongings when he dies.*

The student does not use connecting devices to show how her financial example supports the point about abuse. As it stands, the ideas appear as separate, unconnected thoughts when in all likelihood the student intended to illustrate the concept of abuse with an example about financial dependence. The connection could have been made more explicit by writing, 'The husband can do what ever he wants to them **because** he knows that they are dependent on him as the breadwinner'. Similarly, it is unclear how the following vague extracts from POWA and Pace magazine relate to the argument.

> *According to POWA they regard polygamy as abuse to destitute women who only depend on their husbands. In the pace magazine article various well known personalities had expressed their views regarding polygamy.*

In contrast, examples of the strong reasoning discussed previously, show how conjunctions are used to link ideas directly. After providing statistics, Thabo explained '*this* ***is because of*** *the situation that the women found themselves facing* ***as a result of*** *carrying the responsibility of being the household head*'.

A language omission in some of the essays is when students do not say whose perspective is being represented as they construct their argument. A striking example of

this is Karabo's narrative, '*We are black and South Africans, therefore polygamy is an African thing. It is there to prevent husbands to cheat on their wives. in addition to that it prevents the conflict between husband and wife*'. After listing numerous points in favour of polygamy, she went on to represent a totally different set of ideas against polygamy. From these examples, it is evident that language had not yet enabled students to connect ideas when they wrote.

1.5 Tabular analysis of student performance

The following is a tabular analysis of each student in the case study and makes an assessment about their ability to construct an argument essay according to the modified version of the SOLO taxonomy. I have focused on all aspects of the analysis discussed above: the evidence students use to explain both sides of the argument and the extent to which they take a position regarding polygamy (content), their skill in developing the thread of the argument in the essay (organisation) and their use of language to explain the different positions (language).

In terms of the SOLO taxonomy, as students become increasingly relational in their writing, their ideas become deeper, their explanations more penetrating and the essay structure more coherent. At the one extreme, a student operating at the **uni-structural level** presented fragmented pieces of information when considering different positions taken on polygamy. In some cases, only one viewpoint is taken into account and the student summarises isolated bits of evidence at a superficial level. The student may have made a vague, general assessment about the issue, but does not relate it to the central theme of the essay. As a result of this one-dimensional approach to the topic, the student does not link ideas together in a particular sequence and the reader is not given a sense of direction. Language markers are not used to relate ideas to each other.

A **multi-structural approach** 'goes through the motions' of building up an argument as well as providing more detailed explanation and elaboration of the different positions on polygamy. My analysis of the cases shows that despite presenting relevant ideas in the essay, there is an absence of a sense of purpose to the writing. Students recount the

different perspectives without explaining how ideas are connected. Consequently, the essay resembles a summary of selected ideas on the topic without reflection on the importance of how the ideas fit in with what the student wants to say. The writer's own position is disconnected from the arguments discussed in the body of the essay. The essay may have been neatly structured into sections for or against polygamy but there is no sense of completion to the whole piece. Crème and Lea (1997:91) would argue that students have not worked out their 'story' in which the 'writer and the reader know clearly what this piece of writing is about'.

The one instance of **relational thinking,** unlike uni- and multi-structural writing, is characterised by a 'definite central idea with reasons for it and evidence to back it up and support it' (Crème and Lea 1997:90). As mentioned in the analysis of the other tasks, this writing has a different quality as it went much deeper than simply recounting the 'what' of different positions on polygamy. The student asks more analytical, searching questions of the evidence in terms of its importance to the central question. He weighs up the different positions and comes to some judgement about them. The organisation is integrated in a particular sequence and the structure makes sense to the reader. The student paid attention to the connecting devices he used, which helps carry the argument along, thus forming an answer to the essay question.

As mentioned in the Chapter Five, the usefulness of applying the SOLO taxonomy is to assess how students perform in relation to each of the criteria. There is considerable variability and unevenness in terms of their particular strengths and limitations. Students may have mastered the organisational demands of the assignment, but have not addressed the essay topic as a whole. I have combined an average and global impression of the task simply to facilitate the comparison of cognitive with meta-cognitive tasks in the subsequent chapter on meta-cognition.

Table 6.1: SOLO taxonomy applied to solid achievers

Students	Using evidence	Taking a position	Developing a line of argument	Language of cause-effect	Global assessment
Thabo	Low relational	Low relational	High multi-structural	Low multi-structural	High multi-structural
Maloko	Moderate multi-structural	Moderate multi-structural	Low multi-structural	Low multi-structural	Low multi-structural
Bramley	Low multi-structural	Low multi-structural	Low multi-structural	Moderate multi-structural	Low multi-structural
Lebogang	Low relational	Low relational	Moderate multi-structural	Moderate multi-structural	High multi-structural
Imelda	High multi-structural	Moderate multi-structural	Low multi-structural	Low multi-structural	Moderate multi-structural
Karabo	High multi-structural	High multi-structural	Low multi-structural	Low multi-structural	Moderate multi-structural

Table 6.2: SOLO taxonomy applied to borderline achievers

Students	Using evidence	Taking a position	Developing a line of argument	Language of cause-effect	Global assessment
Isiaah	Moderate multi-structural	Uni-structural	Low multi-structural	Low multi-structural	Low multi-structural
Lindiwe	Moderate multi-structural	Low multi-structural	Low multi-structural	Low multi-structural	Low multi-structural
Joe	Moderate multi-structural	Low multi-structural	Low multi-structural	Uni-structural	Low multi-structural
Angie	Uni-structural	Uni-structural	Uni-structural	Uni-structural	
Sipho	Uni-structural	Uni-structural	Uni-structural	Uni-structural	Uni-structural
Mabe	Low multi-structural	Low multi-structural	Uni-structural	Low multi-structural	Low multi-structural

1.6 Discussion of polygamy essay

As in the analyses of other writing tasks, I draw on my knowledge of how students performed both in the Foundation Course as well as in the degree as a whole to evaluate the effectiveness of the model as well as the students in the case study.

1.6.1 Method of analysis

In applying the SOLO taxonomy, it is beneficial to have a differentiated perspective on student learning related to the argument task. There were new and different cognitive demands as students were required to build a coherent argument by considering different positions on polygamy and weighing them up. As mentioned in the introduction to this

chapter, the key principle governing my analysis of the argument essays is student capacity to develop a **thread of argument**.

Despite the intensive scaffolding for this task around building and structuring a convincing argument, students produced very disappointing essays on the whole. When one compares the assessment of their essays for this task to that of the comparison phase of the course, it appears that they regressed in certain areas, especially in their ability to organise and link pieces of information. This can be attributed to the importance of crafting an argument in a particular way to address the purpose of this essay. Even if a student used appropriate evidence to back up an idea, there was no overall coherence that gave a sense of direction to the writing. I need to uncover why students have difficulty transferring the skill of categorising information from the comparison phase of the course to a new essay-writing genre. This phenomenon is also surprising in the light of student exposure to argument essays in other disciplines in the Faculty of Humanities. Kamler (2001) would argue that exposure to academic genres does not in itself produce competent and confident writers. Other educational strategies are needed for students to develop reasoned pros and cons on an issue before taking an authoritative position in their writing. This critique will be explored in the conclusion in Chapter Eight of the thesis.

1.6.2 Comparing solid and borderline achievers

Solid performers, as in the comparison phase of the course, were stronger than borderline performers conceptually. This manifested in their ability to provide ‘strong sense’ reasoning to back up arguments in favour of and opposed to polygamy. Solid performers were also better able to defend their own position on the topic and relate their ideas to those presented in the essay. Though there is little evidence of strong relational thinking amongst the solid performers at this stage, many of these students show potential to explain their ideas convincingly and to formulate their own positions. The gap in both sets of performers is in their ability to weigh up the evidence in order to come to some judgement about it. The course pedagogy may not have emphasised students’ ability to write authoritatively in the transition to the argument phase of the course.

Students in both categories had difficulty organising their ideas to address the strengths and weaknesses of polygamy, an area that needs to be seriously considered in terms of teaching and assessment practices. Student performance fared worse in the actual construction of the argument than in using evidence to explain the different positions, though some performers in the borderline category remained consistently uni-structural for organisational and content aspects of the essay. The structural features of this essay are an integral part of the formulation of the argument, which may account for the poor performance in both. Most students were unable to build up their writing point by point using a general-specific structure in paragraphs. They seemed better able to assimilate the structure of a 'compare and contrast' essay than an analytical argumentative one.

A key factor holding students back from articulating clear explanations is their difficulty using the language of cause and effect to represent relationships between ideas. It appears that students' poor language skills constrain them from organising their essays systematically both within and across paragraphs. This aspect is far weaker among borderline performers even though they all improved their language expression in the final draft of the South Africa-Zimbabwe comparison. This also suggests the need for a greater emphasis on developing language tools for analytical writing. Across the board, a major writing weakness is in students' referencing practices. This is both in terms of the material they selected from various texts and how they integrated the extracts into their writing. Furthermore, most students did not acknowledge where they located information for this essay. These findings alerted me to the need for students to develop strategies for using sources in order to show where evidence comes from and how to incorporate it into the argument structure.

In terms of individual student output on the essay, four of the six solid performers came down one level from the final draft of the South Africa-Zimbabwe comparison. Unexpectedly, Bramley came down three levels and functioned at a low multi-structural level in the argument essay as compared to a moderate relational level in his comparative essay. Besides examining the changing task demands of the different essays, I explore other course and student-related factors in the concluding chapter that may explain these

discrepancies. Interestingly, in the borderline category, three students remained constant in their overall performance from the final draft of the South Africa-Zimbabwe comparison to the argument essay. Though they began from a low base, this does show capacity to sustain what they had learnt from the previous essay-writing interventions.

It is instructive to compare levels of understanding on the argument essay with that of the research report as they both required more analytical thinking and engagement with topical debates. As students conducted their research in an area of their choice, it was hoped that they would engage more personally with their writing and move away from the 'imitation' writing described earlier. Crème and Lea (1997:104) propose that it is possible for students to 'have a sense of ownership' in their writing if they are confident about the subject matter.

2 Research Report

Students were required to select a topic for a small-scale research project on multilingualism in South Africa. They were expected to investigate topics concerning 'how language impacts on our everyday lives and to research and study the social factors in language use' (Granville 2002:180). The research project was conducted in small groups that worked together throughout the course. As discussed in Chapter Four, language topics that related to language issues in society were introduced to students such as naming practices, code switching, literacy practices and language differences arising from factors like gender and ethnicity. Students were encouraged to examine the kinds of data collected in research articles and how writers reached their conclusions, practices characteristic of academic discourse.

The research task focused on various aspects of quantitative and qualitative research methods. In small groups, students brainstormed and chose their own topic for the project; formulated a research question; designed the process in relation to research sites and samples; planned questionnaires and interview schedules; analysed and interpreted data and attempted to reach a conclusion on the basis of the questions and issues raised by the research. Extensive materials were used to teach students about quantitative and

qualitative forms of data collection, how to draw questionnaires, conduct interviews and construct open and closed questions. Granville (2002) has drawn on Cummins' notion of 'context embedded' materials (1996) to make a case for the scaffolded course materials that enable additional language speakers to handle the complexities of the task demands. Students had to produce the following for assessment purposes: a group proposal for the investigation they chose to do, an oral presentation and a final report of their research (an individual written project), which is the object of my analysis. Students were also 'required to reflect on their personal reflections of the research process itself' (Granville 2002:21).

It can be argued that this activity provided the right conditions for students to participate in and become competent in research activities at the university. Granville (2002:183) claims that it is a project 'grounded in an exploration of issues close to students' understandings and experience, as multilingualism is a normal part of their everyday knowledge'. As the pedagogical approach affirmed for students what they knew and understood about the meanings of names in their lives, students were able to relate with confidence the 'practices in their communities related to their social identities and contexts' (8). As mentioned in Chapter Four, the social theory of 'communities of practice' (Lave and Wenger 1991) is relevant for an analysis of this research section of the course as it highlights the journey students take in entering an academic community

2.1 Method of analysis

There were three types of activities students were engaged with in the research report: the description of the research process, the analysis of data in which students investigated patterns and counter patterns, and the interpretation of data. Students structured their research reports as follows:

- Abstract (a brief summary of aims, methods and results)
- Aims of the research (main research questions and rationale for the research)
- Methodology (**description** of data collection process)
- Findings (quantitative and qualitative **analysis** of data)
- Discussion of findings (**interpretation)**.

The last section was the reflection on the research process, which is analysed in Chapter Seven on meta-cognition.

The SOLO taxonomy is applied differently to the research phase of the course as it consolidates a number of cognitive strategies students had learnt from the writing tasks analysed previously. Firstly, students were required to apply the skill of categorisation to the analysis of their findings in the research report. Both the school-university comparison and the South Africa-Zimbabwe comparison focused on categorisation, the former on students' own experiences and ideas; the latter on representing different perspectives from the three data sources. Categorisation in the research report was a more complex and higher order process as students generated their own categories emerging from the data. Secondly, students had to supply reasons and examples to explain their findings as well as to interpret the findings for themselves. 'Students have to show the value and meaning of their findings in general and demonstrate that they have to some extent answered the research question' (Granville 2002:191). Students would have acquired the relevant skill of formulating an argument from the polygamy essay.

Because of the many different aspects to the research report, I have developed a rubric that unpacks the criteria more systematically after the discussion below.

2.1.1 Content of the research report

For each section of the research report, it is possible for students to operate at levels ranging from uni-structural to extended abstract. Uni- and multi-structural responses focus predominantly on 'the what' of the task incorporating different amounts of information and material. For example, students state the aims without including a clear rationale for doing the research project. Similarly, they describe the method without explaining why certain questions have been asked or omitted or a particular approach adopted to elicit information. In the findings section, the key issue is how students consolidate and support the range of responses to their interview and written questions. Uni- and multi-structural responses involve crude forms of categorisation that include varying degrees of evidence to back up general findings. In the discussion section,

students writing at the uni- or multi-structural levels identified general trends with minimal probing or unpacking of the reasons for certain viewpoints held. It must be noted that categorisation is handled in both the content and organisation sections of the analysis. The former deals with conceptual and explanatory issues, while the latter with the technical management of the material.

Unlike the previous writing tasks, it was possible for students to function at both relational and extended abstract levels in the research report. For each section described above, the sense of integration into a coherent whole characterised relational thinking. There was consistent reasoning throughout the report in terms of the purpose of the project, the methods selected as well as the categories formulated. The process of standing back and reflecting on the meaning of the project results in an integrated and well thought through piece of writing. An extended abstract response weighs up the merits of the reasons provided from various perspectives as well as examines the implications of these views. In addition, the researcher challenges commonly held assumptions and raises questions to highlight issues of status and power.

2.1.2 The organisation and language of the research report

As the report was divided into different sections, students were required to integrate the various aspects so that it had a coherent structure. A relational organisational structure involves conceptualising the essay as a whole by imposing an organisational pattern on the material. Although the headings provide a framework for this structure, students needed to identify and elucidate the relationship between different dimensions of the report. The formulation of categories, as in previous tasks, is a crucial intellectual activity as it signalled an understanding of how ideas and concepts fit together in the findings section of the report. An integral part of this is the connection between quantitative and qualitative data. The individual sections of the report themselves require a logical structure so that they make sense to the topic as a whole. The issue of sequencing was particularly important, for example, when students documented the data collection process accurately. Students consistently used connecting devices to provide coherent links in a relational report.

While relational reports provide a clear organisational thread throughout, in uni-structural writing, ideas are presented separately with little attention to logical sequencing. A multi-structural approach involves a more substantial account of the material, but ideas have not yet been integrated into a coherent whole. Though similar ideas may have been grouped together, it remained difficult for the reader to discern the key categories or to understand the relationship between quantitative and qualitative data. Connecting devices were used sporadically to signal comparisons and cause-effects relationships in uni- and multi-structural writing.

2.2 Analysing reports within groups

In the discussion below, as compared to previous analyses, I examine student writing in the context of the groups students operated in to carry out their research. All except two students in the case study conducted the research with at least one other member of the case study. It is therefore useful to compare written reports within groups as students drew on the same data sources, interviews and findings of the group as a whole, yet produced different pieces of writing. I have formulated a rubric, presented below, to map out the broad and complex range of criteria necessary to assess the research reports. The rubric, derived from reading numerous research reports of students in the Foundation in English tutorial group (33 students in total), has enabled a more in-depth comparative analysis of student performance in the report. In each group, students are in a range of success categories from *n* + 1, *n* + x and NR (not registered). I have showcased issues that characterise the different groups. For example, groups have various issues or show discrepancies in handling different aspects of the report: Group 1 with the skill of reasoning, Group 2 with categorisation, Group 3 with the interpretation of data and Group 4 with the use of evidence. Two students who did not have fellow group members within this case study showed remarkable shifts in levels of higher order thinking. I have provided a more all-encompassing detailed analysis of Group 1 in order to establish a baseline with which to compare other groups.

Table 6.3: Rubric for analysing research reports using SOLO taxonomy

	Content	**Organisation**	**Language**
Uni-structural	• Focuses on 'the what' in all sections of the research report – little attention to purpose or reasons for methods and findings. • Minimal evidence to back up findings of research. • No interpretation of general trends.	• No overall coherent structure – poor links between sections. • Weak categorisation of findings – isolated points presented and no connection between quantitative and qualitative data. • Poor logic within sections especially data collection procedure.	• Sporadic use of connecting devices, in particular language of comparison and cause and effect. • Average outline of research process and signalling different aspects of the report.
Multi-structural	• Elements of reasoning evident in some sections but focus mostly on 'the what'. • Adequate (increased) evidence to back up findings of research. • Summarises findings. • Signs of interpretation but limited justification.	• Some coherence to the report but inconsistent linking between sections. • Similar ideas sorted into separate categories but findings not clearly integrated. • Vague relationship between quantitative and qualitative data • Adequate sequencing, logical development of ideas within individual sections of the report.	• Appropriate use of connecting devices: language of comparison and cause-effect. • Competent outline of research process and signalling different aspects of the report.
Relational	• Focus on 'the what' and 'the why' in most sections of the report – clear purpose and strong reasons supplied for methods and findings. • Evidence explained to justify findings of research. • Convincing interpretation of findings. • Proposed recommendations.	• Overall coherent structure with explicit links between sections. • Effective, integrated categorisation of findings. • Logical development of ideas within sections – clear sequencing of processes.	• Effective use of all connecting devices: comparative and cause-effect markers. • Explicit and logical account of research process and clear signalling of different aspects of the report.
Extended abstract	Relational mode of operation as well as: • Reflection on the meaning of the research project as a whole. • Nuanced interpretation and critical evaluation of findings. • Examination of implications of findings. • Construction of personal meaning.	Relational mode of operation.	Relational mode of operation.

2.2.1 Analysis of Group 1: Thabo, Isiaah and Lindiwe

Topic: Students' views or attitudes towards English as the dominant language and as a medium of instruction and language of learning and teaching.

Key challenge for the group: The ability to reason in all aspects of the report.

2.2.1.1 Content

a) Reasoning

There were striking differences in the writing in this group, particularly in the use of reasons to justify choices made in the research project. Thabo provided extensive explanations in each section of the report. In the abstract, he said that the group chose the topic '*because since Wits had so many black students from all over South Africa and other African countries, we were interested to find out which language is used by them in their conversations or to bring them together'*. This explanation contrasted with the approach of the other two group members who merely rehashed the title of the report when describing its purpose. Isiaah pointed out that the '*purpose of choosing this research question was to find out the people's view towards the use of English as suitable for them or should be changed*'. He refrained from producing a rationale despite the intensive scaffolding around justifying the research question (see Chapter Four). This focus on 'the what' rather than 'the why' was also found in Lindiwe's abstract when she outlined the reason for their research 'to investigate the attitude that students have towards the use of English'. There was no unpacking of reasons for investigating this topic.

In the aims section, Thabo gave a real sense of why the research project centred around students' feelings about the image of English.

> *There were some reports that students sometimes fight or clash with each other as a result of showing how much one knew it* [English] *better than the other one therefore taking an advantage of being superior thus creating some attitudes towards it.*

He used connecting devices to indicate the effect of superior attitudes on interpersonal relationships. Once again, neither Isiaah nor Lindiwe stood back from the project to reflect on how they 'arrived at' this topic. They provided a surface description of the aims devoid of reason or argument. An example of this is, '*We were interested in getting people's attitudes towards English as a medium of instruction and language of learning at Wits*'. The most instructive aspect of the aims sections in both these students' essays was the inclusion of the interview questions generated by the group. These were: 'Is English a killer or oppressive language and why do you think so? Which language is mostly spoken by Wits students? (In what circumstances and why?) Should English be continued to be used as a medium of learning and teaching?'

None of the three students reflected in any depth on why they chose particular methods for collecting data. Lindiwe made one insightful comment about unstructured interviews '*which allow respondents to develop answers outside the structured format and it helped us to get depth view from the interviewees*', and Thabo justified choosing black students '*as they are the ones which experience these problems*'. For the most part, there was simple recounting of the data collection procedure.

b) Use of evidence to explain findings

All three students lacked detail in the presentation of their findings. They had clearly spent time in their groups formulating logical categories and discussing main patterns and counter patterns. Unfortunately the reports do not do justice to these discussions as they merely represent two or three aspects of the research outcomes. After explaining his categorisation of the findings on different attitudes towards English as the medium of instruction, Thabo was surprised that some of the black students interviewed were unable to speak their mother tongue. He revealed his own views regarding the '*bad impression this creates to other black students including myself*' and he generalised about other students' negativity towards non mother-tongue speakers, '*some students even hate these students by considering as making themselves better than others*'. This was the only finding he discussed in any detail and he excluded quotes from the group interviews in the findings section. He fixated on this issue as he continued to analyse possible reasons

for students' inability to speak their mother tongue. Reasons posited were students attending English schools and planning to go overseas in the future.

In the findings section, both Isiaah and Lindiwe summarised key findings in very general terms by providing a serial account of the different attitudes. For example, Isiaah listed a number of points like, '*Out of the forty students we interviewed nine said English will advance us to international job… twelve students stated that English should be used because it's a global language of communication*' and so on. There was no attempt by either of them to capture the comments emerging from the research to bolster the group findings or to explain the evidence from their perspective. Lindiwe enhanced her discussion by relating the group findings to Trew's (1994) comment about the necessity for all South Africans to learn an African language. She too used limited information to back up her findings characteristic of uni- and multi-structural thinking. This common approach amongst the students did not reflect the extensive effort expended on working with data in class. I will explore reasons for this phenomenon when I discuss the findings at the end of this chapter.

c) Interpretation

This final section of the research report, more than any other, differentiated between students functioning at higher, qualitative modes of operation from those at lower, quantitative levels of understanding. This is because the capacity to interpret information relied on students' ability to stand back and oversee the thinking emerging from the data sources. For instance, students needed to ask themselves why certain findings were prevalent amongst the respondents, or why others ran counter to common understandings of phenomena. This section also gave students an opportunity to critique the validity of the project as a whole and to discuss the findings from their own perspective.

In this group, none of the students evaluated the findings in any depth and re-summarised them without critical engagement. Isiaah paraphrased the key findings competently and explained the unexpected response the group elicited from students, '*We thought maybe they will give us negative response about the use of English… but we found that they*

mostly support the idea of English as a medium of instruction and language of teaching and learning'. He did not venture an explanation of why '*African students*' hold this view. Similarly, Lindiwe restated the different perspectives on the issue, but was unable to explain why the respondents either see English as '*oppressive*' or '*necessary for cost reasons*'. Thabo demonstrated the capacity to explore the 'bigger picture' of the research project when he reflected on the limitations of the project, '*the research sample was too small to make definite generalizations about all students in campus*'. He also recognised the implications of the findings when he suggested that '*more work needs to be done on finding how the students feel about languages in Wits campus which may bring changes to the university if necessary*'. This can be considered low relational as it related information to the report as a whole.

2.2.1.2 Organisation

a) Clear structure and sequencing

The strength of the reports across the board was in students' ability to sequence ideas within sections. They seemed to have learnt how to order material appropriately especially when outlining the research procedure. They provided adequate details in terms of the allocation of tasks and how they addressed the 'who (respondents), what, where and how (research methods)' of the research process. Extended time spent in groups may have facilitated this attention to detail in the writing up of the procedure as all three students described details of the methods used. Below, I have included aspects from Isiaah's and Thabo's method sections respectively, which are particularly thorough and logical:

> *Our sample consisted of people from Wits religious students, international relations foundation students, ladies soccer players and first year students from social work department. The research took place at many venues, but we had specific sites to collect this data. The sites were Dig's sports ground because that is where ladies soccer players are found most of the time, East Annex where International Relations students go to lectures…* (Isiaah)
>
> *Each member of our team had to interview or conduct research individually on*

> *about a minimum of ten students. We drafted questions which will provide both quantitative and qualitative results and to accommodate some of our respondents we had to give them questionnaires to fill overnight as some of them were uncomfortable to answer the questions directly.* (Thabo)

As mentioned previously, students accounted for the different research methods used and in some cases explained how the interviewees were made to 'feel at ease'. Most significant in these descriptions was the correct use of research terminology. Students appeared familiar with using the terms 'un/structured interviews', 'Likert scale', 'sample', 'site', 'data', 'respondents', 'quantitative and qualitative data' and 'pilot study', which can be attributed to the extensive emphasis on research discourse in the second module of the course.

Although the headings of the report served to assist students to organise their information, the prescribed structure may have inhibited students from generating their own connections between different parts of the report. There was no evidence of linking sentences between the sections that signalled the sequential development of the reports as a whole.

b) Development of categories

I have treated categorisation as an organisational skill in this section as students were required to sort pieces of information (reasons) from various sources into manageable categories. In the content section I concentrated on how students explained the formation of categories to the research topic as a whole. Students in this research group clearly benefited from spending time sifting through the data to formulate their categories. They had developed a solid sense of their categories and presented them confidently. In all their reports they presented the results from the quantitative questions in tables before outlining their system of categorisation. The three categories derived from the numerous reasons elicited from interviews and questionnaires were: Positive, Neutral and Negative.

Thabo moved the most easily between written and visual forms of representation by connecting the information relationally. He had gathered and organised the reasons given by his respondents for supporting or rejecting the use of English into categories. Within each category, Thabo arranged and numbered his reasons appropriately. He said that in the 'positive' category, the respondents supported the use of English as it is a '*global language of communication*', would be too costly to change and '*advances us to international jobs*'. The 'neutral' position suggested that '*African languages should be given chances as well so that they may not vanish*'. Finally, the 'negative' category posited the view that English is an '*oppressing language because there are some black students who cannot even utter a word of their mothertongue*'. All three students devised a fairly accurate bar graph for representing numbers of students within each category.

2.2.1.3 Language markers

Although students presented the same categories, Isiaah's and Lindiwe's groupings of reasons were not explicit and there was less of a flow between visual and written information. This can be attributed to poor signposting and expression of the findings. In Isiaah's discussion of the findings, for example, he listed the sets of reasons in jumbled form making it difficult for the reader to discern the three categories. He jumped from points about African roots to cost factors and internationalisation without making it clear to which categories these explanations belonged.

In terms of signposting, Thabo, unlike the others, made specific reference to what he was going to discuss.

> *The following bar graph will show the data we received from our quantitative questions. The qualitative data will be included in the bar graph and will be discussed later. I will firstly summarise the results by drawing a table and show the results as we had received them, then later will be categorized into a bar graph.*

As mentioned earlier, the other students in the group used the headings as the organising principle for the report without signalling different aspects of their discussion.

The following table compares the performance of the three students in the research group using the SOLO taxonomy. In my analysis, I refer to the detailed breakdown of criteria within the SOLO taxonomy and provide an overall assessment of content, organisation and language before supplying a global assessment for comparing with other cognitive and meta-cognitive tasks.

Table 6.4: Comparison of the performance of the three students in Group 1

Student	Content	Organisation	Language use	Global assessment
Thabo	**Reasoning:** Extended abstract **Use of evidence:** Low relational **Interpretation:** Low relational	**Sequencing:** High relational **Categorisation:** High relational	Low relational	High relational **39/50**
Isiaah	**Reasoning:** Low multi-structural **Use of evidence:** Low multi-structural **Interpretation:** Moderate multi-structural	**Sequencing:** Moderate multi-structural **Categorisation:** Low multi-structural	Uni/low multi-structural	Low/moderate multi-structural **29/50**
Lindiwe	**Reasoning:** Low multi-structural **Use of evidence:** Low multi-structural **Interpretation:** Low multi-structural	**Sequencing:** High multi-structural **Categorisation:** Moderate multi-structural	Low multi-structural	Low multi-structural **28/50**

2.2.1.4 Comments on Group 1

There are large discrepancies between Thabo and the other two group members who were not able to integrate the accumulated research material to address the research question as a whole. They do not explain the choices they made in the research process that shows their understanding of the core issues. Thabo has made steady improvement through the course and began showing relational processing in the second draft of the school-university comparison especially in his formulation and explanation of categories. His use of connectors does not yet enable him to analyse and connect ideas at a more sophisticated level of analysis but he shows potential to operate in the extended abstract

mode of operation in his research report. Thabo's smooth transition into other years of study at university as an *n* + 1 student is predictable in view of his diligent, committed approach to the course.

The main concern about the other two members of the group is their inability to stand back and unpack the reasons for 'doing' this research project. Isiaah displayed the capacity to interpret data at a higher level than Lindiwe, but remained at the low to moderate multi-structural level. Lindiwe is more consistently low multi-structural throughout her course tasks. She eventually dropped out of her five-year Social Work degree after spending six years at the university. In consideration of her slow progress in the Foundation Course this may not be surprising. Despite his borderline performance on the course, Isiaah completed his degree in record time. Student reflections on the course tasks, to be discussed in the Chapter Seven, further explores reasons for uneven performance at university as a whole.

In the rest of the chapter, I analyse the reports of the remaining research groups according to the criteria outlined above. My analysis highlights issues strikingly different or similar from the trends already identified. It does not cover all the criteria but hones in on those that raise concerns or questions about student writing in this research phase of the course.

2.2.2 Analysis of Group 2: Maloko and Imelda

Research question: How do naming practices differ among different age groups or generations in Javambu Street, Chiawelo?

Key challenge for the group: The ability to categorise and integrate information from different data sources.

2.2.2.1 Content

a) Reasoning

Interestingly, the two students in this group were able to provide reasons for all aspects of their research, i.e. the research question, aims, method and findings, a lot more consistently than the previous group. This may be that their chosen topic lent itself to

'connected' thinking in terms of their experiences and interest in the subject matter of naming practices. Maloko stated strongly in her abstract why the group was interested in explaining the factors influencing name changes over generations.

> *In addition we thought that our study would help us to understand the change in names and predict how the naming practices would be in the next generation. We noticed that feelings either positive or negative towards a name were determined by the political, cultural and social practices at the time.*

Although Imelda tended to repeat the topic in her rationale, she also made the point that '*we wanted people to realize that there are some important issues behind names and naming practices, because people are not just given names without a reason, there is a lot of information about their names*'. There was a genuine desire to uncover some of the factors that '*impact on naming practices*' across different generations. Both students justified their choice of site in an '*old location*' as making it more possible to interview a wide range of ages and ethnic groups. This enabled them to divide their research subjects into three generations: older, middle aged and younger.

b) Use of evidence to explain findings

Both students elicited interesting and varied information about naming practices experienced by different age groups. They narrated the stories of some of their research subjects that illustrated cultural and social factors influencing name changes.

> *In our case study a guy called Sello or Brian. His name Sello is from initiation school and Brian is for economic purposes looking for a job.*
>
> *A middle aged man was named after his father's employer. He said, "My father gave me the name Jack. I like my name Jack very much because Jack was a man my father looked up to".*

Though these cases exemplified different factors influencing naming practices, the students did not link them directly to the cultural and social categories identified. This contrasted with Group 1 that provided sound generic categories, but did not illustrate their material sufficiently.

Poor explanations by both students weakened the system of categorisation developed in the group process. Maloko, for example, separated her general claims about the findings from the examples gleaned from the interviews. On the one hand, she made the following broad claim with disconnected ideas and no evidence backing it up:

> *The second factor that determined the naming practices is the religion of the family, however this does not work well with the women because their rights are violated and it is claimed that lobola has been paid for them.*

On the other hand, she presented numerous examples without explaining their significance to the broader project. Imelda simply inserted a heading of the general category before elaborating on the detail. She did not explain the relationship between the example and the general factor.

> *Natural circumstances. Mapula (rainmaking) got her name because there was no rain and when she born there was rain and they name her Mapula.*

It is interesting that both students wrote more relationally when discussing the attitudes of different age groups towards their names. This issue was not part of their original research question but emerged organically from their analysis of naming practices. Their reports revealed animated discussions about attitudes as they analysed the differing results. Maloko asserted, '*The negative attitude is due to patriarchy, a woman called Katlego does not like her name because her maiden name is not used*'. Additionally, she described the following as an example of '*negative attitudes due to social exploitation*'.

> *Mariam was a domestic worker who said, "My name was Mhlodi but because my madam could not pronounce it, she called me Mariam. I don't like my name because I do not know what it meant".*

Similarly, Imelda explained that '*old people have positive attitudes towards their names because they were names about their culture and they know better about culture. Moreover they got the names of their forefathers and from initiation schools*'. Though she had difficulty expressing herself, there was a stronger sense of explanation and justification when she wrote about attitudes.

Despite these glimmers of relational thinking, I would classify both reports as multi-structural in terms of students' overall use of evidence to explain their findings. The writing was fragmented, as examples were jumbled and uncategorised on the whole. The connected writing only occurred when students veered off the topic and discussed matters they related to more easily.

2.2.2.2 Organisation and language of categories

In this section I deal with organisational issues in the analysis of students' formation of categories. It is evident that the representation of findings was closely related to the conceptual challenges students face in categorising information. The students used the following general labels to describe the bar graph titled, 'Different factors influencing naming practice: Change, Natural and Social'. Unfortunately, there was no connection between quantitative and qualitative information, as the reader was required to make the connections between these categories and the detail presented in unstructured form.

As discussed with reference to Group 1, the system of categorisation does not do justice to the many hours of class preparation students engaged in around the skill of categorisation. The 'sloppy' writing and lack of structure for presenting the findings did not allow for convincing explanations of these categories. Maloko switched from computer writing to her own almost illegible script when listing the findings. This apparent poor effort was a puzzling phenomenon in view of the large emphasis placed on this research section of the course in particular the hefty marks allocated for the reports (see Appendix A) It is an issue that is explored more fully in the concluding chapter of this thesis.

It is surprising that in the second half of the year, certain students remained constrained largely by their difficulty in using appropriate language to express the connection between their ideas. Many of the above extracts and the following statement by Maloko capture this unclear expression, which disrupted the flow of ideas and obscured the meaning.

> *We were required to find a light difference between number of positive and negative attitudes because of hateful political forces, however people's culture made them happy despite the fact that they mostly had English names.*

The students have not yet developed a meta-language to explain ideas or construct a coherent research report.

2.2.2.3 Interpretation

This higher order level of analysis was a weakness in both reports as the students over generalised their findings. They made claims they did not explain in their reports and used new labels like 'political' and 'economic' factors to characterise the main influences on naming practices. Like Isiaah in Group 1, Maloko described the unexpected responses from certain respondents. For example, she had expected the youth to display a more positive attitude towards their names than they did, as '*there is no political pressure there is freedom to strengthen cultural influences in naming practices*'. Although she explained this assertion, there was no attempt to interpret findings that had emerged from interviewing people across different generations. Why, for example, are the youth so negative towards their names compared to middle-aged interviewees who appear positive?

In her final discussion, Imelda included points that had not appeared in her report like historical and life and death circumstances that played a role in naming practices. She also repeated examples of name changes she mentioned in the findings section. She appears unable to move beyond the multi-structural level of analysis by tying together the strands of the report. Her functioning involves the ability to recount the processes and results of the research process at a surface, unexplored level. There is no sense of her perspective on any of the research issues; merely a representation of others' views reminiscent of her writing in the South Africa- Zimbabwe comparison. Students in Group 2 have used limited space (in some cases only a short paragraph) for this section of the report, which reflects their difficulties interpreting qualitative data.

The following table compares the performance of the two students in research Group 2 using the SOLO taxonomy. Once again, I have referred to the detailed breakdown of criteria within the SOLO taxonomy (see page 181) and provide an overall assessment of content, organisation and language.

Table 6.5: Comparison of the performance of the two students in research Group 2

Student	Content	Organisation	Language use	Global assessment
Maloko	**Reasoning:** Low relational **Use of evidence:** High multi-structural **Interpretation:** High multi-structural	**Sequencing:** Moderate Multi-structural **Categorisation:** Low multi-structural	Low multi-structural	Moderate multi-structural **28/50**
Imelda	**Reasoning:** Moderate multi-structural **Use of evidence:** High multi-structural **Interpretation:** Moderate multi-structural	**Sequencing:** High Multi-structural **Categorisation:** Low multi-structural	Moderate multi-structural	Moderate multi-structural **27/50**

2.2.2.4 Comment on Group 2

These students were both solid performers on the Foundation in English course as a whole. Interestingly, Maloko managed to get her degree in the expected time of four years on an extended curriculum, whereas Imelda took an additional two years for a five-year Social Work degree. Unlike the previous group that organised its information into coherent categories, this group struggled to manipulate the data in an integrated way. As discussed, there is an abundance of disconnected examples and ideas that can be attributed to 'sloppy' last minute writing on the part of Maloko, and difficulty with grouping abstract ideas on the part of Imelda. When they discussed issues 'close to the heart' like attitudes to naming practices, they both wrote more fluently and presented their information in a sharper, more analytical way.

Although Maloko operated at a low level in the South Africa-Zimbabwe comparison, she showed potential to go deeper by 'teasing out' some of the issues in her research report. She has clearly benefited from the course pedagogy and the marker responded positively to her introduction by saying, 'you showed clearly how and why your group decided to change the research question'. The marker also appreciated her presentation of detailed cases, but expressed concern about her awkward written expression. Similarly, Imelda has tightened up her writing considerably since her poor school-university comparison. Nevertheless, at that later point in the year, she appeared unable to shift to a more analytical mode of operating, and continued to list serially at a high multi-structural level. She presented a thorough report that fulfilled most of the external, organisational requirements of the report.

2.2.3 Analysis of Group 3: Bramley and Mabe

Research question: Do you think the status of African languages will cease to exist in the next 50 years due to the dominance of English?

Challenge for the group: Differing interpretations of findings.

2.2.3.1 Content

a) Reasoning

Members of this group handled the ability to reason at totally different levels of analysis. Bramley provided a complex rationale for researching the declining status of African languages.

> *To know exactly what perpetuates these attitudes that African students at Wits have on their legitimate languages. To find out if African students at Wits are aware of the possible declining status of their indigenous languages and what attitudes do the African students have towards their languages.*

He also expressed his personal concern for the declining status of African languages and his desire to '*alert African students*' to this downward trend. Mabe, whose writing the marker described as 'verbose and pompous', focused more on the 'what' than the 'why' when he tried to explain the research topic. He said, '*Therefore the research was taken as*

a serious concern arisen from the researchers whereby they felt somehow an imminent directly pre-existing and prompted to the downfall status of these African languages.' Beneath his complicated words, he merely rephrased the research topic without unpacking reasons for conducting the study. This pattern continued throughout the report with Bramley reflecting on the purpose of the project (explaining) and Mabe recounting what happened (repeating) during the research process.

2.2.3.2 Use of evidence to explain findings

After a detailed description of the data collection procedure, both students provided sound and logical categories derived from the data. These were: **Agree**, **Disagree** or **Neutral** in relation to the statement, 'T*he status of African languages will cease to exist in the next 50 years due to the dominance of English*'. They produced clear bar graphs and pie charts representing the proportion of students in different categories. In his discussion and analysis section, Bramley elucidated on the reasons for each of the positions. For the majority view in support of this statement (agree), he pointed out that English dominated in educational institutions as well as '*in the labour market*'. He used explanations and examples to demonstrate support for this perspective.

> *Some of them remarked that many of the African languages cannot unfortunately cope with the many modern changes in science and technology. They have given reason that, when TV, radio and other modern invention pave or found their way in African communities, it was difficult to describe these inventions in local languages. Mahwete, one of my respondents said that today's Africans venerate western culture and it is not because they intend to do so, but is part of globalization.*

The relationship between English and the decline of African languages was foregrounded in these explanations, which is evidence of high relational thinking. Bramley also used lengthy quotes from his interviewees to support the alternative minority view that culture and mother tongue language are too interrelated for African languages to disappear in 50 years time. Those quotes were reminiscent of Bramley's own writing in terms of the

vocabulary and the stance taken. I question whether he had inserted some of his own words into the quotations. For example, he drew on Sue's impassioned plea,

> *This mother tongue language provides the means by which he/she can study and understand the values and concerns of society, and as long as from early ages we are socialized in our mother tongue, the status of African languages will not cease to exist, if so may I live to see it.* [Bramley]

Furthermore, Bramley used these 'quotes' to advocate a change in attitude toward African languages as '*it is the languages through which we thinks, dreams, cherishes, loves, scolds and learns*'. He warned of the '*adverse consequences*' of depriving a child of mother tongue language. He did not mask his own position, which supported the minority (disagree) view as reflected in the large (disproportionate) amount of time he spent accounting for this opposing argument. His conclusion drew out the implications of this perspective by suggesting that mother tongue language

> *can be used also as a formal language of education and to bear in mind that no greater injustice can be committed against a people than to deprive them of their languages, despite the mounting dominance of English in contemporary world.*

Despite his advanced, extended abstract analysis, the limitation of his emotional plea was that while developing his argument he failed to consider or refute the majority position emerging from interviews and questionnaires.

Conversely, Mabe provided a thin, unsubstantiated account for each of the positions that he labels, 'Negative', 'Positive' and 'Neutral' with reference to the research statement discussed above. His reasons were similar to Bramley's, but were less elaborated and instantiated. His writing contained illogical claims that were poorly explained, an example being his account of a respondents' depiction of English as the '*language of Queens*'. Mabe interpreted this statement on the basis of South Africa's Constitution, that all 11 languages '*should be equal and treated with the same status*'. This was an unlikely connection to the student's characterisation of English.

Most alarming was Mabe's incomprehensible, verbose conclusion that did not connect to the research topic as a whole. He claimed that '*despite the high degree of denial, there is a clear manifestation that English is earning high status in all spheres of influence*'. Similar to Bramley, the differing findings have not been fairly represented or synthesised in the concluding paragraphs.

2.2.3.3 Interpretation

The astounding contrast between these two students' reports was their different 'take' on the findings of the data collection procedure. Bramley asserted that the majority of respondents (63%) were in the 'Agree' category, i.e. that they supported the statement that the status of African languages was declining due to English; 7% remained impartial and 30% '*did not subscribe to the statement*'. Diametrically opposed to this, Mabe claimed that 63% of respondents disagreed with the statement and were in the 'Disagree' category while 7% were neutral and 30% agrees with the statement. What is particularly puzzling about this observation is that the two students had worked in the same group, generated the same categories and produced similar explanations for their findings, but drew different conclusions. On further investigation (from reading reports of other group members) Bramley's view was the more accurate interpretation of the data findings. It is not surprising that this discrepancy was not identified by the marker when one considers how difficult it is to read meaning into Mabe's verbose expression.

2.2.3.4 Language: using 'big' words

As mentioned previously both students used overly complicated words and phrases in their attempts to integrate academic language. Their perception was that abstract language enhanced the strength of their argument and would convince the audience of the legitimacy of their evidence. Fortunately for Bramley, his ability to explain ideas coherently and logically, overrode the problem of his pomposity. Mabe, on the other hand, often struggled to formulate his ideas intelligibly, thus, jeopardising his chances of developing a comprehensible argument. The following extracts are classic examples of this rhetorical style of writing.

> *Our research project was strictly racially fragmented on the African students, not because we are being racist but because we have realized that since our research project is narrowly focused on the concern about the declining status of African languages we could feasibly achieve our objectives.*

Although Bramley could not resist the temptation to insert various complex words and phrases, his meaning was patently clear. The extract below from Mabe's report characterises his convoluted style, making it difficult for the audience to decipher.

> [The research was conducted] *in order to evoke out some interesting points, claims and ideas that might correspond on how the dominance of English has contributed to the decline status of the African languages as evidence envisaged that English is taking the upper stage.*

Unfortunately, his choice of 'big' words ran the risk of detracting from the central meaning of the statement and developed a 'life of its own'. The marker revealed her frustration when she commented, 'you must concentrate on writing English in a simple and straightforward manner. Do not use big words and verbose phrases'.

The following table compares the performance of the two students in research Group 3 using the SOLO taxonomy.

Table 6.6: Comparison of the performance of the two students in research Group 3

Student	Content	Organisation	Language use	Global assessment
Bramley	**Reasoning:** High relational **Use of evidence:** Extended abstract **Interpretation:** Low relational	**Sequencing:** Moderate relational **Categorisation:** High relational	Low relational	Moderate relational **35/50**
Mabe	**Reasoning:** Low multi-structural **Use of evidence:** Moderate multi-structural **Interpretation:** Uni/ Low multi-structural	**Sequencing:** High Multi-structural **Categorisation:** High multi-structural	Low multi-structural	Low multi-structural **28/50**

2.2.3.5 Comment on Group 3

Bramley became consistently moderate to high relational in his writing in the latter part of the year. He shifted his level of functioning from high multi-structural/low relational since his comparative essays. He shows tremendous capacity to learn from the lecturer's feedback in the South Africa-Zimbabwe comparison essay. Even in that phase of the course, his explanations are superior to those of his peers in the Foundation in English course. His writing/thinking in the report is significantly more relational than his polygamy essay where he had difficulty developing a coherent argument. His one shortcoming in this report is his skewed interpretation of the data. Even though he made explicit the range of responses to the research question, he concentrated on his preferred position to the detriment of others.

Both Bramley and Mabe demonstrated impressive skills in the organisational aspects of the report. Mabe's functioning is elevated in this area as he provides coherent, convincing categories of analysis and connected quantitative with qualitative data, a substantial improvement on his polygamy essay. As discussed above, his interpretation is compromised when compared to Bramley's analysis of the findings, but his specific explanations of the findings are well executed. This reflects a major improvement in his overall writing compared to the regular low multi-structural mode of operation in all his other tasks. Like Bramley, he is able to move to a higher level in the second draft of his South Africa-Zimbabwe comparison in content and organisational areas.

2.2.4 Analysis of Group 4: Lebogang, Karabo and Angie

The following analysis will only focus on one aspect of the report: students' selection of evidence to form categories. Other areas were handled similarly to the groups mentioned above so do not warrant further discussion.

Research question: How do Wits University students, especially South Africans, become multilingual?

Key challenge for group: Use of evidence from interviews and questionnaires to support findings.

The most interesting feature of these students' reports was in the different way they captured information from the research process. They had all acquired a strong sense of what constituted a research report and justified the aim and research methodology convincingly. Without exception, they described the research process in some detail highlighting the balance between quantitative (likert scale) and qualitative (interviews and observations) approaches. Importantly, they explained their visual tables and graphs clearly by repeating the statistics and findings verbally. Nevertheless the reasoning was limited in the Group 4 reports, a phenomenon which will be analysed in the concluding section of this chapter.

2.2.4.1 Use of evidence to support findings

More than in any of the other groups, rich and elaborated examples characterised the nature of evidence used by Group 4 in their reports. Clear categories were developed for understanding the origins of multilingualism: the family, the speech community and academic institutions. Furthermore, the group elicited respondents' attitudes towards 'the environment as an influence on multilingualism'. In the 'family' category, Lebogang explained how Wits students' parents often originated from different ethnic groups, which accounted for their children's multilingualism. She narrated numerous examples to substantiate this point.

> *For example, Z.N. said that she is speaking Xhosa and N Sotho because her father is Xhosa speaking while her mother is a Northern Sotho speaker. E.B. also said she is speaking five languages as her mother is a S Sotho speaker and her father is from Malawi and speaks Nyasa.*

Lebogang explained how EB acquired the other three languages from social contacts at school and university. Additionally, she examined the benefits of being multilingual from EB's perspective.

> *She is a law student and enjoys speaking different languages as much as she can. She also thinks that knowing different languages will help a person to get different positions of jobs, such as interpreter at court and media.*

Similar detailed examples were integrated into the presentation of the other categories. She showed an understanding of 'speech community' by highlighting the differences between language learnt from parents and those '*dominating in their community*'. Lebogang wrote eloquently about the diversity of languages of university students and how easy it was to '*teach each other how to speak different languages*'.

In her analysis of students' attitudes towards the emergence of multilingualism, she generalised that '*most of the students got multilingual from the environment they live in*'. She concluded that most of these students '*enjoy having different languages and learning them… as it will help them in many opportunities*'. She made an insightful comment about students who oppose the statement that the environment had influenced multilingualism. These students, she says, had '*never lived in areas where they speak different mother tongue. They come from Limpopo province and speak one language which is northern Sotho both at home and the community*'. She chastised students who do not '*like other languages except their own*'. She claimed that these were Zulu speakers or students who had studied at multiracial schools who would rather select English as an alternative language of communication than other African languages.

Surprisingly, Angie moved from uni- and low- multi-structural thinking in all her earlier tasks to a higher level of analysis (low relational) in her discussion of evidence. Though she jumbled up the sections of her report by placing her findings in the discussion section, she presented a set of thoughtful and convincing categories. Her writing remained unstructured and rambling, but it was possible to discern the key findings and her own position regarding multilingualism. Like Lebogang, she gave multiple examples to represent the view that '*multilingualism is something which is very beneficial and important to everyone at any place*'. In particular she focused on university students.

> *Most of them said that to be multilingual at tertiary level help them to comprehend what other people are saying and understanding each other is convenient.*

The marker affirmed Angie for ‘very pleasing improvement’ and ‘good discussion and analysis’.

Karabo is the one student in this group who did not give detailed evidence to explain her findings. She made sound general comments about the research outcomes and described the step-by-step account of the research process. She did not, however, do justice to the extensive research process of interviews and questionnaires her group undertook. She merely summarised the findings and expressed her ‘*happiness*’ in finding that the ‘*dominant answer was that the environment influences students to become multilingual*’. Karabo’s interpretation of the data was more relational than her use of evidence as she supplied vivid examples to sum up the environmental impact on multilingualism.

> *I can also give an example of myself to support this statement. I only speak two languages but then the environment in Jo’burg is influencing me to learn Zulu, and in addition to that, my boyfriend is a Venda, then I also have to learn Venda. Then I have realized it’s all about the people around you, the environment.*

Interestingly, Karabo spent time in her report reflecting on various aspects of the research process and assessing the relevance of the answers obtained through interviews. This meta-level processing is discussed in more detail in Chapter Seven on meta-cognition.

The following table compares the performance of the three students in research Group 4 using the SOLO taxonomy.

Table 6.7: Comparison of the performance of the three students in research Group 4

Students	Content	Organisation	Language use	Global assessment
Lebogang	**Reasoning:** Moderate multi-structural **Use of evidence:** Moderate relational **Interpretation:** Low relational	**Sequencing:** High multi-structural **Categorisation:** Low relational	Moderate multi-structural	High multi-structural **33/50**
Karabo	**Reasoning:** Moderate multi-structural **Use of evidence:** Moderate multi-structural **Interpretation:** Low relational	**Sequencing:** Low relational **Categorisation:** Moderate multi-structural	Low multi-structural	Moderate multi-structural **32/50**
Angie	**Reasoning:** Low multi-structural **Use of evidence:** Low relational **Interpretation:** Moderate Multi-structural	**Sequencing:** High multi-structural **Categorisation:** Moderate multi-structural	Low multi-structural	Moderate multi-structural **31/50**

2.2.4.2 Comments on Group 4

The disappointing phenomenon in this group was the limited development of academic language. As a result of awkward sentence formation and clumsy expression, the meaning and interpretation of findings is often obscured. Despite the enormous emphasis on paragraphing in the comparative phase, the skill has not been translated to this section of the course. In some cases the categories have not been separated into paragraphs, thus minimising their impact. There is a predominance of colloquial language in phrases such as '*It really helped a lot*', '*We were so happy*' and '*We chose the matrix because that's where most of the students chill out*'.

Regardless of this, all the students in Group 4 mastered the complex categorisation required in the research task. Although they showed uneven progress through the course, they managed to 'do' and write research at acceptable levels of understanding especially in terms of high idea density. They were all operating at low levels in their school-university comparisons as well as first drafts of their South Africa-Zimbabwe comparisons. Both Lebogang and Karabo reconceptualised their essays following feedback and shifted to moderate multi-structural levels in their second drafts while

Angie improved by only one level to low multi-structural functioning. As mentioned previously, her performance in the polygamy essay regressed to the uni-structural level but she was able to 'rise to the occasion' in the research report. Lebogang already showed signs of relational thinking in her conceptual understanding of the polygamy essay.

2.2.5 Individual reports

These students were not in groups with fellow members of the case study but are discussed in the section below in terms of the important shifts they made in academic competence. I have spent more time discussing Joe because of the significant improvement in his writing.

2.2.5.1 Challenge for Joe: evidence of higher order thinking

Joe began the Foundation in English course very shakily and produced a low order, highly literal school-university comparison. His writing was showcased in the comparison chapter to illustrate the concept of low idea density as well as concrete, surface level thinking. His writing required urgent remediation to enable him to handle the challenges of university level tasks. In earlier tasks, his lecturer commented on her frustration with his poor language expression as well as his 'appalling handwriting'. She expressed the view to me, in my capacity as teaching and learning advisor, that he probably should not have been admitted to the university through the alternative admissions process. Her perception of Joe gradually changed through the year as he was able to respond significantly to her feedback and make qualitative changes to his essays. He received the class award for the most improved student in 200x. Her comment on his research report is, 'Well done, you have made great progress this year. This report shows that you have grasped the main principles taught on the course and have managed to pull the different strands of your project together…'

Research question: How did Wits students become multilingual and how do they feel (about) or make use of their mother tongue?

The problem with this report was its lack of focus on one topic like the use of the mother tongue. The marker pointed out that there were 'too many bits and pieces', an issue I explore in the concluding section of this chapter. This lack of direction, however, did not detract from Joe's report, which displayed higher order thinking in a number of areas.

a) Reasoning

Joe wrote a thorough rationale for his research question.

> *The rationale of our project is that we noticed that many Wits students are multilingual (they know more than two languages). They code-switch and code-mix fluently without however getting any problem and difficulties. Therefore, after observed this, we realized that its very much crucial for us to know what factors can lead to a person's multilingualism. On the other hand, we realize that students turn against their mother tongue, therefore it is crucial for them to be alert of the importance of their mother tongue.*

Unlike many of the students, discussed earlier in this chapter, who merely rehashed the report topic in their rationale, Joe had thought through the reasons for his project and seemed genuinely motivated to investigate the contradictory phenomenon of multilingual students who rejected their mother tongues. With his fellow group members, he made an effort to conduct interviews in a number of student residences. He justified using both quantitative and qualitative research methodologies by drawing on a research theorist.

> *According to P. Herdina, the qualitative method is very much crucial to provide with the reason for their answers and their opinion. He further goes on saying that in quantitative method you can know about the number of people who support or refute the statement.*

Joe explained how his use of both structured and unstructured interviews yielded quantitative and qualitative results.

b) Using evidence to explain research findings

There were so many disparate findings in the report that it is difficult to identify the central issues. Those that Joe discussed in the findings sections were explained using relevant evidence. After concluding that 72% of students supported multilingualism from information in the bar graph, Joe quoted many of his respondents to underline this point, such as the following:

> *One of our respondents called Dina mentioned the reason why he support multilingualism. He said "Multilingualism is very much crucial as you can socialise with each and every person regardless of the ethnic group which he/she belongs to.*

Although Joe jumped around a range of data sources related to multilingualism, he provided a consistent line of reasoning to explain his ideas. On the topic of English, for example, he said, '*The reason why English is seen as the most powerful and empowered language (99% of students) is because it is the medium of instruction in the institution which accommodates various ethnic groups*'. He also used references to reiterate his findings like that of Joshua (no date) who remarked on the 'importance of being multilingual at university to accommodate other students linguistically'. Similarly, he drew on Herdima (no date) to reinforce his point about 'multiracial schools promoting multilingualism' and Fishion (no date) who commented on 'multilingual interactions between people in the same geographical space'.

c) Interpretation

The issue Joe grappled most with is that 83% of his interviewees '*turn against their mother tongue*'. He ventured an explanation that, '*they think it is so prestigious to know English and on the other hand they look down upon their mother tongue*'. The purpose of his discussion and analysis section was to reconcile this contradiction. It is worth quoting his concluding paragraph that revealed a higher mode of operating.

> *Although we found that **many students** are multilingual, but surprisingly, we found that **many students turn their backs** against their mother tongue to English which is medium of instruction. According to Herdima, pg 120, students **turn***

> ***against*** *their mother tongue with the pretext of accommodating one another with English because of the huge university and different ethnicity. This is like one of our respondents who said that they* ***turn against*** *their mother tongue as they think that it is no longer important in the new South Africa than English which is good in the world of work.*

Joe displayed a strong tendency to function relationally in this report as he was able to connect ideas and draw conclusions from the various strands of the research. Significantly, he moved away from simply reproducing information from the texts and interviews to reconstruct and interpret socio-linguistic concepts. He has clearly benefited from the research process despite his limited linguistic resources, which may account for his mark of 33/50. Despite the repetition of words and phrases throughout the report (in bold in the above extract) he did not merely repeat ideas gleaned from his respondents, as so many of his peers did. At that later point in the year he was able to detach himself in order to analyse information (Angelil-Carter 2000), congruent with conventional academic discourse.

Table 6.8: Analysis of Joe's performance

Student	Content	Organisation	Language use	Global assessment
Joe	**Reasoning:** Low relational **Use of evidence:** High multi-structural **Interpretation:** Low relational	**Sequencing:** Low relational **Categorisation:** Moderate multi-structural	Low multi-structural	High multi-structural to low relational **33/50**

2.2.5.2 Sipho

This is the first piece of writing in which Sipho showed the ability to operate analytically, above the low multi-structural level. In his South Africa-Zimbabwe comparison he was unable to reconstruct his essay following the lecturer's feedback and his polygamy essay was example of 'knowledge-telling' (Bereiter and Scardamalia 1987) rather than a structured argument It is therefore surprising to encounter this shift in thinking in the final report, but disappointing to note Sipho's 'not registered' status at the university.

Research question: How do Wits students feel about English as the language of teaching and learning?

He displayed higher order thinking in the following areas:

a) Reasoning and reflections on the research methodology

Sipho constantly commented on issues in the research process and wondered about issues of generalisability. He made the following points:

- *Our sample is too small and cannot be influential in what we wanted to achieve.*
- *Researching a topic that is likely to have both negative and positive responses was also important to make the research both exciting and challenging so as to enhance our knowledge.*
- *We wanted to know how English as the language of teaching and learning will benefit them.*
- *Moreover, through questionnaires we were able to identify why some were neutral, since this would be interesting*.

Sipho's group had formulated a sound set of quantitative and qualitative questions to elicit responses to their research question. He produced a thorough account of his research findings, distinguishing between patterns and counter patterns.

b) Use of evidence to explain findings

This aspect of the report was limited in terms of the amount of detail supplied and his representation of only one side of the argument. He provided a competent summary of responses to individual questions like his description of reactions to the statement, 'Students will benefit from learning in a variety of languages'.

> *Most of the 'yes' responses stated that it will teach them about other cultures, especially African ones. Furthermore Wits should promote the teaching of African languages more than European ones.*

Despite the fact that he has only accounted for the 'yes' answer above, in his discussion and analysis section, Sipho, like Joe, tried to bring the data together and explain the

discrepancies. He outlined the key reasons for each side of the argument. To explain the pro position, he said, '*Those who said that English should be the only language of teaching and learning stated that it helps them understand the content of their courses. What is more, some students understand English better than their mother tongue.*' For the con position he says, '*They said that there is eleven official languages in this country so why should English be the dominant one? Some other languages deserve a chance.*'

At the end of his essay, he reflected personally on how he had changed his view regarding this issue and stated, '*I have now realized that it would be expensive to introduce African languages. Hence all the material is written in English…*' He concluded on an ambiguous note in his last sentence when he writes, '*However, do we know our roots where we come from?*'

Table 6.9: Analysis of Sipho's performance

Student	Content	Organisation	Language use	Global assessment
Sipho	**Reasoning:** High multi-structural **Use of evidence:** Moderate Multi-structural **Interpretation:** Low relational	**Sequencing:** Moderate multi-structural **Categorisation:** High multi-structural	Low multi-structural	Moderate to high multi-structural **33/50**

It is surprising that Sipho obtained the same mark as Joe for the report as he had not functioned in a consistently relational mode in previous tasks. He displayed the capacity to reflect critically in parts of the report and managed to weigh up the different arguments in his final analysis. Even though he had made huge strides in his ability to address the central question, he remained at a multi-structural level in the report as a whole.

2.3 Discussion of research report

2.3.1 Method of analysis

For this task, more than any other, I have recognised the worth of taking the time to tease out the criteria related to content, organisational and language issues. Once I had formulated a more differentiated set of criteria for the research report, it became far easier to assess each student's performance. In many instances, my analytical assessment

differed from a holistic one (Biggs 2003). For example, a student may appear relational in terms of her grasp of the central issues in the project, but on closer examination, provided elaborate examples of her findings without explaining their significance to the research question as a whole. She only compiled the opinions of others without stating her own. This may account for the discrepancies between my assessment and that of the marker who marked holistically. It became apparent that content issues, like the ability to explain various aspects of their research, elicited hugely diverse responses from students. However time-consuming it is to generate taxonomies such as the one on page 181, it facilitates a richer, more complex perspective on student performance. The distinction between Joe's and Sipho's reports is a case in point as they received the same summative grade, but function at different levels of operation.

The differentiated taxonomy also raises issues about the overlap between content and organisational issues. Categorisation, for example, can be viewed either in terms of how students develop their categories conceptually or how they sort their material organisationally. In the research report, for example, it initially proved difficult to separate conceptual from structural skills. It emerged that students were able to master the more mechanical processes involved in categorisation such as sorting the information and transforming it from one medium to another. The difficulty arose once the categories had been established and students were required to distil and explain the key elements with reference to the evidence. As I show in the next section, it is this skill that differentiates low from high performers in the research report and in the course as a whole. When I examine the implications of adapting the SOLO taxonomy in the concluding chapter of the thesis, I explore some of these challenges in terms of time, investment and expertise required.

2.3.2 Student performance

Table 6.10: Consolidated table of student performance according to the SOLO taxonomy

Students	Content	Organisation	Language use	Global assessment
Thabo	**Reasoning:** Extended abstract **Use of evidence:** Low relational **Interpretation:** Low relational	**Sequencing:** High relational **Categorisation:** High relational	Low relational	High relational
Isiaah	**Reasoning:** Low multi-structural **Use of evidence:** Low multi-structural **Interpretation:** Moderate multi-structural	**Sequencing:** Moderate multi-structural **Categorisation:** Low multi-structural	Uni/low multi-structural	Low multi-structural
Lindiwe	**Reasoning:** Low multi-structural **Use of evidence:** Low multi-structural **Interpretation:** Low multi-structural	**Sequencing:** High multi-structural **Categorisation:** Moderate multi-structural	Low multi-structural	Low multi-structural
Maloko	**Reasoning:** Low relational **Use of evidence:** High multi-structural **Interpretation:** High multi-structural	**Sequencing:** Moderate multi-structural **Categorisation:** Low multi-structural	Low multi-structural	Moderate multi-structural
Imelda	**Reasoning:** Moderate multi-structural **Use of evidence:** High multi-structural **Interpretation:** Moderate multi-structural	**Sequencing:** High multi-structural **Categorisation:** Low multi-structural	Moderate multi-structural	Moderate multi-structural
Bramley	**Reasoning:** High relational **Use of evidence:** Extended abstract **Interpretation:** Low relational	**Sequencing:** Moderate relational **Categorisation:** High relational	Low relational	Moderate relational
Mabe	**Reasoning:** Low multi-structural **Use of evidence:** Moderate multi-structural **Interpretation:** Uni/low multi-structural	**Sequencing:** High Multi-structural **Categorisation:** High multi-structural	Low multi-structural	Low multi-structural

Lebogang	**Reasoning:** Moderate multi-structural **Use of evidence:** Moderate relational **Interpretation:** Low relational	**Sequencing:** High multi-structural **Categorisation:** Low relational	Moderate multi-structural	High multi-structural
Karabo	**Reasoning:** Moderate multi-structural **Use of evidence:** Moderate multi-structural **Interpretation:** Low relational	**Sequencing:** Low relational **Categorisation:** Moderate multi-structural	Low multi-structural	Moderate multi-structural
Angie	**Reasoning:** Low multi-structural **Use of evidence:** Low relational **Interpretation:** Moderate multi-structural	**Sequencing:** High multi-structural **Categorisation:** Moderate multi-structural	Low multi-structural	Moderate multi-structural
Joe	**Reasoning:** Low relational **Use of evidence:** High multi-structural **Interpretation:** Low relational	**Sequencing:** Low relational **Categorisation:** Moderate multi-structural	Low multi-structural	High multi-structural to low relational
Sipho	**Reasoning:** High multi-structural **Use of evidence:** Moderate multi-structural **Interpretation:** Low relational	**Sequencing:** Moderate multi-structural **Categorisation:** High multi-structural	Low multi-structural	Moderate to high multi-structural

In this concluding section, I focus on the impact of the groups on student levels of understanding. I assess the extent to which group processes influence student thinking and writing of the research reports. The analysis includes content, organisation and language dimensions.

2.3.2.1 Content issues

It would appear that the choice of topic influenced the levels at which different groups operated in their analysis of the research findings. Although most of the research questions aimed to elicit people's attitudes towards a particular issue, when one examines

them (see box below), some of the questions lent themselves more to relational and extended abstract thinking as well as to students' expressing their own opinions.

Group research questions:

- Students' views or attitudes towards English as the dominant language and as a medium of instruction and language of learning and teaching. (Group 1)
- How do naming practices differ among different age groups or generations in Javambu street, Chiawelo? (Group 2)
- Do you think the status of African languages will cease to exist in the next 50 years due to the dominance of English? (Group 3)
- How do Wits University students especially South Africans become multilingual? (Group 4)
- How did Wits students become multilingual and how do they feel (about) or make use of their mother tongue? (Joe)
- How do Wits students feel about English as the language of teaching and learning? (Sipho)

The most probing question was that asked by Group 3, eliciting people's views about the status and dominance of English. Bramley had selected a high-level task for which he clearly had an opinion and was able to process information at an advanced level in his synthesis of the research findings. Mabe, on the other hand, was not able to rise to the occasion despite his sound system of categorisation. The middle order attitudinal questions designed by Groups 1 and 2 and by Joe and Sipho also elicited a wide range of interpretations. Either students simply collated various attitudes and views in the form of a survey, or went deeper to probe and explain these attitudes. In the former group were Isiaah, Lindiwe, Imelda and Sipho; in the latter, Thabo, Maloko and Joe. On the surface of it, Group 2's question appeared to be a low order one that involved generating a set of comparisons of naming practices among different age groups. The group, however, opted to go further in their research procedure and focused on eliciting people's attitudes towards their names in particular age categories. Maloko, in particular, was able to handle this question with sound explanations and justifications. As discussed earlier, their interest in the topic must have contributed to the group's engaged approach to the task. They were able to use the opportunity to express their own opinions.

There was an unexpected outcome in Group 4 whose question appeared mechanical and straightforward. Nevertheless all three group members showed potential for relational thinking as mentioned in the discussion of their group and created a thoughtful set of findings and interpretations. Therefore, the topic itself did not necessarily determine the way students processed and explained their findings. Joe's question was similar to that of Group 4's, although it extended the scope of the topic in the question itself. He too was able to function at a high level of analysis. In terms of content issues, the group interaction and 'dynamics' did not influence student performance to any significant extent. The skills of reasoning, explanation and interpretation have distinguished between high, average and low performers on this task, although not on the course as a whole. This phenomenon, as well as the pedagogical implications of these trends, will be discussed in Chapter Eight, the concluding chapter of the thesis.

2.3.2.2 Organisational issues

As mentioned previously, without exception, students acquired academic literacy from this module of the Foundation Course and integrated research terminology competently into their reports. The description of the research procedure was a particular strength of the reports as students provided accurate sequencing of their data-gathering processes. Similarly, they presented a variety of visual forms of their data and explained these methodically. This was testament to the numerous class activities students engaged in to model and develop their research skills (see Chapter Four on pedagogy). Consequently, the reports were all congruent with conventional research discourse and fulfilled the criteria specified in the course handbook.

In the area of categorisation, in all four groups students seemed to have benefited from discussion and interaction. As in the previous course tasks, students coped better with structuring their information from the different data sources than explaining their choices of research topic and categories. This applied especially to borderline achievers who improved their ability to sort and structure their writing into a recognisable patterning. The complex process of forming categories that occurred in the groups had positive spin-offs for all group members. As mentioned earlier, the tasks of assembling and explaining

the categories were distinct activities. The previous comparative tasks taught students how to integrate ideas and reassemble them for the purposes of addressing the essay/report task. This cumulative experience of categorising had clearly paid off as was evidenced in the structure of the research report.

2.3.2.3 Language issues

This area is one of concern, as on the whole students in the case study did not shift from low to moderate multi-structural levels of articulation (8/12 students performed at the low multi-structural level). They thus became hampered in their attempts to write arguments that manifested in their inability to write authoritatively. They may have been practising some of the connecting devices they acquired in preparation for their key course tasks, but were not yet connecting ideas fluently to write arguments, using pronouns appropriately or expanding their linguistic resources to assert opinions. This resulted in repetitive, convoluted expression of ideas, which in many cases, obscured their meaning and prevented overall cohesion. Kamler (2001:105) discusses the importance of developing a meta-language, which would enable students to 'produce a more concise, lexically dense text'. As will be discussed, various teaching interventions to improve language would help students to 'structure argument with conviction, purpose and point of view' (Kamler 2001:101).

In conclusion, the key issue emerging from this analysis is student difficulty with explanation and the reconstruction of information. Many students improved their ability to reproduce information accurately and represented the different views of their respondents. They mastered the skill of arranging their ideas coherently, but fell short when required to provide reasons for various aspects of their reports; the purpose of the report, the methodology used and their use of evidence. In addition, very few students were able to interpret the patterns and counter patterns emerging from the data. Not surprisingly, those students who showed adeptness at reasoning and explanation were solid achievers, most of whom completed their degrees in the required timeframe of four years ($n + 1$).

Chapter Seven explores how students reflected on their writing while engaged in the cognitive tasks discussed in the two data analysis chapters. I examine student responses to the meta-level questions specifically designed to elicit their understanding of their own writing processes. The questions I address are how students conceived of their cognitive progress and their handling of different aspects of the tasks, and how they saw themselves learning from the course pedagogy and the feedback in particular. It is an attempt to relate 'aspects of writer identity as interacting with more cognitive concerns' (Kamler 2001:83).

CHAPTER SEVEN
META-COGNITION

In this chapter I examine the way students reflected on various aspects of their writing tasks discussed in the previous two chapters. Brockbank and McGill (1998:83) argue that to engage in meta-cognition is to engage in transformative learning. I wish to ascertain whether there is a relationship between students' cognition in the form of their writing and their perceptions of their own progress in relation to the teaching interventions on the Foundation Course. I begin the chapter by outlining the background to the incorporation of meta-level questions into the Foundation in English course in 200x. I analyse the purpose and implementation of the meta-curriculum (Perkins 1992) and develop a framework for analysing borderline and solid student responses to the meta-level questions linked to the comparative and argumentative tasks. The implications of this intervention for student performance on the course, and in their degrees as a whole, are explored in depth. The overriding question is whether students become more conscious of their own learning processes through the thinking activities on the course, whether they become more proficient at reflecting and whether their reflections do indeed contribute to improved learning on this course.

1 Background to Developing the Meta-Curriculum

As discussed in Chapter Four, since 2000, Granville, and I have collaborated closely on a number of research projects in the areas of academic literacy development, meta-cognition, course design and assessment. We have used our research outcomes as a basis for an ongoing process of pedagogic reflection and have revised many of the educational strategies for promoting student learning in courses run in the discipline of Applied English Language Studies. This chapter focuses on our extensive deliberations concerning student capacity to reflect on their learning. A key turning point in our thinking about student reflection occurred when we realised at the start of the meta-cognitive intervention that students produced inadequate responses to meta-level questions of a broad generalised nature. For example, when asked what difficulties they had experienced in the course, students responded with monosyllabic, clipped formulations. This contrasted with far richer elaborated responses elicited from the meta-

level questions related to specific, contextualised course tasks (see examples below). We concluded that situating these task-related questions into the students' actual learning environment, 'was in itself promoting student thinking, learning and the acquisition of an academic language' (Granville and Dison 2005:109).

What became clear were the possibilities in this course for promoting reflective thinking in students by integrating meta-level questions into the teaching programme itself. Students began to reflect on their understandings at increasingly higher levels of abstraction in response to the mediation. We argued that the ZPD (1962) was useful as a starting point for understanding our attempts to work with students' existing knowledge and identities in order to develop their abstract thinking. Since the early 2000s until its closure, as a result of our intervention, most curricular tasks were accompanied by a self-reflection activity. Research conducted (Granville and Dison 2005:20), suggests that the ability to self-reflect allows students to 'stand back and oversee their own thinking while deeply immersed in their activities'. We have argued that meta-cognitive reflection enables the development of higher order thinking and the acquisition of academic social languages.

2 Meta-Level Questions Linked to Course Tasks

The lecturer incorporated a number of meta-level questions into the course drawing on Perkins' thesis (1992:102) that being able to reflect productively on one's learning is a developable skill and needs to be 'infused into the usual teaching of subject matters'. Some of Perkins' (1992:102) ideas include developing a range of different kinds of knowledge and 'dispositions' in students. These thinking dispositions do not happen by themselves but are achieved by 'cultivating attitudes of reflective thought'. Tishman *et al.* (1995:40) characterises good thinking as students' 'abiding tendencies to explore, to enquire and probe into new areas, to seek clarity, to think critically and carefully, to be organized in their thinking, and so on.' We believed that teaching thinking dispositions by means of carefully constructed questions would give students a better grasp of what good thinking entails, as well as make them aware of their own thinking patterns. It would offer opportunities for constructivist, reflective learning.

The meta-questions linked to each task were phrased in a way that required students to reflect on **what** they were learning (content), **how** they were learning (strategies) and **how well** they were learning the strategies (self-evaluation). This relates to Mezirow's theory (1990) which subdivides reflection into content and process reflection, 'Content reflection is concerned with what we perceive while process reflection concerns the methods or manner we use to perceive' (Chan *et al.* 2002). Similarly Bateson (1973) describes third order learning as the ability to reflect about learning itself. It involves 'an ability to take a meta-view, not only of content but of process. Here the realisation of the contextualised nature of truth (relativism) and the power of the learner's framework (constructed knowledge) enables learning to be truly reflective' (in Brockbank and McGill 1998:41).

3 Analysing Student Reflections

In the process of analysing student responses to the meta-level questions it is apparent that students reflected at different levels of engagement with the material. These corresponded to existing typologies of student learning identified by Bloom (1956) Bateson (1973) and Biggs (2003). Thus, the ability to self-reflect was not separate from the process of coming to know and understand something in a discipline. Through the process of engaging with course tasks in the learning situation, students were challenged to think about how they had come to grips with competencies required in the course. It was therefore necessary to adapt these categorisations to enable an analysis of the different levels of meta-cognition as they became more structured and articulated.

Like Biggs, Perkins (1992) has provided a hierarchical framework for categorising levels of understanding within a discipline. These levels go beyond the familiar low-level 'content' knowledge to higher levels of 'problem-solving', 'evidence' and 'inquiry'. In addition, he identified four levels of meta-knowledge described in Chapter Two, which enable students to function at higher levels: tacit, aware, strategic and reflective. In sum, 'tacit' is when students are unaware of their meta-cognitive knowledge, 'aware' indicates that students know about some of the thinking they do in a task, 'strategic' indicates the

capacity to organise thinking and develop strategies for addressing course tasks, and 'reflective' implies the ability to evaluate strategies in order to revise writing processes.

My analysis of student responses investigates the way students engage with the meta-level questions at increasingly higher levels of sophistication. I demonstrate the possibilities for integrating cognitive frameworks like the SOLO taxonomy with reflective models to understand growth in reflective capacity. The purpose of elucidating on each of the levels of reflection in relation to each writing task is to differentiate qualitatively between responses to the reflective tasks. At face value, Perkins' framework appears to offer characterisations of the specified levels that do not distinguish clearly between different capacities to reflect. My detailed unpacking of each level provides a more vivid, clearer picture of how students develop their thinking processes through their learning journey on the Foundation Course. At the end of the section corresponding to the key course tasks, I examine each student in the case study in terms of their capacity to reflect on the tasks at hand.

3.1 School-university comparison

As mentioned in Chapter Five, at the end of the school-university comparison, students were required to address a number of meta-level questions related directly to their engagement with the task. As part of this process, the model comparison given to students, served to highlight for them their own strengths and limitations in producing the comparison. Granville and Dison (2005) have argued that 'task-related' reflection occurs as the student struggles to grasp the essence of concepts or skills needed in a specific learning situation – the object of learning could be how to categorise, compare, summarise, write conclusions, or any other aspect of the learning task itself. The intention was to make reflective practice accessible to the students by allowing them to become more conscious of their own approaches to writing (Brockbank and McGill 1998:73).

I use Perkins' levels of reflection as a framework to compare the extent and depth to which students in the different success categories engaged with the meta-level questions. Within each level, I assess student responses in the following four areas of reflection:

- Content – *what* was learnt
- Process – *how* it was learnt.
- *Transfer* of skills to other writing tasks.
- Self-evaluation – *how well* it was learnt.

The course developers did not consciously devise these categories or place them in this order in the questionnaire. The areas have emerged organically from students' responses to the meta-level questions.

3.1.1 Tacit level of meta-cognition

3.1.1.1 Content reflection

The meta-level questions[1] required students to reflect on the content of what they had learnt. Even though the questions asked students to identify their strengths and weaknesses, students commented on *what* they had learnt.

Students operating in this context used course jargon and mostly rephrased or repeated the questions. When students were asked to respond to what they had 'done well' and 'not so well' in the comparison, the following responses reflect what can be considered a highly literal or 'off the point" (pre-structural) level of meta-cognition:

> *I can see what I did well in comparison, moreover in difference.* (Bramley)
>
> *(I can see what I did well) because when we do corrections on the class I was looking on the things I did wrong or right.* (Imelda)
>
> *I think I did well but not 100%.* (Angie)
>
> *Yes (I did well) by understanding what is needed.* (Mabe)

Perkins (1992:102) would describe these responses as 'tacit' as students were as yet unaware of their learning processes. At the tacit level, students reflected at the content level and described routine procedures without addressing the key issue. Also, they were unable to use academic language to represent their thoughts more formally. It appears that these responses were part of a repetitive discourse students had acquired from their

[1] Can you see what you did well in this comparison? Explain your answer; Can you see what you did not do so well? Explain your answer.

years of secondary schooling. As a result, they had not learnt to reconstruct material for different purposes.

3.1.1.2 Process reflection

In terms of reflecting on the process of learning to compare, there was a tendency amongst a few students to provide vague, formulaic responses to these questions, such as '*it (grammar exercise) did help me somewhere*', '*compare and contrast helped me*' and '*Yes I do not have much spelling errors*'. Nevertheless, the probing and practical nature of the questions[2] seemed to have shifted most students in the case study into more aware and strategic levels of reflection.

For the next two areas there was little evidence of tacit reflection as students veered towards aware levels of reflection, a phenomenon that will be explained in the concluding section of this chapter.

3.1.2 Aware level of meta-cognition

3.1.2.1 Content reflection

These responses can be considered as operating at the 'aware' level (Perkins 1992) in that students knew **about how** they could execute the comparative task. They were able to reflect on how to tackle tasks and solve problems fairly generally, but were not as yet able to articulate how to incorporate educational strategies into their writing. Most students in the case study functioned at this level. When they were asked to respond to what they had 'done well' and 'not so well' in the comparison, the following responses show an 'aware' level of meta-cognition:

> *Yes, I have stated the similarities.* (Thabo)
>
> *I had well structured paragraphs but no conclusion.* (Maloko)
>
> *I did not do so well by not giving the similarities. And should think if I had focused on similarities I would have done well.* (Bramley)
>
> *I did well in comparing fees of school and university.* (Lebogang)

[2] Which class exercise helped you to learn how to develop categories of information? Explain how the exercise helped; Did the class exercise on the grammar or language of comparison help you when you were writing your comparison? Please explain.

I think points of punctuation where I was not supposed to do that and also tenses were things I did not do well. (Isiaah)

Students in this zone demonstrated an awareness of the task requirements of classifying and comparing ideas. They mostly provided general points without constructing their own examples of what they had or had not learnt, although the question did not require them to specify on how they could have performed better.

3.1.2.2 Process reflection

In terms of reflecting on the process of learning how to compare, there was an ability to identify which class exercises had helped them develop categories of information. However, students at that point in the year did not address the second aspect of the question by suggesting how the exercises had benefited them. Maloko, for example, merely listed the use of comparative markers as helpful without further explanation. Lindiwe highlighted the comparison between rural and private schools, but simply said that it 'helped me'. In the following statement, Imelda may have known **about how** to categorise information, but there was no sense that she was able to transfer the 'skills' meaningfully to the assignment task.

The exercise where we compared a bus and a taxi we used so many categories. Also this assignment where we compare schools and universities using categories. Now I know about how to categorise.

Biggs (2003:40) refers to this 'seeing the trees' as preliminary to adequate understanding, 'but it should not be interpreted as comprehending the wood'. Students often presented a multi-structured 'shopping list' of items and reflected through the process of 'knowledge telling'. There was still no evidence of being able to articulate their understanding at a more abstract level.

3.1.2.3 Reflection on transfer of skills

Transfer questions[3] required students to focus their attention on applying the comparative methods taught on the course to other learning tasks (South Africa-Zimbabwe comparison) and disciplinary contexts. Students' responses reveal the extent to which they understood the purpose of categorising information.

A typical response at this level was for students to identify the task within the discipline to which they had transferred the skill of categorising. In some cases, students only mentioned the discipline; in others, they outlined the skill that had been transferred. Joe, for example said that he had used the class exercises on categorising information productively in his other subjects as '*now I know how to differentiate the categories*'.

As far as the Agar assignment (South Africa-Zimbabwe comparison) was concerned, most students mentioned the broad comparative requirements without explaining how they would tackle the comparison itself. Certain students interpreted the 'transfer' question literally and made comments like, '*I think I know* [how to do the Agar comparison] *because I have written comparison between school and university*', or '*I think I am not perfect, but up to so far I am better in doing comparison*'. Both Bramley and Isiaah avoided detailing the steps involved in the Agar assignment. Similarly, Imelda pointed out that she did not have sufficient information about the assignment, but that '*once I have it I will do it*'. Angie too expressed her uncertainty and said, '*Maybe I will understand after reading the question carefully*'. This characterises the surface level, detached responses of many students in the case study. There was no attempt to use their experiences creatively to handle the new task demands of the Agar assignment.

This 'transfer' question elicited some unexpected responses from students like Lindiwe who stated that she did not know how to go about doing the Agar comparison and was

[3] Did the class exercises on categorising information help you in any of your other subjects, e.g. if you have had to compare things? Please explain; In the Agar assignment (South Africa-Zimbabwe comparison), you are required to compare and contrast student experiences using Agar's (1990) categories: a) Do you think you know what is expected of you in the assignment task? Please explain, b) Do you think you know how to go about doing the comparison? Explain briefly.

uncertain whether '*they will allow me to cope* [copy] *exactly what is written in the text*'. She viewed the comparison as a mechanical procedure as did Angie who said she knew she had to '*compare in every paragraph*'. The unevenness of student responses to the meta-level questions is explored in the concluding section of this chapter.

3.1.2.4 Self-evaluation reflection

Self-evaluative questions[4] required students to assess how effectively they had learnt to compare school and university. Students were expected to use the meta-language to reflect critically on their processes of categorising information.

When asked how they would do the comparison between school and university differently, Karabo's response was, '*Try to do better than the first one and plan the work in a chronological order*'. Although there was some awareness of the task requirements, the student listed her response in a general, formulaic manner. Other similarly vague responses that did not address the question showed a tendency to provide a set of unconnected points and focus on isolated facts rather than reflecting on their thinking. In terms of cognition, Biggs would characterise this response as 'uni-structural' with its focus on one conceptual issue only. A few students missed the point entirely and discussed their autobiographies that had already been completed.

In response to the question asking students how easy or difficult it was to group information in their writing, the majority wrote in a circular manner without explaining how or why they found the process easy or difficult. Bramley's answer best characterised this general approach to the question.

> *I find it easy in a manner that categorizing things is not like just writing without categorizing. So it is difficult to just write without categorizing before.*

Many students merely rephrased the question as a statement in their answers without 'getting to the heart' of the reflection. Lindiwe, for instance, asserted that '*it is difficult*

[4] How would you do your comparison between school and university differently?; How easy or difficult do you find it to categorise information? Please explain.

for me to put things in categories but when I begin I make it'. Angie described the ease with which she categorised because '*it gives me a way forward with what I'm going to discuss*'. It is not clear how the educational strategies facilitated her 'way forward'.

3.1.3 Strategic level of meta-cognition

3.1.3.1. Content reflection

When students become 'strategic', a qualitative change occurs in learning and understanding as they are no longer listing facts and details. As discussed in previous chapters, Biggs (1999:39) describes this as the first level at which 'understanding in an academically relevant sense may appropriately be used'. Students specify how they will address the limitations of their writing by providing relevant examples.

When students were asked to respond to what they had 'done well' and 'not so well' in the comparison, the following responses represent a more strategic, elaborate approach than 'aware' students. There is a clearer understanding of the purpose of different aspects of the essay.

> *My introduction was not clear enough to show the details of my essay.* (Thabo)
> *I made good use of conjunctions or comparative markers to compare.* (Maloko)
> *I did not use comparison words well like in contrast, however, whereas etc."* (Lindiwe)

Other students in the broader class wrote answers characteristic of strategic thinking:

> *I did not categorise the items, e.g. admission, cost, educational aim and social life and did not make an opening general statement.*
> *There are not similarities in the same paragraphs. I didn't write it in the best way by not using the same paragraphs to differentiate the school and university.*

3.1.3.2 Process reflection

Students demonstrated an ability to integrate concepts and combine their parts to give intended meaning. Perkins (1992:102) argues that this is the start of the process of genuine reflection as students ponder their strategies in order to revise them.

When ‘strategic’ students were asked to identify which class exercise/s had helped them develop categories of information and to say how these had helped, their responses showed how they had used these interventions creatively to adjust to the task goals. These responses explain how they applied the methods used in the course for improving their structure. Thabo, for example, showed an understanding of the purpose of brainstorming and categorising, ‘*It helped me to create more ideas about the topic and arrange or categorize them*’. Similarly, Lebogang explained how brainstorming helped her to categorise as ‘*I did not know anything about categories*’. This more personal reflection was echoed by Imelda who revealed her weakness in grammar, ‘*I am not good in grammar writing so I am learning a lot from it* [grammar exercises]’.

Bramley reflected on how ‘*language and grammar enable us to be able to paragraph the grammar of comparison very well*’. Though this was not well expressed, there was a sense of how he had used the educational strategies to structure his essay.

A student from the tutorial class also mentioned the class exercises assisting students to compare buses and taxis,

> *I did not know that when you compare you have to come with the categories first and you have to explain the similarities and differences. It has helped me in a sense that before writing a paragraph I must categorise information.*

Biggs (2002:39) characterises this approach as **relational** as it is ‘no longer a matter of listing facts and details: they (students) address a point, making sense in the light of their contribution to the topic as a whole’.

3.1.3.3 Reflection on transfer of skills

There are distinct differences between students in the ‘aware’ level and those who operated in a more forward thinking, proactive mode. Thabo, for instance, consistently showed how he had used various skills and processes learnt in the Foundation Course in other learning contexts. He said, ‘*It helped me in International Relations when I was writing my four page essay, where I create many ideas and categorize them accordingly*’.

Without going into detail, he demonstrated the capacity to transfer the cognitive skills to a new set of task demands. In the same vein, Lebogang suggested that her writing had improved as a result of the intervention, '*I use the methods that we study here in class and my assignments are very good*'. A similarly enthusiastic response came from Isiaah who claimed that he could '*even identify which falls under which categories because of this* [intervention]'. Imelda provided the fullest description of how she has used her ability to categorise information in Social Work Field instruction. She said,

> *We were supposed to differentiate between self and identity. So it was easy for me because I started by brainstorming, categorizing and I have it very easily.*

In terms of the Agar assignment, there were no major insights, but students showed an understanding of the task requirements like, '*With the help of categorizing information I will be able to make it*'. Mabe had learnt from the school university comparison that he needed to focus on both similarities and differences in the Agar assignment and he had recognised that the categories were more '*open*' (less prescribed). Some students provided detailed accounts of the steps involved in comparing Zimbabwe and South African schools. Lebogang outlined the specific categories of comparison she would use in relation to the essay topic.

> *I think I have to compare university with schools, what the first year students were expecting and what the university wants, e.g. teaching style, finance and the way students behave.*

She had already thought through the possibilities of the comparison and by highlighting the tension between expectations and realities, revealed an understanding of the purpose of the task.

3.1.3.4 Self-evaluation reflection

The key issue students highlighted at this level was that they had focused exclusively on differences without mentioning similarities in their essays. This was a useful starting point for improving their essays, but contained insufficient elucidation. Bramley, for

instance, considered doing the comparison differently '*by comparing and contrasting rather than focusing on similarities or either the differences*'.

Like the previous group, strategic students mostly reflected on the 'easiness' of categorising information. The reasons offered were that '*categories are different*', '*it is easy to identify which categories fall under*' and '*It was easy to check out the crucial points and assess them thoroughly*'. Again, despite the validity of many of these notions, they remained unexplored in the answers.

3.1.4. Reflection level of meta-cognition

At this point in the foundation year, there is little evidence amongst students in the case study of deeper self-reflection. It must be pointed out, however, that the content and process questions described above were unlikely to yield critically reflective responses. The object of reflection in the 'process' questions were the exercises themselves and the extent to which students were able to use the principles and guidelines for categorising and comparing information in other settings. It was difficult, therefore, for students to reflect meaningfully on their own approaches to the task as they focused on the course pedagogy. It would be unfair to assess students' capacity to engage in critical self-reflection in relation to the process questions. The set of self-evaluation questions (footnote 21) were more challenging in terms of students' ability to evaluate their own performance on the school-university comparison as discussed below.

Maloko, when asked how she would do the comparison between school and university differently, said that she would have liked '*more things to compare, have a conclusion and have more details in the introduction*'. She recognised her low idea density and mentioned specific ways of addressing the problems. Lebogang also suggested approaching the comparison from another angle by '*researching teaching styles, finance and social life as categories*'. These students had clearly benefited from analysing the model essay in class.

When Thabo reflected on how difficult he found the process of categorising information, he went beyond the typically repetitive account to reveal the complex challenges he faced. He said, '*It sometimes become difficult when you come up with ideas that fit into more than one category and not knowing where to put them.*' Similarly, Maloko described the categorisation process as:

> *Easy except in my comparison assignment whereby I tried to put costs of sport in educational institutions under cost but it was marked wrong. It was supposed to be in a different category*.

Although she did not specify the correct category, she acknowledged her 'incorrect' choice of category for the sports item as part of the tricky process of sorting information. Reflective students presented a more nuanced discussion of their own shortcomings such as '*lack of information*' or '*poor categorization*'. Imelda expressed the difficulty in comparing '*when ideas are little bit the same*'. She alluded to the complex task of differentiating between similar topics or themes. Students in this group intended creating a hierarchical structure using generalisations and illustrative material and showed an understanding of how to organise information thematically.

The following tables assess the reflective capacity of each student in the case study using Perkins' four levels of refection: tacit, aware, strategic and reflective. After the assessment, I analyse my findings of student reflections in response to meta-questions in relation to student performance on the school-university task.

Table 7.1 School-university comparison: solid achievers

Student	Content reflection (what)	Process reflection (how)	Critical self-reflection (how good)	Performance on school-university comparison
Thabo	Strategic	Strategic	Reflective	Moderate to high multi-structural
Maloko	Strategic	Aware	Reflective	Uni- to low- multi-structural
Bramley	Aware	Aware	Strategic/reflective	Low relational
Lebogang	Strategic	Strategic	Reflective	Moderate multi-structural
Imelda	Tacit	Strategic	Strategic/reflective	Low multi-structural
Karabo	Aware	Strategic	Aware	Uni-structural

Table 7.2: School-university comparison: borderline achievers

Student	Content reflection (what)	Process reflection (how)	Critical self reflection (how good)	Performance on school-university comparison
Isiaah	Aware	Aware/strategic	Strategic/reflective	Low multi-structural
Lindiwe	Strategic	Aware	Aware	Low multi-structural
Joe	Strategic	Aware	Strategic	Uni- to low- multi-structural
Angie	Aware	Strategic	Aware	Uni-structural
Sipho	Tacit	Aware	Aware	Low multi-structural
Mabe	Tacit	Aware	Aware	Low multi-structural

3.1.4 Discussion on school-university comparison reflection

3.1.4.1 Student capacity to reflect

It is difficult to draw any significant conclusions from this analysis as there is no clear correlation between student performance on the comparative task and their capacity to reflect. For example, when students averaged a low multi-structural score for their comparisons, there was an accompanying wide range of abilities from aware to reflective levels of meta-cognition. It is significant that as far as levels of reflection are concerned, there was unevenness of student capacity to reflect in the different zones of reflection (content, process and self evaluation). Some students operated at all three levels in the questionnaire depending on the type of question. Solid performers on the whole followed a smoother developmental process from aware to reflective levels compared to borderline performers who revealed an erratic pattern. All three students operating at higher levels of cognition in the school-university comparison (moderate to relational levels of performance) showed the capacity to reflect at fairly sophisticated levels.

The key differentiator between borderline and solid achievers appears to be in the reflective zone in which students evaluated their own approaches for tackling the comparative task. Responses to reflective questions were handled responsively on the part of solid achievers as they explored possibilities for transforming their approaches. Bramley did not move beyond the 'aware' level for content and process questions, yet was able to reflect critically on his strategies. Four out of six borderline achievers operated at an 'aware' level in this zone regardless of how 'well' they reflected in the content and process zones. Interestingly, Isiaah and Joe, despite their poor performance in the school-university comparison, showed potential to reflect thoughtfully and strategically on the school-university comparison. Isiaah became an $n + 1$ achiever and Joe made the most significant improvement on the Foundation Course. Their reflections in response to the feedback on the South Africa-Zimbabwe comparison will be instructive for assessing the value of the meta-curriculum as a pedagogical intervention. .

In terms of the qualities discussed in Chapter Three dealing with affective aspects and biographical information, I need to investigate the link between student capacity to reflect on the school-university task and evidence of resourcefulness and determination. This issue will be discussed with reference to student reflection as a whole at the end of the chapter.

3.1.4.2 The meta-level questions

The most significant outcome as far as the variety of questions is concerned, supports Perkins' notion that the ability to reflect is a developable capacity. This is especially the case for process questions that required students to sharpen their thinking about how they had approached the task in relation to the course mediation. Certain students continued to produce repetitive discourse in response to the meta-level questions, but they began demonstrating awareness of the task requirements. The advantage of highly focused questions was to force students away from generalised formulaic thinking into reflecting on the specifics of their learning experiences. The questions challenged students to become more precise and elaborate in the answers they produced. With practise and

carefully sequenced questions, students could become increasingly adept at reflecting on their own strategies. This approach served as a bridge between teaching and learning as students became aware of how to benefit optimally from the teaching intervention.

As the meta-level questions were not consciously sequenced by the course designers into the three thinking zones (content, process and self-reflection), the order of questions appears haphazard. In addition, as discussed previously, some of the specific content and process questions were limited in scope and have not elicited profoundly reflective responses. Despite these shortcomings, it is evident from student responses that there was scope for students to demonstrate their capacity to function meta-cognitively, especially in the reflective zone. Certain students were able to take a bird's eye view of their own performance by honing in on their specific strengths and limitations. They had begun cultivating thinking dispositions making them conscious of their own learning processes. In the remaining analysis of task-related reflections, I assess the role of sustained reflection in promoting student learning on this course.

3.2 South Africa-Zimbabwe comparison

For this task the reflective focus is on how students responded to the course lecturer's feedback on their comparison of the experiences of first year students at Wits University compared with those described by Moyo at the University of Zimbabwe. Students were given support for the first draft in lectures, tutorials and class discussions. They were also given a guidance sheet (included below), which provided 'explicit support regarding the organization of the essay and what kinds of detail and language use (would be) expected. This sheet functions as assessment criteria and is pivotal in the feedback process' (Granville and Dison 2003:6). Students were expected to monitor their drafts against the criteria set out on the guidance sheet. The lecturer gave the students extensive feedback on their first drafts using the guidance sheet, as well as oral feedback to the whole class. After completing their final essays, students were required to comment on how they had changed their essays using the same guidance sheet as part of a 'dialogue between the written tutor feedback and the student' (Granville and Dison 2003:5). They were awarded

a mark out of 10 for these reflections and a mark out of 40 for the final version of the essays.

Table 7.3: Assessment criteria for Agar assignment and feedback handout

Key: +++/++/+/-/--/--- Indicates a scale ranging from excellent, very good, good, average, poor, very poor

Introduction	**Student** +++ ++ + - -- ---	**Tutor** +++ ++ + - -- ---
1. Makes topic and purpose of essays clear.		
2. Identifies the sources of information.		
3. Outlines the essay plan/structure.		
Body: presentation of findings		
1. Presents information in a logical order, providing clear categories for the main findings.		
2. Compares findings from the two main sources using the grammar and structures for comparison taught on the course.		
3. Provides detailed and accurate evidence to support findings, using interesting details/direct quotes.		
Conclusion		
1. Linked to introduction and findings and assignment question.		
2. Makes general comparisons between findings.		
3. Makes an overall concluding statement, highlighting the main findings.		
Use of language		
1. Appropriate academic style, clarity, readability.		
2. Paragraphing, cohesion and coherence – links between paragraphs.		
3. Grammar: correct use of verbs, consistency of tense.		
4. Spelling, punctuation, vocabulary, legibility.		
Overall impression		
What has been done well? What are the problems?		

Granville and Dison (2003:1) suggest that 'feedback cannot be treated as a separate and isolated event that happens on the return of assignments; it needs to be part of an integrated programme that sets its sights on carefully conceived learning outcomes.' This guidance sheet appears to be a simple, unstructured feedback sheet compared to the previous set of meta-questions used to reflect on the school-university comparison. This was a crucial form of reflection, though, as it provided a link between the lecturer's feedback, the course scaffolding around the assignment and the students' response. The

key question was how deeply students engaged with the feedback once they had been made aware of the essay criteria via the guidance sheet and class activities.

At the simplest level, students reflected around the criteria by merely repeating **what** they had done to improve or address the criteria. Alternatively, they assessed their work in relation to each criterion, as 'good', 'average' or 'poor' without explaining why. This corresponds with Perkins' 'aware' level of reflection[5]. At the next level, students were becoming more 'strategic' as they reflected **about how** they had made changes and addressed the criteria. At the deepest level of engagement, they were becoming 'reflective' as they engaged with the criteria themselves and discussed how well they had addressed each item, a level that shows potential for transformative learning (Mezirow 1990). My approach to analysing student reflections on the feedback was to assess how convincing the reflection **about how they had changed** was. The criteria that made the reflection convincing are as follows:

- The extent to which students elaborated on how they had improved the essay with reference to the criteria.
- The extent to which students explained how they had addressed the criteria.
- Student capacity to evaluate their own writing practices by referring to the lecturer's comments on the guidance sheet.
- A realistic display of student strengths and weaknesses.
- Shift away from repetitive to explanatory discourse.

3.2.1 Aware level of reflection on feedback (students identify changes they made to address each of the criteria)

As a result of the prompts on the guidance sheet, students at this level showed awareness of different aspects of the task requirements. For responses to the prompts, they gave a superficial description of how they had handled each criterion. For the most part, this involved rehashing the prompt. For example, for the criterion, 'Makes topic and purpose clear', Thabo stated, '*I think I have stated the purpose of the essay clearly*'. Lindiwe repeated each prompt by prefacing it with '*I think this time…*' or '*I have tried by all*

[5] At this point in the year there was little evidence of tacit thinking.

means to…'. Maloko also rephrased the marginal prompt and assessed each aspect of the essay as '*good*' or '*average*' without elaboration. She identified areas of difficulty like the ability to make an overall concluding statement, '*It is hard to summarize the whole thing*'. However, she did not explain how she had addressed the problem in her final draft. Her inability to reflect at a strategic level at this point may have mirrored the minimal changes she made from first to second draft. This issue is explored in the concluding section of this chapter.

On the one hand, certain students responded positively to the prompt and provide clipped monosyllabic phrases to show how they have made changes like, '*Clearly done*', '*quite right*', '*it was good*', '*well presented*', '*I did mention this now*', '*I improve*' and '*more interesting than the first one*'. Other students lacked confidence in their improvements and foregrounded the fact that they are '*still struggling*', '*not good*', '*not doing it correctly*', and '*have to try harder*'. In some cases, the lecturer contradicted this perception by writing 'much better' or 'still needs work' next to the comments. Ironically, Lindiwe made many grammatical errors when commenting on how she had improved her use of language like, '*I did this better, I links the paragraphs now*'.

The consistent feature in these students' reflections was the lack of explanation or elaboration. There was minimal discussion of the content of their improvements and their responses, like Angie's, were mostly vague and generalised, '*I tried to correct my mistakes. Not sure whether I did well*'. Sipho merely followed the formulaic pattern of repeating the prompt as well as the lecturer's comments. He made remarks like, '*I did better than the first draft, the rest you will judge*'. The extent to which this interaction was dialogic will be explored in the concluding section of this chapter.

3.2.2 Strategic level of reflection (students explain changes they made to each of the criteria)

A number of students reflected on the process of constructing their essays. Lebogang, for example, analysed how easy or difficult she found each aspect, like '*It was easy to identify all the information*' and '*I did identify the findings but I still get difficulties with*

it'. Karabo reflected accurately on her difficulties highlighting the main findings and generating an overall concluding statement, as well as how she had improved her use of language. Despite this focus on the process of undertaking the task, none of these students developed original, substantiated answers to the prompts.

At best, students used their own words to explain their strategies like, '*I think my essay is not plagiarized because I have indicated all my sources of information*' (Thabo) and '*I got information from three sources: Agar, Moyo and my interviewees*' (Karabo). Joe asserted his own thoughts when he responded to the prompt, '*Provides detailed and accurate evidence to support findings, using interesting details/direct quotes*'. He commented, '*Support and evidence has been given throughout from the texts with some quotations and my paraphrasing.*' There was an attempt to show how he had handled that aspect of the comparison.

Mabe, engaged with the criteria by showing how he had changed his approach from his first to second drafts. After highlighting his previous weaknesses, he said he had now '*mentioned the main categories*', '*used comparative markers*' and '*attempted to synthesize the data from the 3 sources as I had ignored three main categories*'. Impressively, he also described what he had '*not done*', showing potential to evaluate his strategies at the reflective level (see next section).

Lebogang sometimes inserted her own observations rather than simply lifting the wording off the prompt. One example of this was her statement that her own evidence was '*almost similar to the two sources of Agar and Moyo*'. She signalled the importance of finding common ground between ideas from different data sources. What was significant about Lebogang's reflection was that she did not do justice to the huge shifts she had made from the first to second drafts of her essay. The lecturer made negatively critical comments about every aspect of her first draft essay (3/20) all of which she had addressed substantially in her second draft ($29^{1}/_{2}$/50) (see Chapter Five). She remarked to Lebogang,

> You shall have to do a lot to pass this assignment… Your essay is based almost entirely on your interviews and your own opinions and the core task was for you to compare your findings with those of Moyo and Agar.

The lecturer acknowledged, via ticks on the guidance sheet, that Lebogang had dealt with the limitations of her previous draft. At one point she commended her for a 'nice, concluding paragraph'.

3.2.3 Level of self reflection (how well they had engaged with each of the criteria to change their essays)

Although he reflected mostly at the strategic level, Thabo was beginning to engage in the meta-cognition at a reflective level especially when he expressed uncertainty about whether he had addressed some of the criteria. For example, he mentioned that despite the fact that he had compared findings from the two main sources, he recognised the imbalance of having '*few contrasts*'. He also cast doubt on his conclusion, which the lecturer had pointed out was the weakest aspect of the essay. He said, '*I'm not sure about (making an overall concluding statement) because I quoted from the sources*'. He grappled with the purpose of the conclusion in this meta-commentary, which is ironic as his final draft conclusion had successfully synthesised his key ideas in response to the essay question. He had drawn on Moyo's ideas to reinforce his central argument.

> … *Moyo (1995) also argued that the experience the students brought to university and the contrary realities that they came across can cause frustration which led to the dropping out of students from the institution.*

Thabo had mistaken '*quoting from the sources*' with using sources to bolster his concluding argument.

Interestingly, Imelda had used the reflection on the feedback as an opportunity to enter into dialogue with her lecturer. She addressed her directly and reflected openly and honestly about her strengths and weaknesses. Two examples of this are:

> *I think I have done this* [making the topic and purpose of the essay clear] *correctly after what you have explain to me on the feedback of the first draft.*

I am not sure if I am correct because I am not good in grammar. I still need your help.

Imelda displayed qualities of resourcefulness in seeking help similar to those that emerged in her biographical questionnaire. In addition, her tentativeness was evident in sayings like '*I think*' and '*I am not sure*'. These qualities may well have indicated her receptivity to change and the possibilities for improving her writing. Although Imelda showed potential to reflect critically on her approach to writing, she operates predominantly in the strategic zone of reflection as she did not always explain how she had addressed the various criteria.

Joe manifested a similar tendency to connect meaningfully with the feedback when he acknowledged that he '*did not understand that essays need purpose*' in his first draft, but that '*now the purpose is clear*'. Nevertheless, his answers mostly slotted into the 'aware' zone because of his inability to show how he had fulfilled the various criteria.

Of all the students in this category, Isiaah and Mabe describe how they had '*learnt from mistakes*' to adjust their writing in the final draft. Isiaah produced his own examples of the changes he had made and was able to reflect openly about his strengths and weaknesses. When asked to self-assess whether he 'presents information in a logical order, providing clear categories for the main findings', he remarked, '*Here I am not sure about it because I did not write categories at the first essay, so I tried to signal sub and categories by writing on the first sentence.*' This example shows how he had drawn on the course terminology to reflect on the changes he had made. He was not reticent about exposing his shortcomings when he said,

For comparing sources I did not do better because I always experience problems on structuring grammar.

The grammar is the one that always gives me problems. I rate myself average.

At the same time, the lecturer confirmed his positive self-assessment by ticking the column and writing 'improved'. Similarly, Mabe gave an honest description of his '*insufficient linkages*' his need for '*more elaboration*', '*unclear sentences*' and his

vocabulary, which was '*not suitable for usage in academic writing*'. He committed himself to working hard on these weak areas and to '*mentioning differences as well in future comparison*'. From both these students there was a sense of having learnt from the drafting experience and from the feedback in particular.

Bramley's reflection fulfilled all the criteria of a highly engaged, reflective piece of writing. For each aspect, he explained fully how he had addressed his previous shortcomings and extended his ideas further. In addition, he illustrated how he went about '*rectifying* [his] *past mistakes*' by applying many of the educational strategies taught on the course. The following remarks show Bramley's capacity to evaluate his own essay-writing approach in relation to the essay requirements for the comparative task.

- *Yes, I have identified two different studies Agar (1992) and Moyo (1995) together with mine and put them in a clear manner.*
- *Yes, I did indicate how I am going to structure my essay, e.g. socio economic, financial and educational factors.*
- *I have tried to use the grammar and structures for comparison on the course like similarly, conversely, however.*
- *I have done some careful reading and quoted nicely from three data sets.*

Bramley had used the guidelines as a springboard for evaluating his own writing rather than accounting for each aspect in a formulaic, repetitive style. His lecturer pointed out that his conclusion was still 'a bit thin', but his reflection showed his understanding of the importance of making a general concluding statement and how his findings related to the broader issues of expectations and realities. Hopefully this heightened awareness will assist him to improve conclusions in subsequent essays. The significance of Bramley's reflection is that it highlights his work in process, and his commitment to improving his final product. He has clearly benefited from the feedback and has addressed the lecturer's chief concern about his poor categorisation and incorrect grammatical markers. He has made a dramatic improvement from his first to final draft essay reflected in the shift from moderate multi-structural to moderate relational level of operation. Surprisingly, he was

only awarded 6/10 for his reflection, which, in my opinion, does not do justice to his self-insight and attempts to explain how he had integrated the feedback productively. His sophisticated reflection in itself reveals his capacity to learn from the feedback and incorporate the necessary writing tools to address the topic.

Table 7.4: Reflection – South Africa-Zimbabwe comparison: solid achievers

Student	**Becoming aware** (states which criteria have been addressed)	**Becoming strategic** (states how criteria have been addressed)	**Becoming reflective** (states how well criteria have been addressed)	**Overall reflection** (elaboration, explanation, evaluation)	**Performance on South Africa Zimbabwe comparison** (from 1st to 2nd draft)
Thabo	X	X	X	$5^1/_2$/10	Moderate multi-structural to low relational (*2 notches up*)
Maloko	XXX			Aware 4/10	Uni-structural to low multi-structural (*1 notch up*)
Bramley			XXX	Reflective 6/10	Moderate multi-structural to moderate relational (*3 notches up*)
Lebogang		XXX		Strategic $5^1/_2$/10	Uni-structural to moderate multi-structural (*2 notches up*)
Imelda	X	X	X	$6^1/_2$/10	Uni-structural to low multi-structural (*1 notch up*)
Karabo		XXX		Strategic 5/10	Uni-structural to moderate multi-structural (*2 notches up*)

Table 7.5: Reflection – South Africa-Zimbabwe comparison: borderline achievers

Student	**Becoming aware** (states which criteria have been addressed)	**Becoming strategic** (states how criteria have been addressed)	**Becoming reflective** (states how well criteria have been addressed)	**Overall reflection** (elaboration, explanation, evaluation)	**Performance on South Africa Zimbabwe comparison** (from 1st to 2nd draft)
Isiaah		X	XX	Reflective $6^1/_2$/10	Low multi-structural to moderate multi-structural (*1 notch up)*
Lindiwe	XXX			Aware $4^1/_2$/10	Uni-structural to low multi-structural (*1 notch up*)
Joe	X	X	X	$5^1/_2$/10	Uni-structural to low multi-structural (*1 notch up*)
Angie	XXX			Aware 4/10	Uni-structural to low multi-structural (*1 notch up)*
Sipho	XX	X		Aware $5^1/_2$/10	Uni-structural to low multi-structural (*1 notch up*)
Mabe	X	X	X	$6^1/_2$/10	Low multi-structural to moderate multi-structural (*1 notch up*)

3.2.4 Discussion on South Africa-Zimbabwe reflections

3.2.4.1 Relationship between reflection on feedback sheet and improvement on the essay

Granville and Dison argue (2003) that although most students ignore the guidance sheet while writing the first draft of their essays, they draw on the various forms of feedback in order to produce their second and final draft'. It appears that the feedback was effective at that stage of the process. The difficult question was the extent to which the process of reflection itself had assisted students to adjust their writing. When students like Bramley were able to reflect meaningfully on how they had addressed the feedback, there was of necessity a relationship between their meta-awareness and their execution of the final draft. By carefully engaging with and taking into account the lecturer's feedback on the first draft as well as 'taking on board' the other teaching inputs, the reflection had moved beyond 'reflecting about' change. It was a combination of 'reflecting in' and 'reflecting

on' (Brockbank *et al.* 1998) the writing as students were hyper aware of how to manage a complex set of information to meet the task requirements.

It is interesting that almost all the students in the case study with the exception of Lindiwe, Angie and Moloko, showed potential to engage with the lecturer's feedback at higher levels of engagement. These students who reflected at low, repetitive levels all improved their comparative essays by one notch, from uni-structural to low multi-structural. Although there were other students who only improved by one notch, it is significant that they (Imelda, Isiaah and Joe) all shifted in the content area as far as representing other perspectives was concerned. Both Lindiwe and Angie remained at low multi-structural levels in the content arena, whereas Maloko moved from uni-structural to low multi-structural levels in the areas of content, organisation and language. This inability to improve in terms of conceptualising the topic as a whole is a phenomenon that is examined in Chapter Eight. Of interest is the relationship between student capacity to engage in the meta-cognition and their cognitive performance in the Foundation Course and at university as a whole.

As mentioned previously, the students who oversaw their own thinking in a more sophisticated way and who evaluated their strategies in relation to the guide sheet criteria improved the most in their comparative essays. Bramley displayed the deepest engagement with the guide sheet criteria and improved by three notches in all aspects of his writing. Although Isiaah did not improve in all areas, he shifted two notches in the way he represented different perspectives. Change in this arena appears to be the key factor distinguishing low from high performers. The two strongly strategic students (Lebogang and Karabo) both improved by two notches, which is not surprising in the light of their determination to tackle the task requirements. They may not have had sufficient exposure to cultivating the 'habit of reflection' (Perkins 1992), but have taken on the feedback to the best of their abilities at this point.

Of particular interest are the students who span all three zones of reflection: aware, strategic and reflective. Although this does indicate some ability to operate at a higher

level of explanation and justification, there was no relationship between their capacity to reflect and their performance on the course or in the degree as a whole. Joe, for example, made a dramatic improvement within the confines of the course, but did not succeed at university (n + 3); Imelda, another $n + x$ achiever improved steadily in the course. Mabe is no longer registered for university and Thabo became a high achiever both in the course and at university as a whole. No clear patterns have emerged from this analysis except for students in this 'grey area' for whom socio-economic factors, beyond the control of this study, may have impacted on student performance at the university.

3.2.4.2 Repetitive discourse

A striking trend emerging from this analysis, are the students who not only repeated the prompts on the feedback guide sheet, but who reiterated the lecturer's comments received after the first draft. They merely transformed her comments and questions verbatim into reflections. This pattern emerged in students who had made significant changes to their essays as well as students who had improved marginally. Two examples of this are as follows:

- The lecturer remarked to Bramley on the feedback sheet 'You've tried hard to use these [grammar and structures for comparison taught on the course] and often use the wrong word. Check that you really understand the meanings of the words.'
- Bramley responded to this point as follows, '*I have tried hard to use these and have also used grammar and structures for comparison taught on the course. Like similarly, conversely, however etc.*'

There are further instances in Mabe's reflections of repeating the entire commentary. For example, the lecturer pointed out: 'Some good paragraphing and coherent' to which Mabe responded after the second draft, '*good paragraphing and essay reasonably coherent*'. There were times when he engaged more directly with the feedback and provided his own examples as Bramley did above, but the reflection consisted mostly of repetitive discourse. The overriding question is the extent to which this rephrasing constitutes 'dialogue' with the lecturer. In Bramley's case, I would argue that the repetition served to reinforce the critical points made about content, structure and

language of the essay. He was able to reconstruct the content to show how he had addressed the issues raised. When Bramley rehashed the feedback content, he used it as a basis for interacting with the lecturer. Mabe and Sipho tended to reflect the lecturer's comments back without reconstructing the material for their own purposes. Although Mabe's reflections appeared fairly high level (see analysis above), on closer inspection, they matched his characteristically low multi-structural functioning. This repetitive pattern was not diagnosed by myself initially or by the lecturer who gave him 6 ½/10 for his feedback reflection.

It is worth considering that the formulaic parroting of information from the guide sheet resulted from students not taking the reflection process seriously. Consequently they did not invest in meaningful engagement in the meta-cognition. Alternatively, the repetitive approach may have been symptomatic of inadequate practice in reflecting in the foundation and other courses. Students had not been exposed sufficiently to the 'meta-curriculum', which aimed to cultivate their habit of reflecting.

3.2.4.3 Assessment of student reflection

Very few students used the rating scale in the guide feedback sheet to assess their own performance in relation to the criteria. As they were not practiced reflectors, this may have been too challenging a task for them. It was unusual to receive a summative mark for a reflection of this nature. As mentioned earlier, there were discrepancies between my system for rating the students and the mark they received, an issue that needs to be explored further regarding the assessment of reflection as a whole. It may be considered unfair for a researcher (participant observer) to judge the quality of graded reflections from the advantage of having had the time to carefully unpack the criteria for assessing students' capacity to reflect. This issue will be discussed in the concluding section of this chapter.

3.3 Research report

One of the requirements of the research report was for students to reflect on both the content and processes of constructing their reports. Granville and Dison (2005:113) argue tha**t** 'the lived experience of the project on multilingualism meant greater engagement with the issues and challenges involved. Through the process of evaluating their own thinking processes, students begin to cultivate a new social language as well as a new academic social identity'. Students were given the following instruction regarding reflection:

> All researchers discover that research is difficult and things do not always work out the way that they had anticipated. In this section of the report you should discuss some of the difficulties and problems you encountered and how you overcame them. What you have personally learned from doing this research project? What might you do differently if you did a similar project in the future and why? What do you think were any strengths and weaknesses of the ways in which you planned the research and carried it out? Was working with your group successful? Why or why not? Would you prefer to do an individual research project? Why? Why not?

Although the focus of the above instruction was reflection on the process of 'doing research' collaboratively, I have divided the analysis of the reflection on the research report into two sections: firstly, reflection on the **content** of the research itself, i.e. student observations of the nature of the research, findings that emerged, patterns and counter patterns etc; and secondly, reflection on the **group processes** of gathering, describing, analysing and interpreting the data.

It is apparent from the analysis that there is a striking difference between students who engaged in 'critically reflective' learning and those who were detached as 'intellectual performers' (Brockbank and McGill 1998:49). Harvey and Knight (1996:9-10) describe critical ability as follows:

> Developing critical thinking involves getting students to question the established orthodoxy and learn to justify their opinions. Students are encouraged

> to think about knowledge as a process in which they are engaged, not some 'thing' they tentatively approach and selectively appropriate… an approach that encourages critical ability treats students as intellectual performers rather than as compliant audience. It transforms teaching and learning into an active process of coming to understand.

Through the task requirements of the research report, students developed their capacity to be reflective as far as their own personal development (process) as well as knowledge production (content) was concerned.

3.3.1 Reflection on content of research findings: becoming critically reflective

Table 7.6: Summary of critical reflection on the content of the research report

Uncritical reflection of content (weak reflection)	Critical reflection on some aspects of the report (moderate reflection)	Highly critical reflection on content (strong reflection)
• Minimal critical engagement with research material • No reflection in report itself	• Some critical issues highlighted relating to the research material • Sporadic reflection in report itself	• Ongoing discussion of critical issues emerging from the research • Criticality integrated into report throughout • Shift in own perspective

What emerged was a strong connection between the way students reflected on the research report and their level of reasoning in the report itself. For example, in Group 1, Thabo, who reasoned at a high abstract level because of his ability to justify all his decisions in the report (choice of topic, aim, methodology, findings etc), continuously raised issues about the limitations of the research findings. He asserted in his discussion and analysis:

> *Although our findings show that most students were positive about English, our research sample was too small to make definite generalizations about all students in campus. I think more work needs to be done on finding how the students feel about languages in Wits campus which may bring changes to the university if necessary.*

Consistent with his approach to argumentation, Thabo identified the problem of poor reasoning during his group's research process when he asserted, '*Many students were giving invalid or weak answers where they do not wanted to tell why were they thinking like that*'. Thabo's meta-awareness sustained throughout the report fulfilled the criteria of Brockbank and McGill's (1998) 'critical reflective learning'. He responded positively to certain aspects of the research despite his criticism of the '*generalization*' problem. In his view, the broad range of opinions elicited from '*researching in different places*' contributed to the favourable outcome of the project. Thabo's fellow group member, Isiaah, had a similar critique of the sample size though he did not explore this point in any depth. He suggested that in future the group '*try by all means to interview a large number of interviewees*', typifying a moderate reflection on the content of the project. Lindiwe, another group member, provided no critical engagement with the research material at any point in the report, which was congruent with her poor reasoning skills and surface responses to the question.

In Group 2, Maloko showed the capacity to engage critically with some of the unexpected outcomes of the research process. She noticed, for example, that certain respondents were shy about telling their age while others '*wanted to tell us what we wanted to hear*'. She examined some of the implications of gaps in the research such as the need for more research to be done '*especially on younger generations*'. She speculated that younger people were negative towards their names because '*there is no purpose for it*'. She showed insight into the macro issues throughout the report, unlike Imelda who displayed no critical understanding of the research topic. As mentioned in Chapter Six, Imelda merely reproduced the findings without extrapolating ideas for addressing the research question as a whole.

Strong relational thinking characterised Bramley's writing in this course as well as in his reflections on the research report. He demonstrated clearly how the shortcomings of his group's research process, such as the confusion about '*which methods to use to get quantitative and qualitative data*' and the '*conducting of a very small sample*' were a direct consequence of difficulties in the group. (See next section for reflection on group

process.) He was the only student in the case study who made this connection explicitly and who expressed concern about aspects of the research directly related to poor group functioning. Another example of this critical analysis was:

> *Owing to the frequent absence of our group members from group meetings, those present drafted leading questions when they draft questionnaires. But before that we did not even know which methods to use…*

His fellow group member, Mabe, displayed minimal capacity to reflect critically on the research content. He merely reiterated his research findings that English was a '*serious threat to the downfall status of the African languages*'. This simplistic recounting reveals his inability to explain and interpret the information.

Karabo, a member of Group 4, raised critical issues throughout her report in terms of the data collection process as well as the findings. For example, she said,

> *The one mistake we did on our questions was writing down the term multilingual. This is because some of my respondents did not understand what we meant by multilingual.*

She also explained why the group decided to do a pilot study '*to rectify our mistakes after experiencing some problems as a group*'. Although she felt '*satisfied with our findings*', she suggested that more research needed to be done

> *in finding out which is the dominant influencing environment. Is it friends at school, the community, sports activities or because of moving from one town to another?*

These remarks revealed her capacity to question and engage with the research process at a higher level of meta-cognition than that of her peers. Although the obstacles in the group prevented her from gathering more details and case studies of how people became multilingual, she showed understanding of the main research principles. Similarly, Lebogang, despite omitting the reflection section of the report, used strong meta-language to express the group findings and her own views on some of the case studies. The lecturer commended her for presenting 'very interesting and valuable data'. She

engaged with the sometimes-contradictory findings of student attitudes towards being multilingual. By referring to one her figures, she said,

> *We find that not all people are interested in learning other languages. The only languages they think about is their mother tongue and prefer to communicate in English when speaking with other people who do not understand their language. For example, most of the Zulus* [in our research] *do not want to speak other people's languages. Also the students who were studying at multiracial school…*

Both Karabo and Lebogang inserted their own experiences into the reports to illustrate particular findings. As discussed in the Chapter Six, the former discussed how she had had to learn Venda in order to communicate with her boyfriend, and the latter described a close Afrikaner family friend's resistance to learning English.

Unlike the previous two students, Angie was steeped in repetitive discourse in her account of the research process as well as her reflections on the process. She merely rehashed in linear form the steps the group took to undertake the research without reflecting personally on the impact of the group difficulties on the limited outcomes of the research itself. This correlated directly with her limited capacity to reason adequately in the report itself.

Both Joe and Sipho engaged in critical commentary on various aspects of the research process. Joe highlighted the deceptiveness of the responses they elicited from their respondents. He said that his group became confused when students cooperated '*in disguise*'. They raised their hands to agree with using their mother tongue in the group as a whole, but denied using their mother tongue when probed in the interview. These contradictory responses forced him to '*question the strength of the research*'. His critical stance in the reflection tied in with his ability to operate relationally and explain phenomena in the report. Sipho also questioned issues of generalisability (discussed in Chapter Six) of the report when he expressed disappointment that students '*did not tick the appropriate answer for example you may find that the person ticks yes when he is not*

supporting that idea/statement'. Both students shed light on how these unexpected outcomes had affected the research findings as a whole.

3.3.2 Shifting or shaping perspectives

It appears that certain students assumed it was acceptable to shape the research in terms of their own bias in favour of either positive or negative findings. Isiaah declared,

> *To do this research, it was our main aim to come out with positive findings and we found that majority of our sample were positive that English should continue as the medium of instruction and language of teaching and learning.*

He was challenged by the lecturer for 'influencing the research', as was Maloko who said,

> *We were required to find a light difference between number of negative and positive attitudes because of hateful political forces, however people's culture made them happy despite the fact that they mostly had English names*.

In discussing the reason for this unexpected finding, there was a strong sense of the student's position on the topic. It was not clear whether these students did intend to 'influence' the respondents, or whether they lacked the meta-language to express the expected or unexpected outcomes. The clauses, '*It was our main aim*' or '*we were required*' may have misled the marker into believing there was some conscious 'leading' intention on the part of the student researchers.

3.3.3 Reflection on research process

Table 7.7: Summary of student reflection on the research process

Tacit level of reflection	Aware level of reflection	Strategic level of reflection
• Minimal awareness of difficulties encountered during research process • Scant account of what they have learned from the process • No implications for future practice • Focus on content rather than process issues in reflection	• Aware of difficulties encountered • Description of what they have learnt with minimal explanation or elaboration • Mostly quantitative solutions proposed • Some suggestions for future practice	• Thorough explanation of difficulties encountered • Thoughtful reflection on what they have learnt • Qualitative, resourceful solutions proposed • Proposal of strategies for future practice. • Becoming self-aware from experience of group process

There is a continuum of responses on the way students reflected on the group process itself: on the one extreme (tacit level), students displayed minimal awareness of the difficulties they had encountered, what they had learned from the process or how they would deal with these challenges in future. In the middle, aware category, students had identified their difficulties as well as what they had learned, but they offered few explanations or justifications for what this meant for them as participants in the research process. On the other more strategic end of the continuum, not only did students surface and explain their difficulties, but they also proposed strategies for future application. In addition, they reflected at increasingly thoughtful, self-critical levels on what they had learned during the research process and how this impacted on their role as academic writers. In the analysis of students in the case study, there were no tacit responses; mostly 'aware' reflections.

3.3.3.1 Tacit/aware level of reflection

Isiaah's response characterises a typically aware level of reflection as he identified the key problems in the group without reflecting on his own role or how he had learnt from the group experience. He blamed two of the group members for incompletion of work and raised concerns about the phrasing of the question, '*Is English a killer language?*' After successfully clarifying the question for his respondents and explaining that '*we are conducting research concerning language use*', his respondents became cooperative. He identified the strength of the research as '*making sure that each and every question was straightforward and easy to answer*'. Thus, his solution was to facilitate the research process for his respondents. Other problematic issues identified by students in this category are:

- *Poor linkings to our questionnaires*
- *Respondents wanted to get paid after the interview*
- *Some of our group members were sick and we were a large group*
- *Difficulty finding quantitative data*
- *Students busy with assignments or exams*
- *People did not come to meetings and when they came they did not do their work*
- *Two of our members did not co-operate*

- *Our sample was very small because people were busy*.

These problems had not been investigated or clearly explained in the reports of students operating at this level. They may well have accounted for some of the gaps identified with the reports in Chapter Six., such as scant evidence, poor categorisation and the absence of critique in students operating at the multi-structural level of operation. At best, minor adjustments were made in group discussions to the phrasing of questions. Alternatively, quantitative solutions were suggested like, '***more*** *research has to be done to get* ***more*** *information about names and naming practices*', '*At least we* ***tried hard***' and '*We need* ***more*** *hard work and commitment*'. There was minimal reflection on what and how they had learned from participating in the research process.

Students in this arena often reflected on the content outcomes of the research without engaging with how they benefited from the group process or learnt about their own abilities. Karabo asserted, '*What I have learned from our research was that being multilingual is not one's choice but the influence of the environment which I was not aware of*'. Sipho concluded in his reflection, '*I have realize it would be expensive to introduce African languages as our medium of instruction*' though he questioned whether students '*know our roots, where we come from as Africans*'.

Certain students displayed feelings of defeatism when faced with problems identified above. In response to the poor effort on the part of other group members, Karabo declared,

> *That is why at the end I gave them my data and told them to analyze everything alone and that I was no more coming to class. I told them that I will only come to practice my presentation because I could not tolerate it anymore.*

Her fellow students expressed their disappointment at having to take over her duties. Likewise, Sipho argued that '*it is not possible to agree with each other while we are working*'. He judged other group members for not devoting time to their studies or to participating in a group situation. He exclaimed dejectedly, '*You may plan as a group*

that you are going to meet at a particular time, the result is that that person/members are not going to show up.'

3.3.3.2 Strategic level of reflection

Unlike students at the 'aware' level, students in this category were able to move beyond their difficulties to generate a myriad of creative strategies. Bramley showed a strong ability to seek resourceful solutions to problems within his group. In particular he attributed the progress of the group to the contract, which was introduced to students in class. He said,

> *Several factors mitigated against our research project. It nearly became a total fiasco, but through an obligations endorsed or enshrined in our research contract, we have worked well co-operatively towards a good research project.*

Despite his excessive use of legal verbosity, he showed his commitment to creative problem-solving in the form of group structure and contract. As mentioned in Chapter Three, which examined students' affective factors, Bramley's strength was his articulation of qualities that made for academic success. Here too, he identified the importance of '*cooperation, perseverance, honesty and being realistic… in the face of seemingly mountainous odds with regard to the research process*'.

Bramley presented a set of contradictory claims about the way decisions were made in the group. On the one hand, he argued that despite conflicts and disagreements in the group,

> *the group felt comfortable with this and worked to sort it out. Nobody felt unhappy with the decisions made, there was give and take and the spirit of listening prevailed.*

On the other hand, he attributed the negativity in the group to the fact that '*only two people acted as group leaders and made decisions. Other members were docile and submissive and discussions were not frank and honest*'. While it was puzzling that Bramley portrayed contrasting perspectives of the group decision-making processes, he showed insight into cause-effect relationships and explored the consequences of different styles of operation. During his individual interview with the researcher (October 200x),

he highlighted the '*controversy*' about allocation of tasks in the group, and how '*things fell apart when someone tried to reshuffle our jobs*'. Despite the ambiguity, he remained positive and pointed out that the group eventually '*resolved the problems satisfactorily*'.

Though he recognised the shortcomings of undemocratic group processes, especially when group members were '*frequently absent and uncommitted*', Bramley retained an optimistic, proactive view of the learning possibilities of successful groups. This contrasted with Mabe's depiction of the group's '*inner conflict*' as unsolvable. He said, '*We failed to come out with concrete and outstanding responses*', which reflected his more passive, defeatist approach. Like Bramley, Joe captured the potential of his group to respond creatively to obstacles encountered. After assessing their questions as '*so ambiguous (that) students did not know how to answer those questions*', his group transformed them, '*we changed them to be straightforward questions… and that is where we got excellent answers*'. He recognised possibilities for change when groups were able to '*settle problems in a peaceful manner through negotiations*'.

In terms of his self-awareness as a group participant, Thabo reflected critically on his previous '*individual*' style of working that was challenged by the benefits of working in a group. He asserted, '*Working in groups help because different people come with different suggestions, of which if you were alone you were not going to recognize.*' In an individual interview with the researcher (October 200x), he asserted that his group felt he was '*not doing too much for the group, I mean, after, all, I think I come up with most of the ideas*'. He claimed to be '*scared of interacting with people*', but having to '*compel myself*' to do the interviews. After being challenged by his fellow group members who told him, '*all I do is give instructions and stuff*', he committed himself to '*pulling up my socks*'.

Thabo articulated the need to be less '*pushy*' from his experience of interviewing his respondents. He said that he '*learned to be submissive when working with people, because people may get angry when keep on asking them questions*'. His renewed thinking may have been a consequence of having elicited some negative responses from

his respondents or may have reflected his sensitivity to interpersonal aspects of the interviewing process. Either way, it signified his capacity to reflect productively on and transform his interviewing approach for future application.

Table 7.8: Reflection on group process of 'doing research': solid achievers

Student	Content reflection: extent of critically reflective thinking		Process reflection: tacit, aware or strategic	Performance in research report
	Reasoning in research report	Reflection		
Thabo	Extended abstract	Strong	Strategic	Group 1: High relational
Maloko	Low relational	Moderate	Aware	Group 2: Moderate multi-structural
Bramley	High relational	Strong	Strategic	Group 3: Moderate relational
Lebogang	Moderate multi-structural	Moderate	Aware	Group 4: High multi-structural
Imelda	Moderate multi-structural	Weak to moderate	Aware	Group 2: Moderate multi-structural
Karabo	Moderate multi-structural	Strong	Aware to strategic	Group 4: Moderate multi-structural

Table 7.9: Reflection on group process of 'doing research': borderline achievers

Student	Content reflection: extent of critically reflective thinking		Process reflection: tacit, aware or strategic	Performance in research report
	Reasoning	Reflection		
Isiaah	Low multi-structural	Moderate	Aware	Group 1: Low multi-structural
Lindiwe	Low multi-structural	Weak	Aware	Group 1: Low multi-structural
Joe	Low relational	Strong	Strategic	High multi-structural to low relational
Angie	Low multi-structural	Weak	Aware	Group 4: Moderate multi-structural
Sipho	High multi-structural	Moderate to strong	Aware	Moderate to high multi-structural
Mabe	Low multi-structural	Weak	Aware	Group 3: Low multi-structural

3.3.4 Discussion of student reflection on research report

3.3.4.1 Content reflection in terms of Perkins' levels of understanding (content as object of reflection)

There was a strong correlation between students' ability to reason in the research reports and their role as critical participants. The fact that a number of students in both solid and borderline groups were able to reflect at moderate to strong levels on the content of the project, suggests that there is potential to develop students' critical ability to engage and grapple with issues and ideas they themselves had generated and probed in the research process. Students also expressed intrinsic interest in the research project as expressed by a student during the individual interviews (October 200x). He said,

> *I'm really learning from the research project because I'm interested, I know about nine African languages, I understand nine African languages but I can speak eight. I really want to find out about attitudes of African students.*

Another student in the interview said,

> *I found it quite interesting because I wanted to know if these languages will cease to exist in the next fifty years. I was surprised that nineteen out of thirty support that the African languages should still exist.*

This research project lent itself to 'inquiry' levels of understanding (Perkins 1992:85) which involved 'knowledge and know-how concerning the way results are challenged and new knowledge constructed in the subject matter'. The project developed students' critical ability as they became participants with others in a process aimed to bring about critical transformation. Performances at this level challenged disciplinary assumptions and moved beyond the 'epistemic level' (Perkins 1992) of justification and explanation in the subject matter.

Reflection on the content of the research report can be described in terms of Perkins' levels of understanding (1992). Weak reflection involved repeating and paraphrasing routine procedures within Perkins' 'content' level of understanding. It also concerned standard problem-solving activities in the discipline. Moderate reflection included justification and explanation in the discipline at Perkins' 'epistemic' level. This related

strongly to Biggs' relational level within the SOLO taxonomy. The final level of understanding constituted deeper critical reflection at the 'inquiry' level and had the potential to transform students' conceptual ability. It related directly to Biggs' extended abstract mode of operation within the SOLO taxonomy.

It appears that reflection on content issues was fairly strong on the part of most students in the case study because the nature of the project made it more likely for students to engage in processes and activities that promoted critical reflection. Thus students shifted to epistemic and inquiry levels of engagement more easily than in other reflective tasks. Four out of 12 'strong' reflectors integrated criticality throughout their reports and began shifting their perspectives as a result of the research process. Another four out of 12 students reflected at 'moderate' levels of criticality by highlighting some issues in the report. The remaining four students, to greater or lesser extents, displayed minimal critical engagement with the research material. As mentioned, these students had all operated at low levels of reasoning and justification in their reports as a whole.

Table 7.10: Synthesis of Biggs' and Perkins' levels of understanding and critical performance with students' capacity to reflect on the content of their research reports

Level of critical reflection	Level of understanding: (Biggs)	Level of understanding: (Perkins)
Weak critical engagement with course material	**Uni/multi-structural** levels of understanding: Mastery of one part of the task (uni-structural) to more detailed response to the task (multi-structural)	**Content and problem-solving** levels of understanding. **Students focus on:** • Isolated facts • Terminology and key words • One aspect of the task • Solving typical problems • Listing facts • Understanding task requirements • Knowing about how to generate strategies
Moderate critical reflection within report	**Relational** level of understanding: Beyond listing information, addresses the point of the comparison that makes sense as a whole to the topic, relates and connects ideas to each other)	**Epistemic** level of understanding: Students reflect on understanding of evidence and explanation in the discipline. **Students focus on:** • Relating and distinguishing argument and evidence • Integrating concepts into a coherent whole • Using teaching and learning interventions to adjust to overall task goals
Strong critical engagement with issues in the research material	**Extended abstract** level of understanding: Goes beyond what's been given and concentrates at higher levels of abstraction	**Inquiry** level of understanding, students reflect on how inquiry proceeds in the discipline. **Students focus on:** • Searching for questions • Constructing theories and themes • Challenging disciplinary assumptions

3.3.4.2 Process reflection (self as object of reflection)

As mentioned in Chapter Two on methodology, definitions of reflection (Brockbank and McGill 1998:83) are prone to privilege the cognitive over the emotional and physical, and reflection is regarded as 'an activity of the detached mind using reason as its tool'. Brockbank and McGill (1998) argue for a more holistic definition that 'values the senses, recognizes emotion and draws on personal experience through dialogue'. In order to facilitate this personal reflection process, students were asked what they had 'personally learned from doing this research project', what they might do differently if they did a 'similar project in the future', what they thought the strengths and weaknesses were of

how they had ‘planned the research and carried it out’ and which aspects of working in a group had been successful. In response to these prompts, only three students were able to provide thorough explanations of the difficulties they encountered in their groups and proposed strategies for future practice. Even fewer articulated what they had learnt about themselves during the research process. Learning was articulated in terms of the content (the **what**) rather than process outcomes (**how** they had learnt and become better researchers).

The three students operating at the strategic and reflective levels were those who had already shown the capacity from the biographical questionnaires to use their resources to respond creatively to feedback and change in the learning context (see Chapter Three). In the final reflections, they demonstrated the propensity to ‘critically engage in self monitoring and self confrontation’ (Brockbank and McGill 1998:51). The majority of students performed at the ‘aware’ level in this reflective task regardless of their manifest qualities in the biographical questionnaire. The lack of consistency in the form of meta-level questions may have accounted for some of the patchy reflections, especially in students’ capacity to become self-reflective. Further explanations for this phenomenon are discussed in the conclusion in Chapter Eight. Although Perkins believes meta-cognition is a developable competency, the current approach has not yielded optimum results in terms of increased self-awareness.

It is evident from my analysis of the reflections that students benefited from working in their groups both in terms of their written reports as well as their capacity to reflect on ideas generated from the research process. Isiaah’s critical perspective in weighing up the strengths and weaknesses of the research, for example, was clearly the outcome of extensive discussion with his fellow group member, Thabo. They both highlighted the constraints and possibilities of the research, unlike Lindiwe who was also in their group but had not considered critical aspects. Similarly, Maloko and Imelda influenced each other positively in producing a moderately critical discussion of some of issues emanating from the research. In the individual interviews (October 200x) Thabo expressed the view that it was ‘*nice*’ working in groups ‘*because sometimes you might*

find that you don't have any idea about this, so one of my group members can come up with an idea'. Another student prided himself on being '*controversial and always negative*' so that students could learn from him in the group context.

3.3.5 Reflection on the meta-curriculum in the course

The approach to building the meta-curriculum described in this chapter geared instruction towards higher levels of understanding and gave students the opportunity to develop their capacity to become self-reflective. Perkins (1992:130) argues that in order to promote the three key goals of education, 'retention, understanding and the active use of knowledge', more attention has to be paid to developing the meta-curriculum.

> We are simply not likely to see much of the three (goals) without contributing directly to students' overarching conceptions of the subject matters and to their artful orchestration of their own mental processes.

There were a number of positive spin-offs to this integrated form of task-based reflection. Students developed the habit, some more enthusiastically than others, of thinking about their learning and writing in a sustained way. The 'situatedness' of the reflective activities motivated more students to engage with the meta-level questions and took them further in their thinking about course issues and debates. This supported Brockbank and McGill's claim (1998:48) that the combination of self and critical reflection has the 'most potential for transformative learning'. It is difficult to show conclusively that the reflection shifted students to deeper levels of analysis and explanation. Nevertheless, in my view, the variety of cognitive and meta-cognitive pedagogical interventions on the course set up a recursive cycle of thinking, writing and learning that propelled students into increasingly sophisticated and higher modes of operation. As discussed in Chapter Four, meta-cognitive tasks operated as a bridge between the teaching activities and the learning outcomes on the course as students were required to articulate how the pedagogical activities fostered their writing development.

Although the meta-curriculum was integrated into the Foundation Course, there was an erratic application of meta-level questions and frameworks for the different tasks in the

Foundation Course. The uneven emphasis on different types of reflection activities made the analysis more challenging for descriptive and analytical purposes. For example, in the school-university comparison, students were required to reflect, in random order, on all aspects: content, process and self evaluation. In the more open-ended South Africa-Zimbabwe reflection, students could select which areas to reflect on and the extent to which they engaged with the essay-writing criteria was variable. In the research report, the focus was more on the process of doing research and producing the report although there were open-ended possibilities for critical self-reflection. The omission in the construction of the meta-level questions was students' ongoing development of critical self-awareness. From my analysis of student reflections, the weakest area was students' capacity to reflect on their own strengths and limitations. Ironically, this was the area least promoted or made explicit through the meta-level questions. I explore the pedagogical implications of this in the conclusion.

3.3.6 Student perceptions of the meta-curriculum

During the individual and group interviews with students (October 200x), students were asked whether they had found the reflection questions useful or interesting both for their learning on the course and for application to other first year courses. Most of the responses were positive and mentioned the following:

- *Yes, we like this because these are the things which help you correct your mistakes.*
- *We can see for ourselves where we've gone wrong.*
- *Ja, these questions help a lot because sometimes you make mistakes. So you can see where you went wrong.*
- *Somehow we can see our mistakes even before she* [the lecturer] *marks it.*
- *It* [reflection questions] *allowed me to identify where I did things good and where I did bad.*
- *I think it does help because it makes you aware of what you're doing wrong and then you try to improve it.*
- *It makes me more conscious of it like when I'm doing something right.*

In themselves, these comments show a high degree of meta-awareness. Students recognised the learning potential of such questions and approaches for helping them monitor their own academic development. Some students showed how they had been able to improve their own approaches, while others relied on the lecturer's feedback before engaging in self-reflection in comments such as, '*It is easier when you get your results – then you can see where you went wrong*'. This contrasted with a more independent declaration from a student, '*I really like it when I've improved here and there and then when the feedback comes back again, she* [the lecturer] *has written: I agree with you.*

It is fairly common for certain students to answer on behalf of their fellow students by using '*we*' and '*us*'. This reveals an assumption that all students in the class gained from the meta-curriculum.

In the following final chapter I provide a more in-depth graphical analysis of each student in the case study in terms of their performance on both cognitive and meta-cognitive tasks. This detailed plotting and tracking will allow me to draw out the pedagogical implications of this analysis for the Foundation Course itself as well as for first year university courses in general. The concluding chapter reflects holistically on factors that have promoted or inhibited learning and thinking on the course as well as evaluates the analytical tools used for assessing student progress. My key focus is on the pedagogical significance of having drawn the comparison between borderline and solid students throughout the thesis.

CHAPTER EIGHT
DISCUSSION AND CONCLUSION

This thesis set out to apply a socio-cognitive approach to investigate elements of student writing in relation to the higher order thinking of 12 students enrolled in a first year university Foundation in English course. The study has achieved this by bringing together issues of literacy, language, cognition and meta-cognition to characterise students' approaches to writing. In this respect it has pursued a theoretical as well as an applied gaze to discover the attributes and pedagogical interventions leading to retention and academic achievement. The originality of this thesis is the development of an integrative approach for creating an in-depth, multi-dimensional perspective of student cognition.

In this final chapter, I firstly consider the key findings and conclusions of the comparison between borderline and solid students. The comparison is based on an analysis of students' dispositions and qualities, their capacity to develop comparison and discursive writing, and the growth in their ability to reflect on their writing tasks through the year of the study. It attempts to establish a profile of students who benefited most from the 'shared knowledge' and 'text-mediational' forms of scaffolding characteristic of the Foundation Course. Secondly, I explain the value of the integrative comparison for building an understanding of what constitutes academic potential in this context, as well as for interrogating the pedagogical orientation of the course. I am able to achieve this by making a case for the validity of the SOLO taxonomy as a socio-cognitive tool for assessing student learning and for evaluating the impact of the Foundation Course pedagogy on higher order thinking. Although set in a specific South African context, I conclude the chapter by addressing policy and pedagogical implications of relevance to a broader audience of academic practitioners.

1 Context of the study

I became interested in the differences between borderline and solid students in the late 1990s when there was a strong discourse amongst academic staff questioning the presence of 'under-prepared', 'marginal', 'special selection', 'at risk', and 'extended curriculum' students at Wits University. As discussed in Chapter One of the thesis, these

students were perceived to be impacting negatively on student throughput and success rates. Having co-designed learning materials with subject specialists for use in academic support or Foundation Course tutorials, I spent time sitting in on teaching sessions to ascertain the 'uptake' of these materials and methods, as well as their impact on student learning. I wished to explore student progress on a course in which educational strategies and assessment practices were highly scaffolded and in which students' identities and voices were recognised, affirmed and had contributed to shaping the curriculum. It was a learning environment which, in my opinion, like the other discipline-based foundation courses at the time, promoted optimal learning of relevant disciplinary and generic competences whilst valuing participants' own perspectives and experiences. As discussed in Chapter One, the Foundation in English course along with the other four discipline-based foundation courses in the Faculty of Humanities were put in abeyance in the mid-2000s as they were no longer regarded as financially viable[1].

Within the academic development context, on the one hand, numerous anecdotes abounded about the talents and academic potential of many of these special selection students. Some of them had become role models for undergraduate students as tutors and post-graduate students in particular disciplines. On the other hand, there was a profound sense of disappointment that certain students had not measured up to course learning expectations and assessment standards. Foundation courses were regarded as inadequate for addressing students' educational and language difficulties and by some staff as 'spoon-feeding' students unnecessarily. In order to counter these predominant views of either student idealisation or deficit, I wished to develop an integrative framework for understanding student learning, in particular, how students were engaging with academic literacy on the Foundation Course. This approach would contribute to the need to document and track students on 'special paths' more systematically. As discussed in Chapter Two on methodology, from a teaching and learning perspective, the current university analysis of throughput rates does not take into account the different contextual and educational circumstances of Foundation Course students in comparison to

[1] After the financial aid policy in 2005 withdrew funding to 'special selection' students, it became difficult for departments to justify funding foundation courses catering for far fewer students.

'mainstream' students in the BA degree. My comparison of borderline and solid students, who were both recognised in the biographical questionnaire and language proficiency test for their academic potential and who were exposed to the same degree of scaffolding on the Foundation Course, would be useful for separating out both intrinsic and extrinsic factors promoting or inhibiting learning. A more differentiated, multi-dimensional picture of Foundation Course students would assist course developers to identify student and course-related issues that contributed to success or failure at university. As mentioned in Chapter Two, it became necessary to create a qualitative lens for understanding the throughput and graduation rate figures of students in the case study.

This comparison has proved extremely instructive as there are significant differences between borderline and solid categories of students in the areas outlined below. It is worth repeating that all students in the solid group obtained their degrees. One of the six obtained his degree in three years, which was one year less than required on the extended curriculum; four out of six obtained their degrees in the required four year period and one out of six with an additional year. Three out of six of the borderline group ultimately obtained their degrees: one in regulation time, another with an additional year, and one with an additional two years. The following tables summarise the throughput rates of students in the tutorial class as a whole. This serves as a backdrop for the more intensive case study analysis further in the chapter.

Table 8.1: Solid performers

Number	Years to graduate	Percentage graduation	Drop-out rate	Postgraduate study
14/33	*n:* 1/14 *n* +1: 9/14 *n* + 2: 2/14	12/14 = 86%	2/14 (both 1st year)	4/14

Table 8.2: Borderline performers

Number	Years to graduate	Percentage graduation	Drop-out rate (not registered)	Postgraduate study
8/33	*n* +1: 1/8 *n* + 2: 3/8	4/8 = 50%	4/8 (1 in 1st year, 2 in 3rd year and 1 in 4th year)	0

Table 8.3: Top performers

Number	Years to graduate	Percentage graduation	Drop-out rate (not registered)	Postgraduate study
7/33	*n* +1: 3/7	3/7 = 43%	4/7 (1 in 1st year, 2 in 2nd year and 1 in 3rd year)	1 completed LLB

Table 8.4: Weakest performers

Number	Years to graduate	Percentage graduation	Drop-out rate (not registered)	Postgraduate study
4/33	*n* + 2: ¼	¼ = 25%	3/4 (2 in 1st year, 1 in 2nd year and 1 in 4th year)	0

Total number of graduations: 20/33 (61%)

Total number of drop-outs: 13/33 (39%)

Total number of postgraduate registrations: 5

n : 1 graduation

n + 1: 13 graduations

n + 2: 6 graduations

2 What are the Main Findings of the Research Study?

2.1 Overall results of students in the tutorial group

Before elucidating on the main findings of my comparative research study, I wish to comment on the overall results of students in the tutorial group. It is interesting that the most successful students in terms of achievement at university and length of time it took to complete their degrees were in the solid group. This finding suggests that students who appeared to cope consistently with academic tasks and pass at an average level, regardless of their initial academic language proficiency and educational exposure, benefited maximally from the Foundation Course scaffolding. It is significant that only one of the borderline students attained a degree in the regulation time, while the other three out of eight students took an additional year to complete their degrees. Similarly,

one student out of four from the weakest category in the tutorial class managed to obtain a degree with an additional year of study. This finding raises concerns about the risks involved in admitting students to university operating at vulnerable entry levels. It also points to the need for faculty policy regarding students who under perform in their first year. Surprisingly, students in the top-performing group in the tutorial achieved less than a 50% graduation rate, a result that needs to be interrogated in terms of which students are likely to succeed on an extended degree programme. Factors such as commitment to a Humanities degree and qualities of endurance may suggest different curricular paths for top-performing students. These phenomena will be explored in more depth when the implications of the findings are outlined in the final section of this chapter.

2.2 Main findings of differences between solid and borderline students

2.2.1 Analysis of affective factors

What has emerged clearly from the analysis of affective factors is that all students selected for the case study, to a greater or lesser degree, showed evidence of the 'will to learn' and resourcefulness in response to the various tasks that elicited these qualities. In particular, family members and teachers contributed to their construction of strong learner identities. Students in both university success categories identified people in their early years motivating them to continue with their studies. Similarly, extra-curricular activities played a significant role for all students in the case study, as was a sense of pride and confidence in their school accomplishments. Despite poor language expression on the part of some of the students in the biographical questionnaire, members of the admissions committee believed they showed potential to succeed at university in terms of these affective qualities, and that intensive competency-based foundation courses would develop their language and learning abilities.

2.2.1.1. University identities

From interpreting the biographical questionnaires and autobiographies of students in the solid group, the first major difference between students in the two university success categories (*n* + 1 and *n* + x) was their belief in their ability to succeed in their future studies at university. All students in the *n + 1* group, including Isiaah from the borderline

group, made specific reference to life at university unlike students in the *n + x* category who referred to themselves only in terms of their current school identities. They were not able to project their 'learning selves' (Cottrell 2001:26) into university life. Their inability to re-construct themselves as confident, successful university students made it difficult for the selection committee to predict whether they would become 'go-getters' at university.

2.2.1.2 Translating attributes of determination and motivation into cognitive problem-solving

As discussed in Chapter Three, in terms of success at university, it is interesting that the discourse of motivation, though present in some answers[2] in the biographical questionnaires of students in the *n + x* category, was not evident in their approaches to solving problems. This does raise questions as to whether certain students were able to transfer these attributes to process information at higher cognitive levels. This is, arguably, the most important difference between solid and borderline students. As mentioned in Chapter Two, at the time of my comparative analysis I did not have access to student throughput rates. In rereading Isiaah's biographical questionnaire and autobiography, it is evident that he had a different approach from the other students in his sub-group. He was the one student from the borderline group who managed to pass in the expected four years without failing any of his modules in his degree. Although his language expression was faltering and awkward, he displayed energy and passion about studying at '*tertiary*'. In addition, he could rise above his difficult circumstances, like students in the solid group, and see the big picture of how to solve problems and dilemmas at university. His 'will to learn' emerged clearly from his answers despite his difficulty with English.

Linked to determination, although language expression presented difficulties for all students regardless of sub-group, a point of difference in the admissions tests and autobiographies was that borderline achievers provided notably less detail and justification in their answers compared to solid students. This manifested in a limited

[2] Questions that elicit the 'discourse of motivation' in the biographical questionnaire are those asking students to describe their strategies for dealing with various life challenges.

repertoire of vocabulary, which may also have prevented them from elaborating on their career choices and how they had used available resources in their environment.

My analysis of affective factors suggests that solid students were able to think ahead and plan strategies for solving various problems. As mentioned in the analysis of investment/ 'will to learn' factors in Chapter Three, students in the *n + x* category were unable to move beyond their own issues in order to engage with the challenge of the tasks. They generally showed reluctance to move out of their 'comfort zones' and provided very few strategies for dealing with problems presented to them. This resulted in narrow, one-dimensional and unimaginative thinking, not congruent with success at university. Isiaah stood out as the one borderline achiever who had the capacity to open up to new experiences and learn from his mistakes. In the final question on the biographical questionnaire which asked students if they had any information to add to their forms, most students attempted to convince the Admissions Committee to accept them in fairly general terms with sentences like, '*You won't be sorry if you take me*', '*I won't let you down*' and '*I think I am suited to this…*' Isiaah, on the other hand, made some constructive suggestions to the committee when considering potential candidates:

> *I think the admissions committee should consider only the outstanding candidates and if you are not successful they should inform you in time in order to be aware of the situation. They must also not respond to candidates for just fulfilling their needs.*

Though he did not explain his last remark sufficiently, he presented a fairly well-reasoned view of selection processes, an essential component of academic thinking.

2.2.1.3 Quantitative vs qualitative processing of information

It appears that students in the borderline group were operating at a more quantitative than qualitative level (Biggs 2003) regarding affective (as well as cognitive) factors. They demonstrated an awareness of the ***amount*** of effort needed for success at university as they recounted and listed their accomplishments at school. This contrasts with solid students who unpacked the elements and types of activities tertiary level activities would

involve. Borderline students tended to focus more on the discourse of hard work and effort both in the way they managed their own lives as well as in their advice to other students.

2.2.2 Analysis of written performance on the Foundation Course

I have constructed a developmental graph (in Appendix D) for each of the students in the solid and borderline groups as a visually clear method of illustrating their academic growth during the course of the foundation year. These graphs fulfil a dual purpose. Firstly, they draw on the elaborated SOLO taxonomy to differentiate between students as far as content, organisation and language use is concerned. Separating the writing criteria in this way makes it possible to discern how students responded to different aspects of the course pedagogy in their writing. Secondly, the graphs are a colourful and vivid graphical representation of the changes students made across the various writing tasks and indicate the extent to which they shifted to more qualitative levels of analysis (relational and extended abstract). This depiction allows for a more in-depth comparison of students in the case study. In my analysis I refer to individual as well as group trajectories and trends. I have grouped the graphs according to solid and borderline groups and not university success categories, although this information has impacted significantly on my understanding of the data.

After embarking on an individual analysis of each of the students, I examine the group trends in the separate writing dimensions of content, organisation and language. This global overview of student writing allows me to reflect on the course pedagogy critically in terms of its effect on writing development. Furthermore, it facilitates a closer interaction between teaching and learning on the Foundation Course and determines the match between the educational provision and the learning outcomes. All the findings on student writing refer to the comparison, argument and research phases of the course.

2.2.2.1 Individual analyses

Refer to Appendix D for illustrative graphs of the following descriptions.

Solid group

Thabo followed a steady upward trend in all three writing areas, the most consistent being his improvement in content. In fact, his grasp of the meaning of the tasks caught up with and at times overtook his ability to perform the more 'teachable' tasks of organising and expressing information. He shifted to the relational, qualitative zone early in the year in response to the first set of academically relevant feedback.

There was a steady improvement in **Maloko's** grasp of the task requirements from earlier until later in the foundation year. Like Thabo, her mastery of the content of the tasks improved more than the organisational and language aspects of her writing. Her functioning in these latter areas was not as competent as her understanding of how to address the essay tasks. She too showed potential to shift to relational modes of operation in her ability to reason in her research report, though not to the same level as Thabo, Bramley and Lebogang.

Bramley was the one student who showed elements of relational thinking from the start of his essay-writing journey. His handling of the content matter was also superior to his structuring of information and language although his writing revealed overall competence in categorising and communicating his ideas. In all except the argument essay, he moved closer than any of the others in the solid group towards extended abstract thinking.

Lebogang's writing development through the year closely resembled that of Maloko's that showed a consistent upwards pattern. Nevertheless, she made more progress from the first to second draft of her South Africa-Zimbabwe essay (two rather than one level up the content ladder), and was more consistently relational in both her argument essay and research report.

Imelda, like other students in her cohort, improved in her ability to handle the content of the different task requirements. However, unlike students in her sub-group, this trend flattened out when she made no progress from the argument essay to the research report. In addition, Imelda showed no evidence of the potential for relational thinking in content, structural or language aspects of her writing despite her overall solid performance. Her membership of the solid group can be attributed to the gradual progress she made in the course in all writing areas.

Unlike Imelda, **Karabo** managed to edge into relational thinking in her interpretation and sequencing of her research data. She too made steady progress conceptually and improved in all aspects of her South Africa-Zimbabwe comparison.

Borderline group

Isiaah, despite not moving beyond the quantitative multi-structural level of understanding in his writing and failing his first foundation module, showed a similar steady pattern of development to his solid counterparts. He improved his South Africa-Zimbabwe comparison by two levels as far as representing different perspectives was concerned. As discussed in the data analysis in Chapters Five and Six, in all his essays, his control of language may have been an obstacle to relational reasoning and writing.

Lindiwe's writing reflected a typically static picture of a borderline approach to conceptual thinking. Although she made some marginal improvements in her handling of the task demands through the year, they were never above the low multi-structural level. Significantly, there was no increase in performance from her first to second draft of the South Africa-Zimbabwe comparison.

Joe, like Isiaah, demonstrated the potential to learn from the discursive feedback on the comparative essay although he failed his first foundation module. In all his writing, his grasp of content was in advance of his organisational and language control. He made huge strides in the research report by functioning at the low relational level in his reasoning and interpretation of the data. As mentioned previously, given his impressive

progress on the Foundation Course, not that dissimilar from members of the solid group, it is surprising that he took an additional two years to complete his degree.

Angie's writing followed a similar pattern to Lindiwe's as she appeared not to have benefited from the extensive scaffolding and feedback especially in the comparison phase of the course. She wrote mostly at the multi-structural level but showed elements of relational processing in her use of evidence in her research report. As discussed in Chapter Six, she may have benefited from the interaction with her fellow research group members both of whom were solid students.

Like Angie and Lindiwe, **Sipho** remained at the uni- and low- multi-structural levels with the exception of his research report in which he showed some potential for critical thinking.

Although **Mabe** improved gradually in the comparative phase of the course, his conceptual understanding of the material stayed at the low multi-structural level.

2.2.2.2 Comparing the development of conceptual understanding (content)

From examining the graphs, it is important that all students in the solid group made steady progress in the way they processed and interpreted increasingly complex material in their writing tasks. Predictably, they fared better in the first comparative task that drew on their own understandings and experiences than the first more 'academic' task that required them to engage with other verbal and written texts. Some students declined slightly in their handling of the new genre of the argumentative essay, but there was a steady upward trend as they rose to the conceptual demands of later course tasks. This contrasted with most students in the borderline group who remained at a constant level across tasks as far as the active construction of meaning was concerned.

The most significant improvement of solid students across tasks was from the first to the second draft of the South Africa-Zimbabwe comparison as documented in detail in Chapter Five. Not only did all solid achievers shift to a higher level in their final

comparative essay in addressing the content, but three students moved two levels up in terms of their representation of perspectives. This contrasts with three out of six borderline students who remained static from first to second drafts, suggesting that they were not as receptive to the multiple forms of feedback they received on their first drafts. The former group seemed to have benefited optimally from the course scaffolding on the basis of their willingness and openness to learn from new experiences and inputs. As a result, they moved into a more advanced analytical space.

More importantly, even those borderline students who made minor improvements in the way they addressed the latter course tasks (Angie and Sipho) did not move beyond the multi-structural, quantitative level of analysis in any of their essays. In the comparative essays, this manifested in the limited depth and breadth of their ideas and their inability to draw on sources to represent multiple perspectives in the school-university comparison specifically. In the argument phase, it surfaced in weak substantiation of their arguments and poor defence of their own position on the topic. In the research reports, borderline students had difficulty explaining and reconstructing information. This limitation manifested in inadequate reasoning processes in all aspects of their reports: the purpose, methodology, use of evidence to analyse the data and their interpretation of patterns and counter patterns emerging from the data. In contrast, solid students showed potential to explain and justify their ideas convincingly, which are the hallmarks of higher order thinking (Perkins 1992).

It appears from this close analysis of students' content development that there are two differentiating factors that indicate the likelihood of success at university. The first factor is not so much the actual level and extent of relational thinking across tasks as the fact that certain students like Maloko and Karabo had the capacity to function relationally in at least one of their written assignments. These students were able to develop their thinking and writing abilities in response to the course mediation by actively constructing meaning. The second factor points to the capacity to improve their conceptual understanding of the tasks, even if this was a gradual process. Although Isiaah did not function at the relational level for any of his tasks, he made consistent progress in his

handling of the task demands. As discussed in Chapter Three there were linguistic, rather than conceptual, factors that prevented certain students like Isiaah and Joe in the borderline group from shifting to higher levels of analysis.

2.2.2.3 Comparing the development of organisational ability

A global examination of student writing development on the course shows that students in both achievement groups benefited from the course input, which emphasised categorisation and linking in all three writing genres. From the analysis of individual student writing progress, it emerged that solid performers improved more in their capacity to structure information in response to the mediation than students in the borderline group. More surprising was the striking contrast between solid and borderline students in terms of the inter-relationship between content and organisational issues. The conceptual understanding of students in the solid group was stronger than and improved more than their ability to structure information through the course of the year. This trend was reversed in students in the borderline group whose ability to structure information was at least at the same level and mostly better executed than their engagement with the conceptual issues. This manifested in greater mastery over the skill of sorting and structuring their writing into a recognisable pattern rather than a competent handling of the content matter. The reverse trend reveals the effectiveness of the particular emphasis on categorisation in the course.

In the comparison phase of the course, it is evident, though not stated explicitly, that the lecturer weighted the organisational concerns more than the conceptual issues. From re-examining the comparison texts, the students were assessed on the basis of how they had arranged their ideas into categories. The school-university comparison highlighted students' own experiences and ideas while the South Africa-Zimbabwe comparison stressed the way students represented different perspectives from the three data sources. The overriding concern in this phase was how students had assimilated the ability to relate specific details and examples to broad categories of analysis (part-whole relationships). This prioritising of structural factors in the course pedagogy and assessment practices in the comparison phase (Chapter Five) may explain why borderline

students improved in this aspect of their writing. With the exception of Sipho, they all progressed in their ability to organise material systematically. The 'top' students in the solid group made huge strides in this area, which indicates their intensive engagement with the pedagogical and feedback processes around categorisation.

As discussed in Chapter Six, students across the board produced poorly structured essays in the argument phase of the course as a result of their difficulties in assembling evidence to construct a coherent line of argument. It was surprising that this challenge was not apparent in the research phase when students were required to apply the skill of categorisation to the analysis of their findings in the research report. As they were expected to generate their own categories emerging from the data in order to write the research reports, categorisation was a more complicated and higher order process. Despite this complexity, I believe that the dialogic, mediational nature of the research groups contributed to students' enhanced capacity to assemble and integrate their findings. Most students in the borderline group were able to categorise and sequence their material at a moderate to high multi-structural level, while four students in the solid group rose to relational levels in this arena. A case in point was Mabe's elevated functioning in his research report especially as he provided coherent, convincing categories of analysis and sophisticated connections between the quantitative and qualitative data.

2.2.2.4 Comparing the development of communicative ability (language)

From a close scrutiny of students' individual writing patterns, it would seem that language followed the most erratic developmental path for both solid and borderline groups. In the comparative phase, language expression was an area of improvement for students as a result of the central focus on comparative structures and grammar. Similar to the organisational analysis, the borderline cohort did not improve as much as the solid group in their signalling of categories and sub-categories to their readers. They all made progress however in 'trying on' the language structures to compare information and represent different viewpoints.

A major concern of this research is whether students' language difficulties, such as limited lexicon, constrained students from shifting to higher modes of operation, even in the cognitively supportive, 'context embedded' (Cummins 2000) Foundation Course. The key factor holding certain students back from articulating clear explanations in the argument and research phases of the course was their difficulty using the language of cause and effect to represent relationships between ideas, thereby constraining them from constructing convincing, authoritative arguments.

2.2.3 Analysis of student reflections on the course

2.2.3.1 Individual analysis of students' developing reflective capacity

Refer to Appendix E for illustrative graphs of the following descriptions.

Solid group

Thabo, Bramley and Lebogang, the three 'relational' writers in the solid group, showed a strong tendency from the beginning of the course to engage in critical self-reflection in response to the meta-level questions. This capacity to reflect critically on their own strategies was sustained throughout the course and followed their steady progress as far as higher order cognitive development was concerned. Similar to the cognitive pattern in which conceptual progress exceeded their organisational and language abilities, their reflections on how they had managed the content of the tasks was in advance of their reflection on the process of executing the tasks detailed in Chapter Seven.

Interestingly, the other three members of the solid group reflected at a lower (aware or strategic) level even if they started off on a promising note reflecting thoughtfully on their school-university comparisons. Of the three, Karabo peaked to the highest self-critical level in her final reflection, reminiscent of her shift to higher levels of reasoning in the report itself, while Maloko peaked in her first reflection, dipping in her second reflection on the South Africa-Zimbabwe comparison. Her slightly stronger reflection on her research report contrasted with Imelda's who after opening well with an honest, detailed discussion of her school-university comparison, moved to a lower level in her

capacity to reflect on both content and process areas of her final report. This mirrored the downward trend of her writing from the argument essay to the research report.

Borderline group

Three members of the borderline group (Angie, Lindiwe and Sipho) showed no evidence of shifting to higher levels in any of their tasks requiring reflective thinking. This closely resembled their level of performance on their writing tasks, which remained static, including the group-based research projects. Such a pattern contrasted with that of the other three students in the borderline group (Joe, Mabe and Isiaah) who engaged with the meta-level tasks at a more complex level. All the students reflected at the highest level for the South Africa-Zimbabwe comparison, but Joe was the only student who remained at this advanced level while reflecting on his research report. As mentioned previously, this was consistent with his move to the relational level in his explanations of the research findings in his final report.

2.2.3.2 General comments on student reflections

This detailed analysis has shown the positive relationship between students' reflective capabilities at the highest and lowest levels and their performance on the course and at university as a whole. The chief difference between borderline and solid achievers was in the reflective zone (Perkins 1992) in which students evaluated their own approaches for tackling the tasks throughout the year. Solid students consciously explored possibilities for transforming their approaches to the tasks especially in the comparative phase of the course unlike borderline students who tended to remain at the 'aware' level, with reference to Perkins' hierarchy of reflection. This was regardless of their dispositions and qualities displayed in the biographical questionnaire.

As documented in Chapter Six, there was a striking correlation between students' levels of reasoning within the research report itself and the quality of their reflections on the content and process of the research. To some extent this can be attributed to the interactive group processes that shifted students' ZPD to more complex and abstract levels of analysis. Brockbank and McGill (1998) suggest that to optimise learning, there

needs to be constant interaction between practice and reflection. For writers in the field of higher education, thinking goes beyond 'critical thinking' to a more holistic notion of 'critical being' (Barnett 1997) and 'criticality' in which students 'develop their powers of critical self awareness well as critical action' (in Brockbank and McGill 1998:50). This notion is particularly relevant for the research project as students participated actively in and reflected on a process of 'doing research' prompted by the meta-level questions.

Recent information has become available[3] that approximately 40% of the entire class of 200 students graduated from a four to a six-year period (although 15% of the class changed to other faculties making it difficult to track their throughput rates). The main difference between the positive throughput rates of the tutorial group observed during 200x and that of the other tutorial groups within the Foundation Course, may be explained by the systematic incorporation of the task-related meta-curriculum throughout the year. Although all tutorial co-ordinators were encouraged to integrate meta-level questions with course tasks, there was an uneven and infrequent application of methods designed to encourage self reflection[4].

3 The value of the integrative approach for understanding student learning and teaching in the Foundation Course

The use of the integrative approach for comparing students in different success groups raises a number of issues about the calibre of students 'in transition' and critically examines the capacity and pedagogy of educational programmes, like the Foundation Course, for enabling students at different levels to shift to more analytical modes of operation in the ZPD. I firstly show how I have adapted the SOLO taxonomy in an iterative way to identify students' strengths and weaknesses. I subsequently tease out the benefits of the comparison for describing academic potential in this context. Secondly, I show how I used the SOLO taxonomy as a socio-cognitive tool for understanding the interrelationship between pedagogy and writing. The taxonomy serves to highlight the

[3] Information on cohort study obtained from AISU (Academic Information Systems Unit) at Wits University
[4] Information gleaned from researcher's attendance at weekly Foundation Course planning meetings.

effectiveness of the mediational strategies and reveals the constraints of certain aspects of the teaching programme.

3.1 Using the SOLO taxonomy to identify cognitive potential

Through the comparative analysis of data, I became increasingly adept at modifying the SOLO taxonomy to suit the different task types. For example, in the comparison phase documented in Chapter Five, the challenge of whether to place categorisation as a conceptual or structural issue was complex and labour-intensive. I believe I succeeded in enhancing the strength of the taxonomy identified by Hattie and Brown (2004) by differentiating and unpacking the broad criteria within their task contexts. Such an adaptation enabled me to explore the development of individual student writing in different phases of the course as well as writing trends of the whole tutorial class in relation to the course pedagogy. The adapted versions of the SOLO taxonomy indicate the extent to which students in different success categories connected with the various forms of course scaffolding and lecturer feedback. This process uncovered factors in the taxonomy, like idea density and representation that may have revealed academic potential more than organisational or language factors.

It became apparent from my comparative analysis that the differentiated taxonomy enabled me to identify whether students were processing information at a surface or deeper level of meaning-making. The following questions underline this facility to establish how students performed in relation to each of the criteria:

- In the comparison phase of the course were students representing different perspectives on university experiences or merely reproducing ideas about which they had heard or read?
- Were students able to formulate a coherent argument in response to the issue or simply recounting those in the texts?
- Were students able to explain the value of their research findings in the report or merely listing them sequentially?

- Were students able to manipulate fragmented pieces of information into coherent categories? If so, did this structure assist them to address the topic as a whole or did it only improve the presentation of the material?

I conclude that the differentiated taxonomy provided me with a perspective of student writing that was analytical in terms of individual assessment, but holistic in enabling a global and comparative view of student strengths and weaknesses. This dual overview enabled me to establish a profile of students who benefited most and least from their participation in the Foundation Course in the next section.

3.1.1 Creating a profile of students likely to succeed

While conceding that it is impossible to make general predictions and claims about student potential at university from an individual case study analysis of student writing and reflections, the comparison enabled me to generalise about two groups of students on the basis of their cognitive and meta-cognitive performance on the Foundation Course. These generalisations are more in keeping with those described by Erikson (in Merriam 1998:210) that 'in attending to the particular, concrete universals are discovered'. It is clear that the extended curriculum model as it existed from the mid-1990s to 2007 in the Faculty of Humanities at Wits University was ideally suited to students in the solid group who, despite their past inadequate schooling, showed potential for relational thinking and a strong 'will to learn' (Barnett 2007) from their participation in the course and their interaction with the course pedagogy from early in the year. They showed adeptness at higher order reasoning, explanation and reflection coupled with strong dispositions and qualities correlating with success at university in their biographical questionnaires. The majority of students in this category went on to complete their degrees in the required timeframe of four years.

The second group, consisting of students in the borderline group, appeared not to have 'dialogued' actively with the course mediation. As a result, they were unable to reconstruct and transform their ideas in the Foundation Course. Their profiles were unlikely to change when faced with increasingly complex task demands in higher levels

of study in courses with far less scaffolding and support from lecturers. This 'will to learn' (Barnett 2007) existed in students in the borderline group in a less articulate, elaborated form. The key constraint for this group was their poor connection with meta-reflective and feedback processes for shifting to more complex levels of analysis and interpretation.

These findings raise questions about the remaining students in the case study in terms of their progress at university. How, for example, is it possible that a student like Isiaah, who operated at a predominantly multi-structural level during his first year at university, successfully transferred a range of educational strategies to meet the cognitive demands of higher level university courses? Furthermore, how does one explain the 'academic potential' of students in both groups whose higher level thinking processes were sporadic? Some of these students obtained their degrees in regulation time while others dropped out of university precipitously. Although student performance at this level is not generally predictive of later success, it points to certain student and course-related factors that need consideration. These phenomena discussed in section 3.2 allow me to draw inferences about future pedagogical and institutional activities.

3.1.2 Understanding profile of other 'achievers' in the Foundation Course

Although they were not the focal point of my research, I propose that students at the 'bottom' or 'top' achieving end of the Foundation Course do not benefit optimally from highly scaffolded courses. It would have been preferable to have counselled students failing both their modules away from university courses to alternative tertiary level options early in the year. This would have prevented them becoming falsely optimistic about remaining at university indefinitely. I believe that students performing at the 'top' end in the Foundation Course are similarly unsuitable for an extended curriculum. While some of them may have fine-tuned their writing and thinking, their patchy results and erratic participation in the course does not justify their continued inclusion. In all likelihood, certain successful performers would have coped academically if they had been placed on a well-constructed three-year degree programme. As discussed earlier, many of these students, despite being admitted through an alternative admissions procedure, may

not have had the same 'will to learn' from additional provision of support, having attended middle-class suburban schools. Some students may have been using a Humanities degree as a back door route to other limited access degrees.

3.2 Using cognitive and meta-cognitive approaches to reflect critically on the Foundation Course pedagogy

3.2.1 The SOLO taxonomy identifies relationship between teaching and learning

My intention of providing detailed examples and applications of the SOLO taxonomy for the various course tasks was to address its one-dimensional form presented in current curriculum development handbooks (Biggs 2003). There is a danger that educators simply reproduce the taxonomy for the purposes of assessing student levels of understanding, reinforcing the notion that the criteria for each task are weighted equally and remain static over time. Such a generalised approach makes it difficult to create a textured picture of how students have engaged with particular writing tasks at different levels of connectivity. For this reason, the method of detailing the criteria allowed me to gain a deeper understanding of how students were handling the various task demands. Despite the labour-intensive activity of adapting the SOLO taxonomy, there were useful outcomes in terms of mentoring and guiding fellow staff members to follow similar procedures in Applied English Language Studies as well as in other disciplines. Once the taxonomy was modified for a particular context, it became a teaching 'model' for how to formulate essay criteria and to analyse the development of student writing.

Applying the SOLO taxonomy to an analysis of how students responded to different course tasks has allowed me to identify areas of optimum learning. As discussed in Chapters Five and Six, in terms of connecting and structuring ideas, particular students benefited immeasurably from the course pedagogy and various forms of feedback emphasising categorisation, linking and using evidence to represent different perspectives. These may have been students who entered the course with some skills required by the curriculum (solid students) unlike the borderline students whose thinking capacities may have been limited by 'over-scaffolding'. The analysis has therefore

allowed me to reflect critically on the pedagogy of the Foundation Course in terms of which students were better served by the various forms of scaffolding.

3.2.2 Perkins' reflective hierarchy identifies the relationship between student reflection and writing

Perkins' model of reflection, combined with others used in this thesis (Mezirow 1990, Brockbank and McGill 1998) served as an important tool for understanding how students reflect critically on their approaches to reading and writing academic texts. It must be pointed out that during my analysis of student reflections some of the terms used were misleading and difficult to apply in new contexts. For example, as the notion of 'conscious' reflection implies an active, self aware alertness on the part of students, it is surprising that Perkins' 'aware' level of reflection is characterised as passive and relatively low level. The description of 'strategic' reflection is similarly vague in its intention to denote both thought and action, and the highest level of reflection, depicted as 'reflective', does not suggest students' capacity to stand back and reflect critically on their approaches to learning. It was only through my application of the taxonomy to specific reflective tasks that I was able to tease out and do justice to the complexities of the different levels of reflection.

The role of reflection was particularly pertinent as the feedback prompts and meta-levels questions encouraged students to articulate what they had learnt from the course scaffolding. They became increasingly conscious of how they were reading and writing academic texts and what strategies they needed to engage at higher levels of cognition. This complies with what Lillis (2003) refers to as 'talk-back' rather than 'closed commentary feedback' in which there is 'an attempt to open up space where the student-writer can say what she likes and doesn't like about her writing' (Lillis 2003:204). This 'dialogic' orientation to academic literacy mediated through meta-reflective processes has challenged one-way notions of feedback in which the students are the recipients/receivers of pedagogical strategies rather than active meaning-makers.

4 Implications of the Research for Pedagogical and Admissions Practices at the University

This final section teases out the potential of courses like the Foundation Course to close the gap between borderline and solid students. The research findings have shown that it is possible to shift diverse entry-level students to higher levels of cognition and thoughtfulness. However, the contrast between solid and borderline students in my research study became starker as the tasks became increasingly analytical and cognitively demanding. It is difficult to speculate from an analysis of student writing and reflections whether more students could have shifted to higher levels of writing and thinking had there been space for extending and probing their own thought processes around the course themes and topics. Future growth and innovation in developing extended curricula depends on active institutional and government support for undergraduate teaching at a research-focused university like Wits.

4.1 Improving teaching to close the gap

Biggs (2003:5) suggests that when there is a large gap between different students' levels of engagement with teaching, good teaching methods are required to 'get most students to use the higher order cognitive level processes that the more academic students use spontaneously'. Closing the gap between solid and borderline students would involve additional 'interactive, intersubjective dialogue with advanced peers and adults' (Gee 2000:14). There would be an emphasis, for example, on categorisation as an organisational as well as a cognitive skill to improve students' ability to justify and explain their categories and arguments. It would be eminently possible to draw on the vast expertise and experience of Foundation Course lecturers to enable students to 'take responsibility for their thoughts and the expression of those thoughts, whether in writing or in action, including the spoken word' (Barnett 2007:141).

I have argued that the inclusion of the meta-curriculum was effective in facilitating the movement of students to higher levels of consciousness within the ZPD. The research phase in particular empowered students to explore new meanings beyond the 'authoritative discourse' expected by the institution by 'questioning, exploring and connecting' (Lillis 2004:198). The repetitive, overly descriptive writing illustrated in

Chapters Five and Six can partly be attributed to the lack of focus on developing a meta-language for enabling the formulation of evidence and explanation which occurred in the later phases of the course. As pointed out previously, despite the incorporation of the meta-curriculum as a bridge between students' writing and reflections, there could be a more conscious attempt to develop 'language of thinking strategies' (Perkins 1992:109). An explicit focus on the relevant terms and concepts needed for 'good causal reasoning' could improve students' ability to operate at higher cognitive levels as well as facilitate more sophisticated self and meta-reflections within the 'pedagogy of space'.

4.2 Improving research on teaching and learning

Engaging in qualitative, long-term case study research of how students learn in the transition from school to university has enriched my understanding of teaching and learning practices in higher education. It has alerted me to the critical value of applied research in highlighting factors that promote or inhibit success in first year academic endeavours especially in the light of South Africa' graduation rate being one of the lowest in the world (Letseka and Maile 2008). Less than 5% of the African university-going age group are currently participating in higher education in South Africa and the current system of 30% attrition rates of first year students is not meeting the demands of equity and development agendas (Scott 2008). I hope to encourage fellow academic development specialists to research disparities in higher education with a view to developing a systematic multifaceted approach to tackling the challenges we face. I suggest that we investigate research methodologies appropriate for researching the integration of academic literacy into disciplinary discourses.

In reflecting critically on my method of analysis, I realise that the term 'borderline' may unintentionally have set up a negative expectation of these students thereby prejudicing readers' perceptions of them. One needs to be aware that generating comparative categories is an 'intuitive process but it is also systematic and informed by the study's purpose' (Merriam 1998:179). The positioning of students in this group may have closed off possibilities for success and growth, despite their poor performance in course assessments. It is worth considering that certain students in the borderline group could

have ‘made it’, as Isiaah did, with enhanced academic literacy support. Similarly, some of the students in the solid group may have ‘made it’ without the intensive scaffolding of foundation courses. This implies a major re-examination of educational resources for foundation and first year students. Furthermore, as discussed in Chapter Two, although my detailed assessment of individual student progress was guided by the modified SOLO taxonomy, my collaboration with Granville in designing the Foundation Course and assessing student development over many years might have influenced some of my perceptions of their academic dispositions. This possibility does not detract from the holistic, integrative approach the taxonomies have afforded me during the research process.

4.3 Improving admissions and readmissions procedures

One of the key implications of establishing a profile of students most likely to benefit from educational interventions aimed to bridge the gap between school and university is a more confident, refined approach to identifying the ingredients of academic potential. Flowing from the comparison between solid and borderline students, the following set of broad principles can be incorporated into the variety of testing mechanisms more systematically. Additional questions and test items need to be developed using the qualities and dispositions from the biographical questionnaire (Chapter Three) as the main criteria to assess the following:

- students’ ability to transfer their intrinsic motivation and learning dispositions to solve a variety of problems and dilemmas
- students’ potential for critical self reflection
- students’ capacity for qualitative thinking and writing in response to writing tasks. They need to show potential for developing the cognitive skills of explaining, exemplifying, applying, justifying, comparing and contrasting and generalising[5] (Perkins 1992)
- students most likely to benefit from educational programmes set up to accommodate the needs of first year students.

[5] The UCT Placement Test in English for Educational Purposes (PTEEP) would play a significant role in testing for these emerging abilities in conjunction with the biographical questionnaire.

As suggested earlier in this chapter, once students have been selected on the basis of these criteria, if they show no potential for qualitative growth in response to the linguistic and cognitive scaffolding in first year (redesigned courses), they might need to be counselled out of university study halfway through the year. This would benefit students in the long run both financially, psychologically and educationally as they are directed towards appropriate tertiary level programmes.

4.4 Institutional challenges to closing the gap: concluding comments

The history of academic development at Wits documented in Chapter One shows the disjuncture between mainstream teaching and academic development. Academics have had to contend with competing demands on their time as research incentives are prioritised over teaching. This has resulted in less attention to educational processes in higher education (Scott 2008). Wits academic literacy specialists are concerned that through the closure of foundation courses, the impetus for curriculum change and student development will disappear. The assumption that the teaching methods and materials can be mainstreamed 'automatically' for the benefit of all students needs serious questioning. In some departments, 'mainstreaming' of foundation principles and practices into first and second year teaching has been uneven because of its reliance on dedicated teaching specialists who are junior and whose work is often undervalued. Creative possibilities for integrating many of the Foundation Course methods and materials into first year curricula for the benefit of all students depends on infrastructures and resources being made available for staff and course development, as well as financial aid for students with academic potential regardless of their matric results. It also supports Letseka and Maile's (2008:7) claim after conducting research into high university drop-out rates that 'unless South Africa seriously addresses issues of poverty and inequality, it is unlikely that the high drop-out rates and under-representation of black African students will improve'.

I conclude this thesis by raising the following question that consolidates my key research findings: What conditions need to be created for tertiary educators to incorporate effective pedagogical strategies for addressing the 'problems' of higher order thinking in

first year students? Despite the current focus on postgraduate teaching practices in furthering the research mission of the university, it is essential to continue exploring approaches for developing a solid undergraduate base for equipping students to handle the linguistic and cognitive challenges of academic discourses. Unfortunately students of the calibre of Bramley, Thabo, Joe and Lebogang are no longer eligible for selection through the alternative admissions route. Pedagogical spaces need to be opened up for students with a similar 'will to learn' and potential to benefit optimally from course pedagogies. As Gardner (1994:77) proposes,

> It has become evident that any portrait of human nature that ignores motivation and emotion proves of limited use in facilitating human learning and pedagogy… It behooves educators not simply to attempt to motivate students en masse but to identify activities that will rapidly become rewarding for a certain group of predisposed students.

This study has shown that the combination of sociocultural understandings, academic literacies and social constructivism has enabled a deep assessment of the cognitive progress of students in the case study. This integrative analysis has raised questions about the extent to which different forms of scaffolding in a first-year EAP course have led to higher order thinking of students in different success groups. These findings can be used by institutions to challenge themselves as to how to accommodate non traditional students through interactive pedagogies. Only in a climate of respect for educational expertise, recognition of the scholarship of teaching and learning, and professional accountability of lecturing staff, can the effective pedagogical strategies described in the Foundation Course promote transitional learning in the ZPD for first year students, thereby maximising student potential.

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APPENDIX A
FRAMEWORK FOR ANALYSING CURRICULAR AND META-CURRICULAR TASKS

I use the following framework to describe curricular and meta-curricular course tasks:
I firstly describe the content and learning outcomes of each task (**Content**). Secondly, I describe how the teaching and learning activities were implemented in the teaching situation and how the materials were mediated for students (**Pedagogy**). Thirdly, I list the criteria used by the lecturer for assessing student responses to the questions (**Assessment**). Mention will be made of whether the task was used for formative or summative assessment purposes. For some tasks, the criteria were not formulated or made explicit for students in the course handbooks or materials. I have been able to derive these criteria through a process of discussion with the course lecturer and from my own observations of the teaching and reading of the data.

Phase 1: Autobiography

Content

'My pathway to university' was the topic for the first autobiographical essay, which was intended to be an 'autobiographical account of students' pre-university learning experiences' (Granville and Dison 2005). At this early point in the year, students would be expected to produce a competent, well-structured narrative about various aspects of their lives.

Pedagogy

To prepare for this task, students read selected autobiographical writings of South African authors (Fugard 1994, Ramphele 1995, and Mandela 1994) and also of students at South African universities. They were provided with a table to compare the different autobiographical texts in terms of categories such as writer profile, historical and geographical setting, financial or emotional concerns and the style in which the passage was written. Several tutorials were devoted to analysing extracts from Mandela's autobiography, *Long Walk to Freedom*, which aimed to teach academic skills such as pre-

reading and making notes from written texts through guide materials. The key purpose of the activities built around the Mandela text was for students to compare features of narrative texts in the autobiography itself with academic writing in the commentaries on his autobiography.

Furthermore, in reading various autobiographies, students were required to relate categories to each other, for example, how Ramphela's concerns about studying at medical school were affected by her gender and the historical conditions at the time. Students were further extended by having to select texts from the reading pack that resonated with their own experiences as well as generating their own categories for comparing students' autobiographies at the University of the Western Cape. They were taught some basic academic skills to help with the planning of the autobiography such as brainstorming, mind-mapping, structuring and paragraph organisation. An example of a prompt for organising ideas emerging from their initial brainstorm is the following:

> When you have completed your brainstorm, it will be useful to begin to organise the ideas that emerged from your brainstorm under specific headings or categories. Some of the categories will probably relate to specific phases in a life (e.g. childhood, schooling etc). At this stage, it might be useful to fill your main categories and related ideas onto a spray diagram.

For writing their own memoirs, they were taken through a process of planning and free writing one specific event they had experienced. A series of guidelines and pointers were outlined in the learning materials that served to remind students to incorporate specific features of memoir writing such as details of the event, their own point of view and feelings about the event. One such example of the type of questions students could ask their partners is:

> Childhood:
>
> a) Where and when were you born?
>
> b) Could you describe the place you grew up? Urban or rural?
>
> c) Tell me about your family. E.g. how many siblings do you have? What kind of relationship did you have with your parents?

d) Did your family belong to any religious group? If so, what kind of rituals, beliefs and customs were associated with this?

Assessment

Tutors read and commented on student writing, but a mark was not allocated to this first productive piece of writing, as 'students' stories are often very painful or personal accounts of hardship and distress' (Granville 2002). Many of the criteria identified for assessing qualities in the Biographical Questionnaire were used implicitly to assess the value of students' work. Examples of these are: 'positive, purposeful and determined approach to life', 'internal locus of control' and 'evidence that the candidate has dealt in a resourceful way with difficulties or challenges in his/her own background' (see Enslin *et al.* 2006).

Phase 2: Comparison

Comparing School and University

Content

Students were given this assignment in preparation for their major comparative assignment. (See analysis of subsequent assignment.) They were simply asked to compare the key differences between school and university.

Pedagogy

In class, students were given preparatory exercises in comparing taxis with buses. There was accompanying language work, which included the use of markers in comparison and contrast (similarly, in contrast, however etc.). Students were given extensive practice in comparing and contrasting objects and concepts using comparative markers. The exercises were mostly of a general nature taken from standard academic literacy textbooks like Hamp-Lyons and Beasley (1994) *Study Writing: a course in written English for academic and professional purposes.* Students were also presented with various patterns for structuring their comparison between buses and taxis.

For the school-university comparison tutorial time was allocated to the structuring of paragraphs and how to work with categories and sub-categories relevant to the comparison. Particular time was spent on constructing conclusions by distilling the main similarities and differences between school and university and their significance in relation to one another. After writing their school-university comparisons, students analysed a model assignment that fulfilled all the criteria of a well-structured comparison. The tutor took them through a process of generating criteria for writing a comparison and students examined their own writing in relation to the model.

Assessment

Though no specific criteria were given to students, extensive feedback was given to them. This consisted of written annotations on their essays as well as oral feedback. A 'model' essay written by one of the students was used for this purpose and students were asked to reflect on their own essays on the basis of a number of questions like, 'Did your introductory paragraph state the general purpose of your essay?', 'Did you signal each new category to the reader?', 'Did you mention similarities as well as differences?' and 'Did your concluding paragraph highlight the key similarities and differences?' (See reflection on school-university comparison.)

Reflection on comparing school and university

Content

Students were given a questionnaire in which they were encouraged to reflect on what they did well and what they did badly using the model as a guide. Some examples of these questions were:

> Refer to the exercise where you looked at the differences between school and university:
>
> - Can you see what you did well in this comparison?
> - Can you see what you did not do so well?
> - How would you do your comparison between school and university differently?
> - Which class exercise helped you learn how to develop categories of information? Please explain how that exercise helped.

Pedagogy

The questionnaire was given to students immediately after completing their comparison to allow them to relate their reflections to the task at hand.

Assessment

No criteria for reflecting were given to students though they were encouraged through the meta-level questions to think about strategies for improving their writing.

First Draft: Comparison of South African and Zimbabwe Universities

Content

In this assignment students were required to compare the experiences of first year students in the first few weeks at university with those described by Moyo (1995) at the University of Zimbabwe.

> Write an essay in which you compare and contrast the expectations and realities experienced by a selected group of first year students at Wits this year (including yourself), with those investigated by Moyo (1995) at the University of Zimbabwe.
>
> Using the categories listed below, analyse the similarities and differences between the experiences of current first year students at Wits with those researched by Moyo.
>
> 1. Socio-cultural factors
> 2. Financial factors
> 3. Educational factors
> 4. Psychological factors.

Pedagogy

After analysing the essay topic in class, students practised the skills of mind mapping, classifying and comparing in preparation for the assignment. One activity was for them to brainstorm a range of fun, difficult, surprising and stimulating experiences they had had in their first three weeks at Wits. After sharing these experiences with their partners, students rearranged them into the set of categories prescribed in the essay topic: educational, socio-cultural, financial and psychological. They were introduced to the

rules of evidence, referencing, plagiarism, argument construction and other aspects of academic literacy. A close reading framework was set up in tutorials for analysing the Moyo (1995) and Agar (1990) articles.

Students were guided to devise a set of interview questions they would use with other first year students. They were expected to interview other students and then gather and organise their interview data in order to evaluate the similarities and differences between their peers and those described by Moyo, using the specified categories. A framework was established in the form of a comparative table for students to consider the differences between their own and another's experiences in a specified category.

According to Granville (2002), while students wrote the first draft of this essay, they were given support for this in lectures, tutorials and class discussions.

> New skills are introduced as students face the complex task of selecting and organising the interview data and reading and evaluating Moyo's and Agar's paper.

The higher-order challenge in this task was for students to learn to synthesise their own data with Moyo's and Agar's and to present their work using acceptable referencing conventions. The skill of generalising was highlighted for students in the materials with reference to the Agar article. Students made generalisations about adjustment problems after analysing Agar's summary of the key issues.

Assessment

Extensive feedback was given after the first draft had been marked. The feedback sheet, which focused on content, organisation and language issues, is explained in Chapter Five. Students were given an opportunity to respond to the tutor's feedback on the sheet.

Second Draft: Comparisons of South African and Zimbabwean Universities

Content

Students were required to submit a final revised draft of their assignment after receiving extensive feedback from the tutor.

Pedagogy

Students were given an opportunity to respond to the tutor's feedback on the sheet. After writing the final draft of the comparison between universities, students completed a table that required them to reflect on the writing progress they had made in relation to the essay criteria. They commented on their strengths and limitations in all areas related to the introduction, body (presentation of findings) and conclusion. They also remarked on their use of language in the essay.

Assessment

Students were awarded a mark out of 50 for the final draft of their essays.

Reflection on changes made to comparison essay

Content

After writing the final draft of the comparison between universities, students completed a table that required them to reflect on the writing progress they had made in relation to the essay criteria. Students commented on their strengths and limitations in all areas related to the introduction, body (presentation of findings) and conclusion. They also remarked on their use of language in the essay.

Pedagogy

Students had been familiarised with the assessment criteria in class before they wrote the essay draft. They were given another copy of the assessment criteria, which they were expected to hand in with their final essay drafts.

Assessment

Students were given a mark out of 10 for the essay reflection. This was determined by the students' level of engagement in the meta-curricular task and the extent of elaboration rather than by progress on the essay. I discuss these reflections in Chapter Seven.

Phase 3: Argument

Pros and Cons of Polygamy

Content

Students wrote an essay in which they were required to argue a position on a topic about polygamy. They had to explain the purpose of polygamy and debate its pros and cons in contemporary society.

Pedagogy

Students were guided through a similar process of 'shared knowledge scaffolding' as described for the comparative essay. Activities included structuring and organising the essay, writing coherent paragraphs and integrating relevant quotations from the literature into their writing. The particular focus was the ability to take into account counter arguments relating to polygamy and to construct a convincing argument using appropriate evidence. Their writing is analysed in detail in Chapter Six.

Assessment

Students were assessed on the basis of a modified guideline sheet building on previous sheets, but including relevant assessment criteria for this task.

Learning Expectations of Students in the June Exam

There is fairly strong alignment between the pedagogy in the comparative phase of the course in module 1 and the assessment strategies used in the June exam. The external examiner describes this as a 'busy paper with many smallish tasks that are different but conceptually overlapping at places'. I will provide a brief description of some of the questions that relate directly to the skills of information extraction, synthesising and

comparing although an analysis of exam writing is beyond the scope of this thesis. It is a useful discussion in terms of analysing student writing as a whole as many students performed poorly in the exams.

Question 2 requires the students to write brief notes in the form of a table for an essay on the topic, 'Women are portrayed negatively in the media'. Students had to complete the following in the table: their position on the argument, evidence from the three extracts which support their argument and quotes from the texts to back up the evidence. Question 3 requires students to write a short speech in which they build an argument explaining why boys should learn to prepare food using five logical connectors. Students refer to two adverts that show men and women behaving in stereotypical ways. They are then also asked to compare and contrast these representations in a paragraph using comparative markers. Question 5 extends the theme of how women are portrayed in the media and continues to test skills of cohesion and coherence. It involves students in a two-page evaluation of Waters and Ellis' position (1996) that women are portrayed as sex objects in print advertisements and television commercials. The essay is 'scaffolded' for students in the exam paper into the different aspects of the argument: explanation of roles, description of the stereotypes, evidence from texts and own experience, own opinion on the issue including counter arguments, motivation for strength of own argument and conclusion.

Post-exam reflection

Content

Students completed a questionnaire after they had received their results for the June exam. They were required to reflect on various aspects of the course that may have contributed to their performance in the exam. They were also asked to identify other issues that may have affected their performance and to express their feelings about their results and their ability to cope at the university in the second half of the year.

Pedagogy

A focus group was conducted with students by the researcher in her capacity as teaching and learning advisor before they completed the reflection questionnaire. Students were invited to comment on their exam performance in general as a way of normalising the class's feelings of anxiety and disappointment. After the group and class discussion, students were in a better position to write an honest and open account of their performance in the first half of the year.

Reflection on second term

Content

Students were asked to write about what they had gained from the first semester's work in the Foundation Course. They were provided with an open-ended question to this effect.

Phase 4: Research

Reading Portfolio

Content

A number of research articles[1] were incorporated into the research phase of the course. Students were given an assignment to test reading skills that had been taught intensively in the first module. Granville (2002:10) states that the assignment 'attempts to increase awareness of the research processes referred to in the reading texts (and to) introduce students to the processes that lie behind the academic texts they are required to read at university.' They were expected to summarise and comment critically on each article.

Pedagogy

Students were provided with substantial 'modelling' support in reading the first few articles and answering the set questions. This structure was gradually withdrawn, as they were required to read and tackle the questions independently. Kay McCormick's (1986) paper entitled *Children's use of English in District Six* provided the basis for a study of

[1] The following are some of the readings used: Reichman 1993, McCormick 1986, Slabbert 1994, Trew 1994

authentic South African research. A range of reading exercises allowed students to analyse McCormick's research process. In particular, they were encouraged to examine the kinds of data collected and how McCormick reached her conclusions. Furthermore, students read other accounts of research on the literacy practices of working-class communities (Bell 1907, and French 1989) for further practice in categorizing and analyzing data.

Reflection on reading portfolio

Content

This detailed reflection required students to think carefully about how they had tackled the reading portfolio. It focused on all the features of the summary including structuring and language concerns, for example 'Did you write an introductory topic sentence which signalled to the reader the overall subject matter of the article?'

Research Report

Content

Students were required to select a topic, collect and categorise information and write up their data for their small-scale group research projects on multilingualism in South Africa. They were expected to investigate topics concerning 'how language impacts on our everyday lives and to research and study the social factors in language use' (Granville 2002:2). Students were assigned research groups for the duration of the research process.

Pedagogy

Language topics related to language issues in society such as naming practices, code switching, literacy practices and language differences arising from factors like gender and ethnicity, were introduced to students. The task focused on various aspects of quantitative and qualitative research methods. In small groups, students brainstormed and chose their own topic for the project; formulated a research question; designed the process in relation to research sites and samples; planned questionnaires and interview schedules; analysed and interpreted data and attempted to reach a conclusion on the basis of the questions and issues raised by the research. Lectures and tutorials provided structure and support for

different aspects of the research process and exposed students to specialist research language and group-work skills such as time management and cooperative learning.

Students were taught about quantitative and qualitative forms of data collection by means of very explicit learning materials, which included relevant examples and models. Materials assisted students to conduct interviews, construct open and closed questions and analyse quantitative and qualitative data. During the September holidays, they were expected to use their questionnaires to collect data and begin the analysis when they returned to class. Thereafter, much class time was spent on drawing up pie charts, bar graphs and summary tables using their own data.

Assessment

Students had to produce the following for assessment purposes:

- A group proposal for the investigation they chose to do (a mark was awarded to the group as a whole).
- An oral presentation (a mark was awarded to the group as a whole). The assessment was based on a set of criteria both in terms of content and delivery.
- A final report of their research (an individual written project). All members of the group could draw on the interviews, the analyses and the findings of the group as a whole. A detailed handout consisting of headings and sub-headings informed students precisely what aspects of the project had to be presented. The students produced a first draft, which they analysed in class in relation the criteria checklist.

At the end of the research process, students were asked to evaluate each other's contributions to the project and allocate marks to each other.

Reflection on research report

Content

Students were required to 'reflect on their personal reflections of the research process itself' (Granville 2002:21). This exercise expected students to think deeply about the way they had planned their research. In particular, it posed questions about the group process

and whether students had worked constructively and productively in their groups. Students had to determine their own role in the group and the extent to which they had learnt from the experience. In addition, they reflected on the research phase of the course as a whole and how they had applied many of the quantitative and qualitative methods taught.

Pedagogy

This reflection was incorporated into the research itself and formed part of the overall grade used for the assessment. Student reflections are analysed in depth in Chapter Seven.

Course Evaluation

Content

This was a traditional set of questions that aimed to elicit some general feedback from students about the course.

November Exams

Content

This exam was based primarily on a reading – students were given time before the exam to read and analyse a research article on a socio-linguistics topic. Exam questions tested students' understanding of the research process and whether they could handle the reading expected of them at university. The first section was a conventional comprehension, which tested understanding of the key ideas in the text. The next section involved research processes and required students to design a proposal, discuss the procedures, explain the findings, analyse the data and address questions on quantitative and qualitative research.

APPENDIX B
INTERVIEW SCHEDULE

Revised semi-structured interview schedule (beginning of second semester)

1. introductory questions:

- **What subjects are you doing in combination with Academic Literacy Foundation? How did you choose these subjects? (special selections process or recommendation from others etc.)**
- **Which tasks/ activities stood out for you in the first semester?**
- **Why do these stand out for you?**
- **How did they contribute to your learning?**
- **How do these tasks/ activities compare with what you are doing this semester? Please explain.**

2. General questions:

- **Name at least 3 things you have learnt from the Academic Literacy Foundation course.**
- **What helped you learn these things?**
- **Is there anything that got in the way of your learning last semester?**
- **Would you say that you have been able to use what you have learnt in this course in your other subjects? Which ones? In what ways – please give examples.**
- **Please comment on the self reflection questions that were incorporated into each task (were they beneficial to your learning or were they a waste of time?)**
- **What have you learnt from other courses that will help you in the Academic Literacy Foundation course?**
- **Are you pleased you were placed on this course (with one other foundation Course) or would you rather have done a 3 year degree? Please explain.**

APPENDIX C

FEEDBACK SHEET

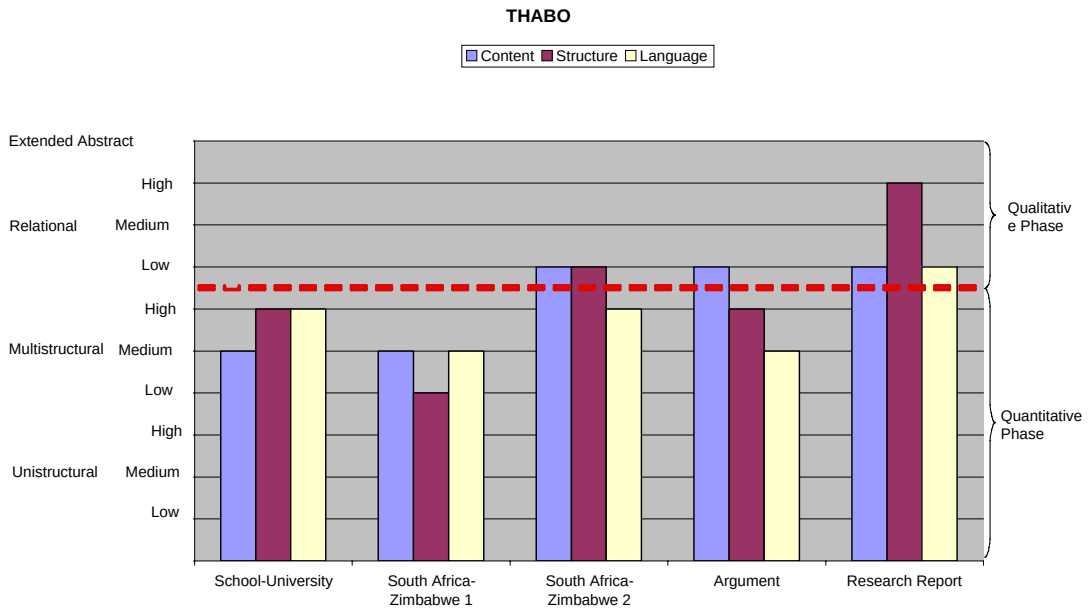
Table 7.3: Assessment criteria for Agar assignment and feedback handout

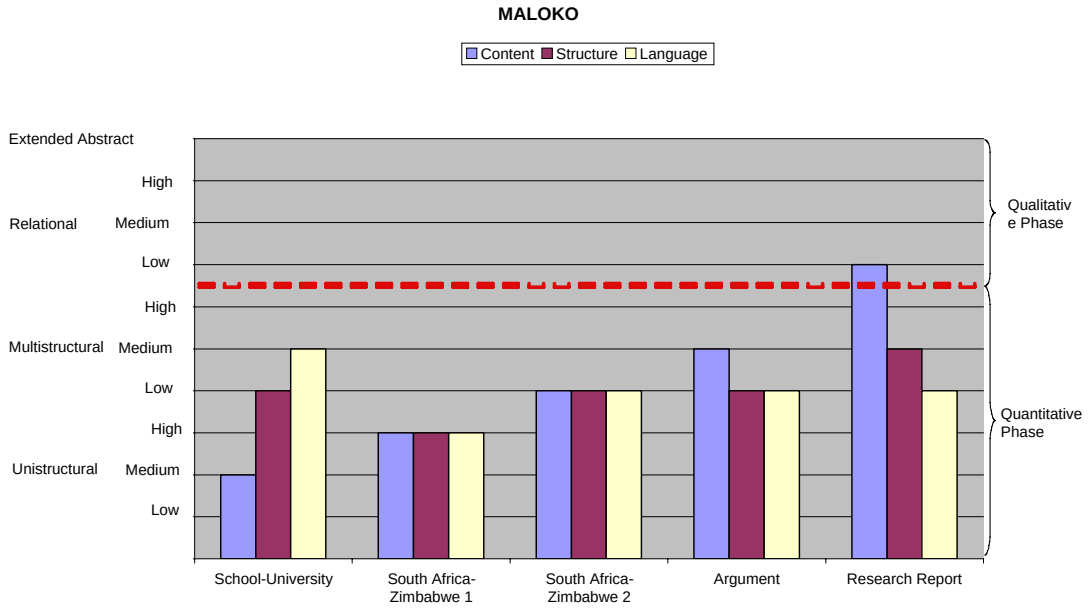
Key: +++/++/+/-/--/--- Indicates a scale ranging from excellent, very good, good, average, poor, very poor

Introduction	**Student** +++ ++ + - -- ---	**Tutor** +++ ++ + - -- ---
1. Makes topic and purpose of essays clear.		
2. Identifies the sources of information.		
3. Outlines the essay plan/structure.		
Body: presentation of findings		
1. Presents information in a logical order, providing clear categories for the main findings.		
2. Compares findings from the two main sources using the grammar and structures for comparison taught on the course.		
3. Provides detailed and accurate evidence to support findings, using interesting details/direct quotes.		
Conclusion		
1. Linked to introduction and findings and assignment question.		
2. Makes general comparisons between findings.		
3. Makes an overall concluding statement, highlighting the main findings.		
Use of language		
1. Appropriate academic style, clarity, readability.		
2. Paragraphing, cohesion and coherence – links between paragraphs.		
3. Grammar: correct use of verbs, consistency of tense.		
4. Spelling, punctuation, vocabulary, legibility.		
Overall impression		
What has been done well? What are the problems?		

APPENDIX D
INDIVIDUAL ANALYSIS

SOLID GROUP





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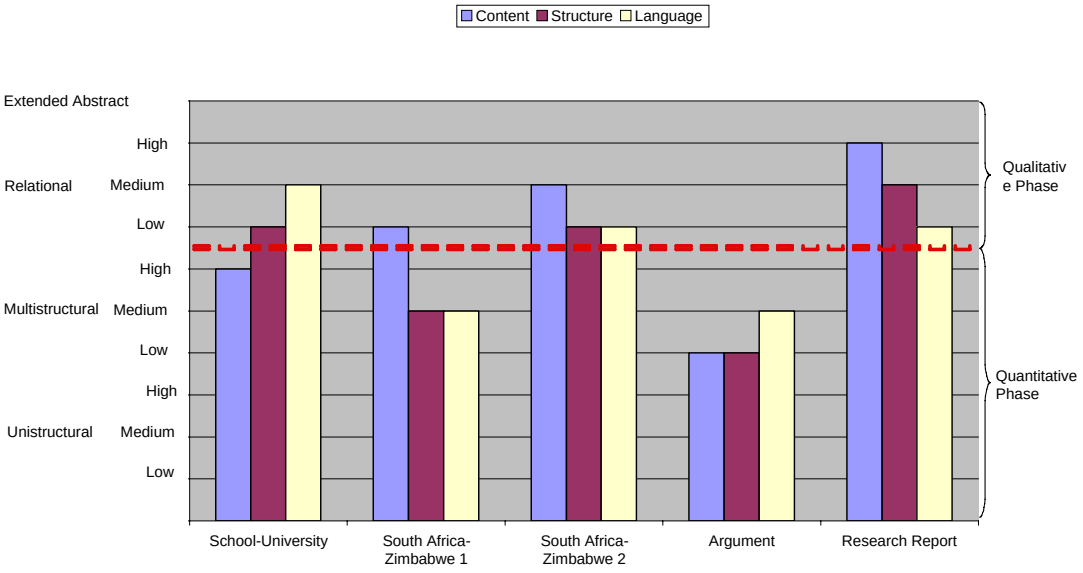

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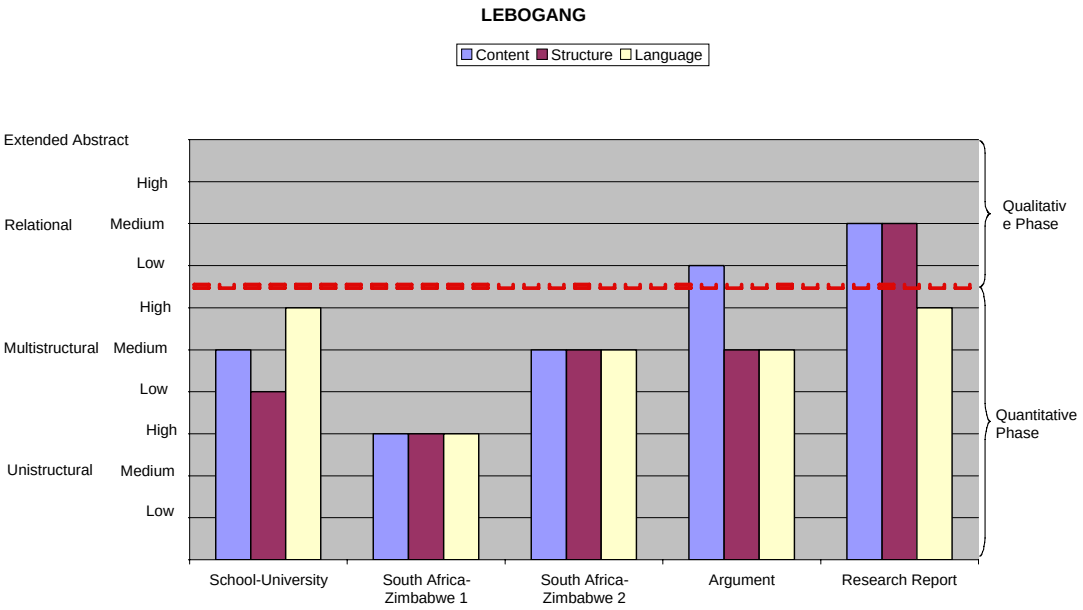

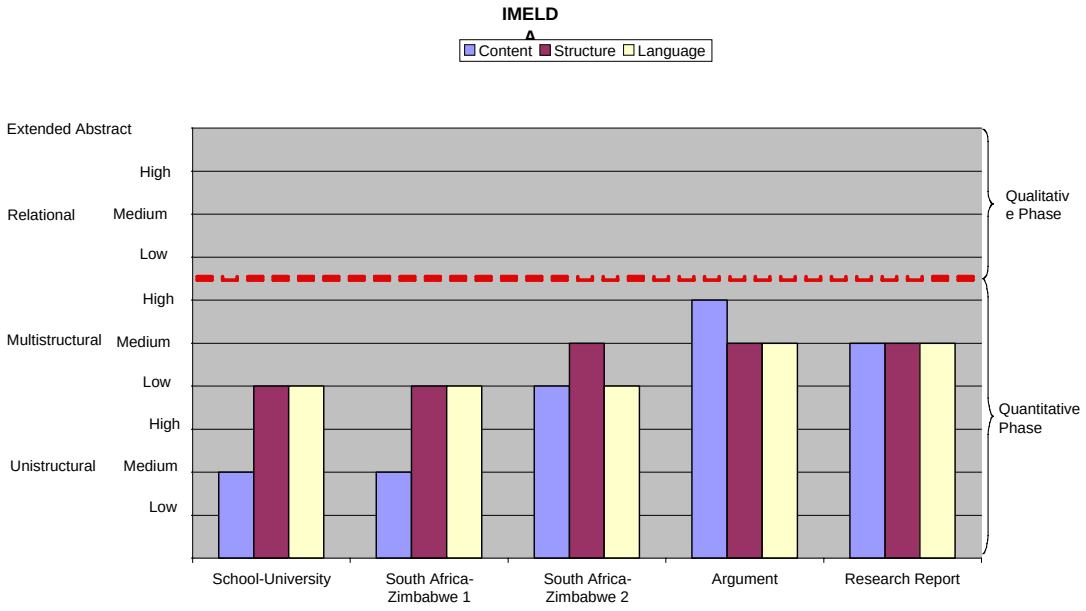
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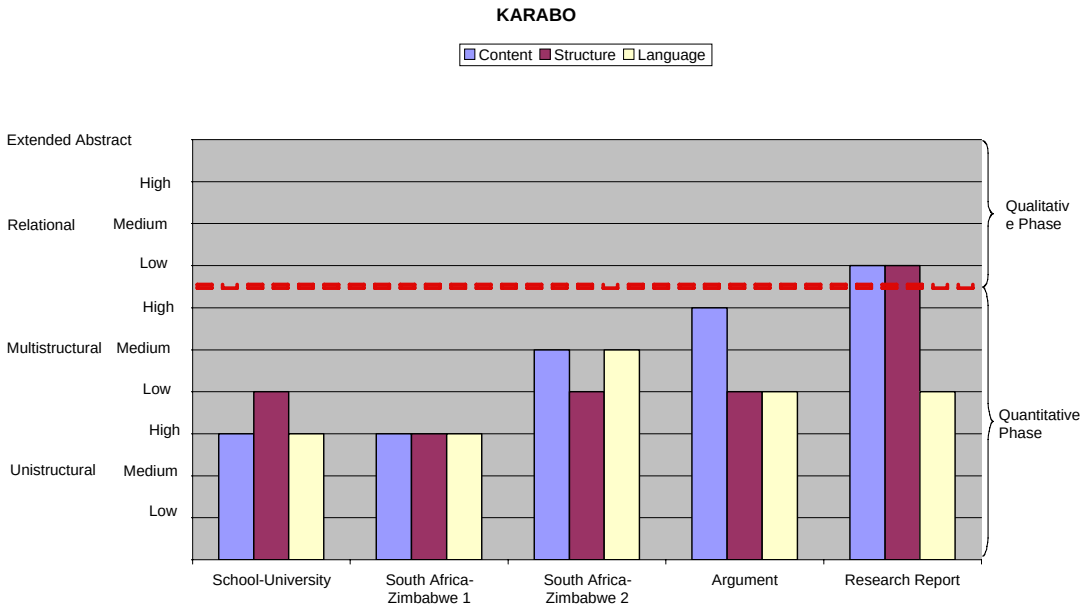
KARABO
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South Africa-Zimbabwe 2
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BORDERLINE GROUP

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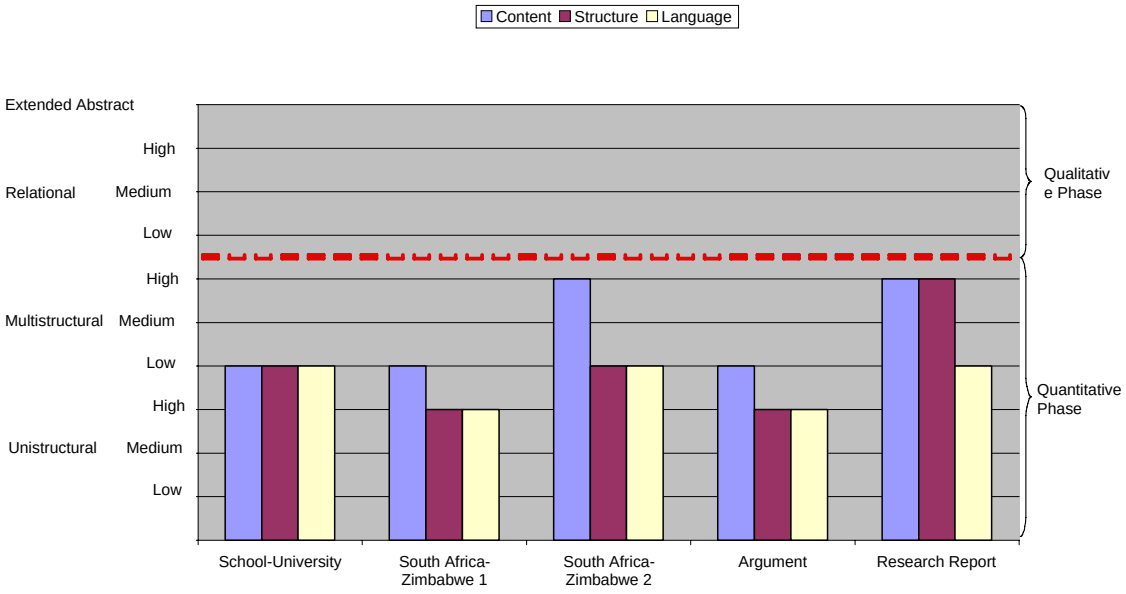

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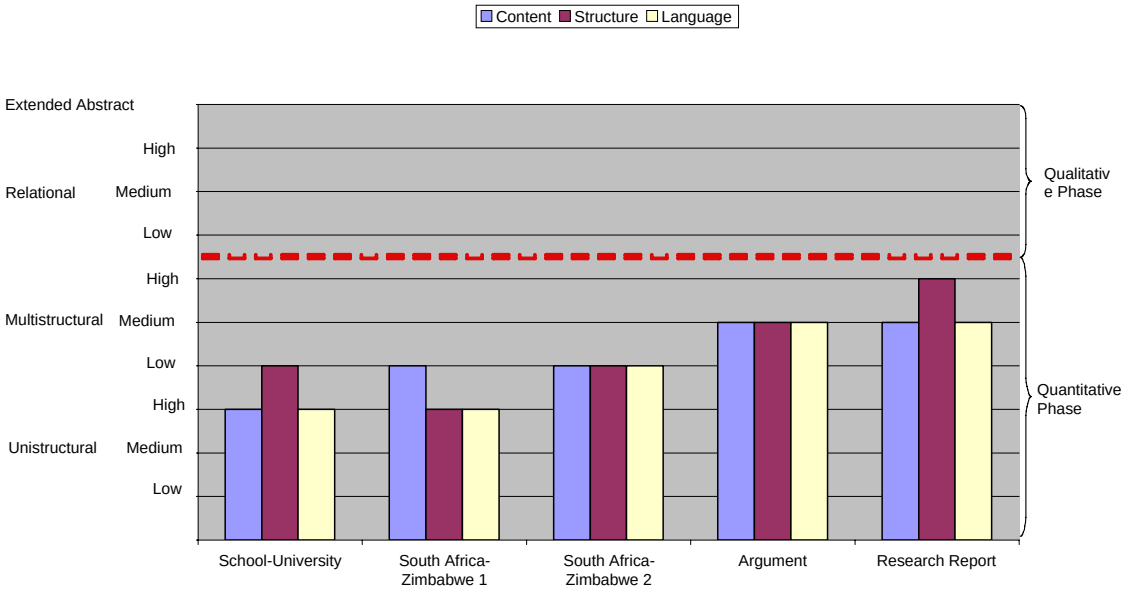

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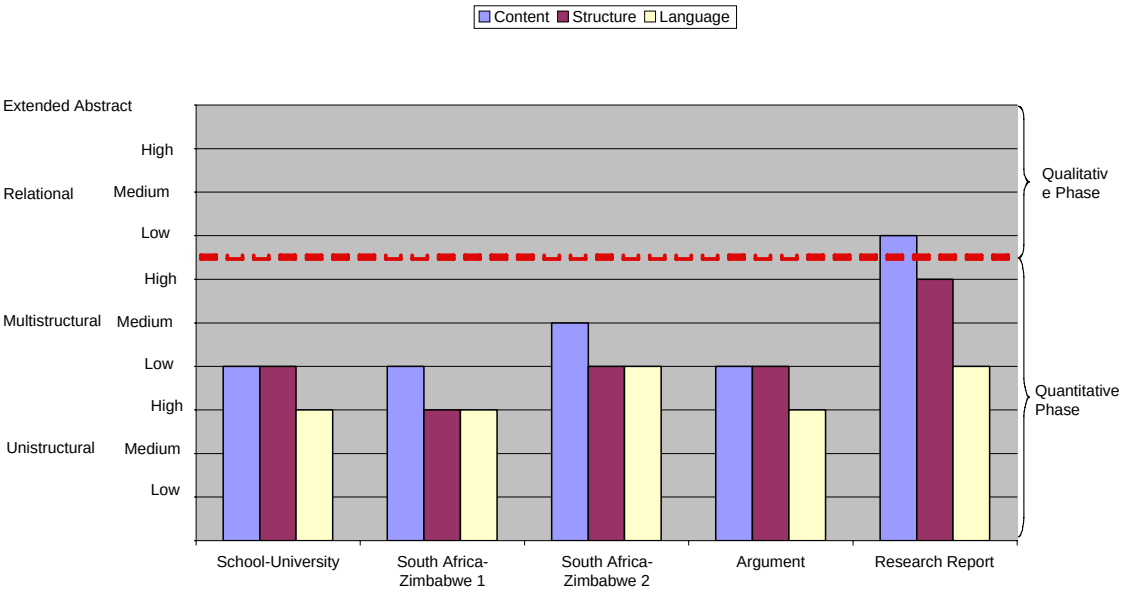
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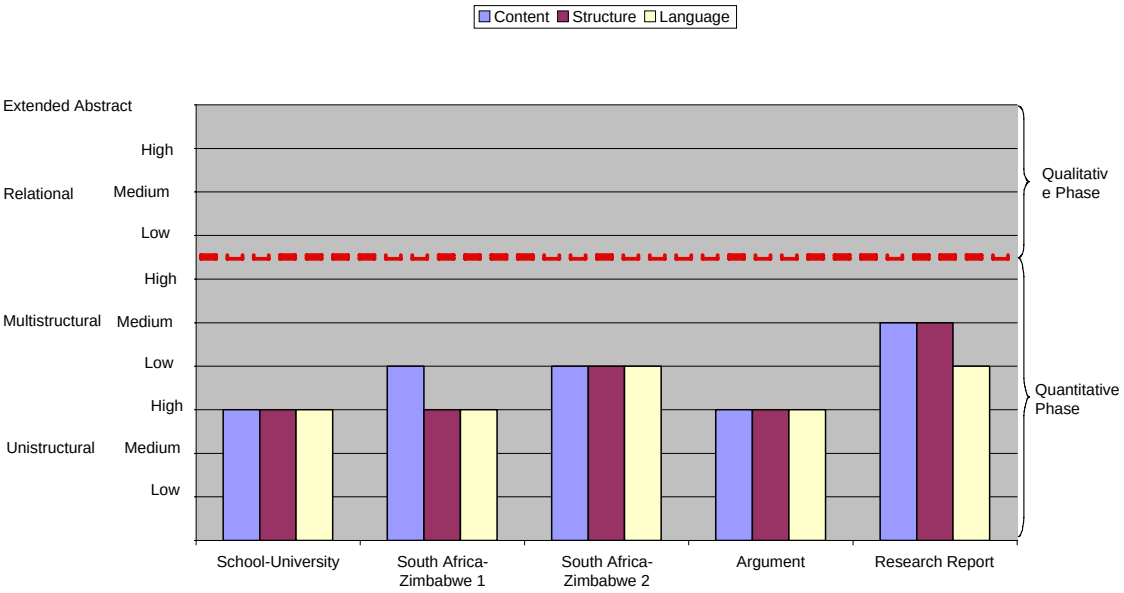
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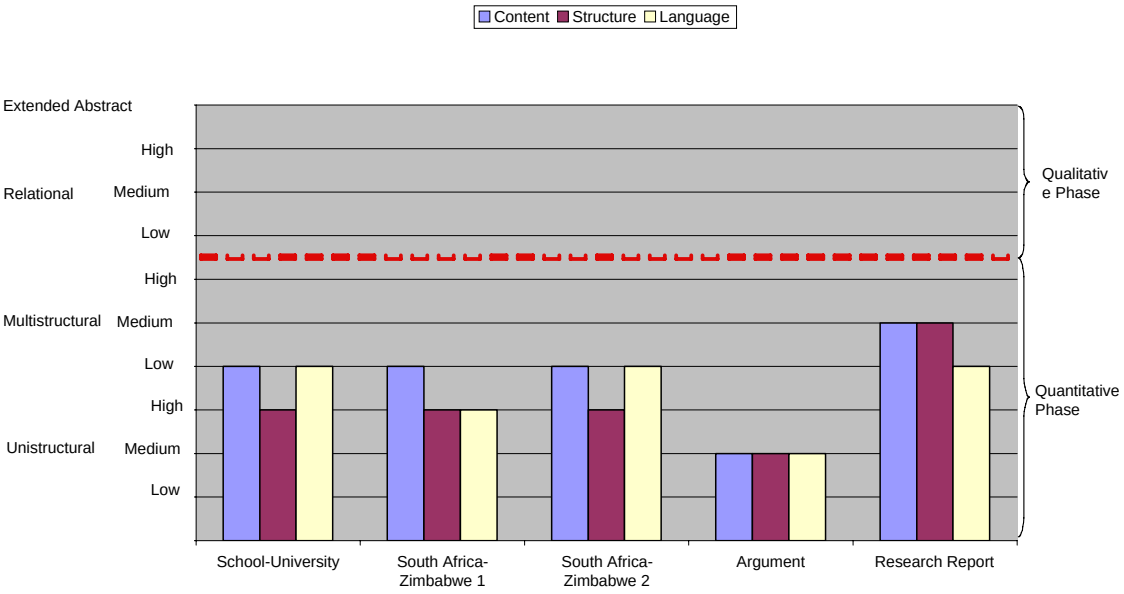
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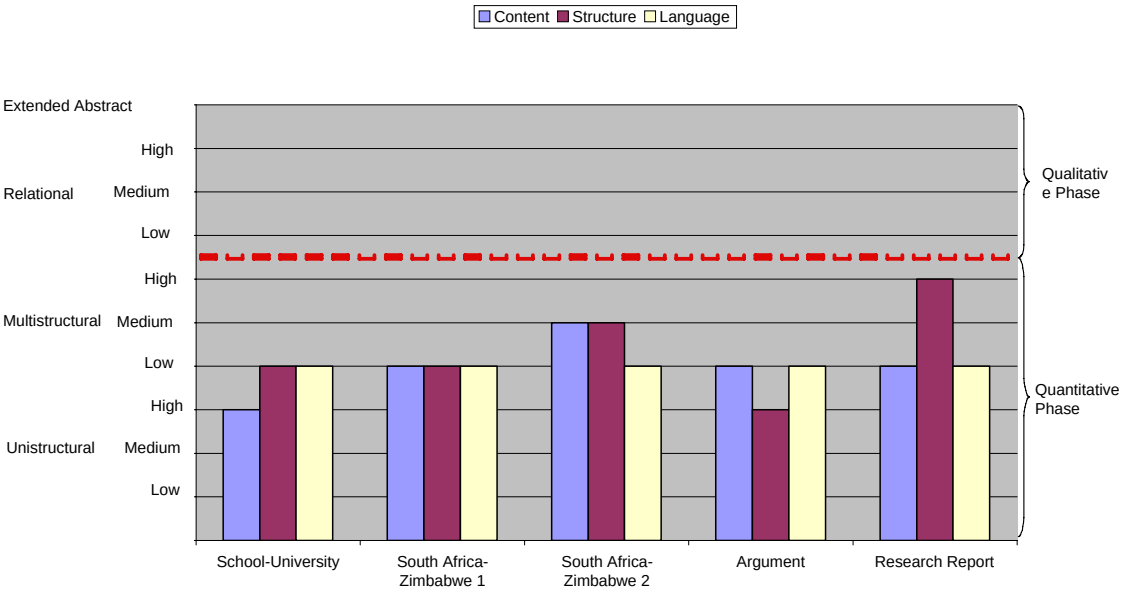
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APPENDIX E
ANALYSIS OF STUDENT REFLECTIONS ON THE COURSE

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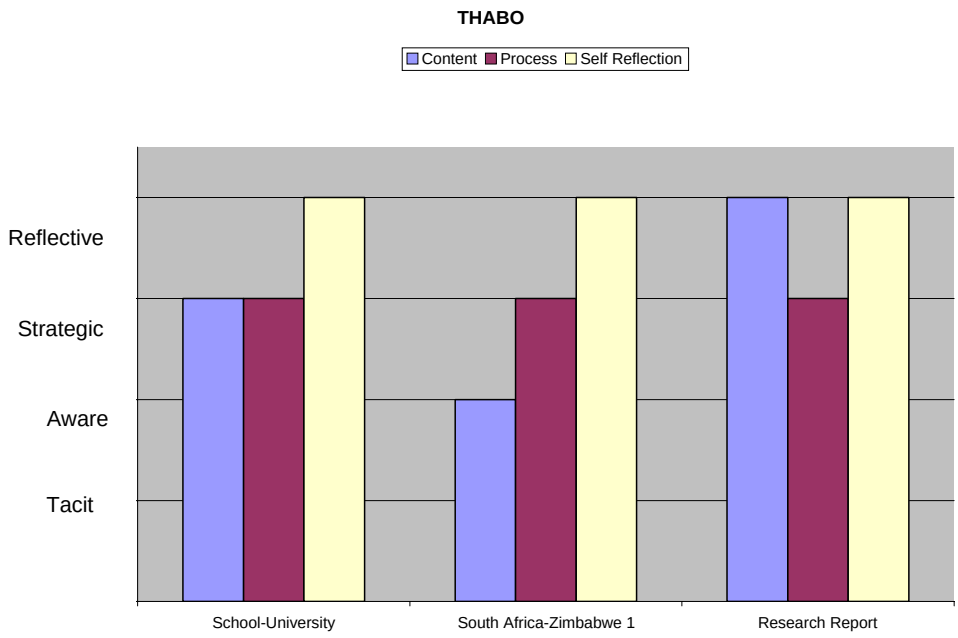

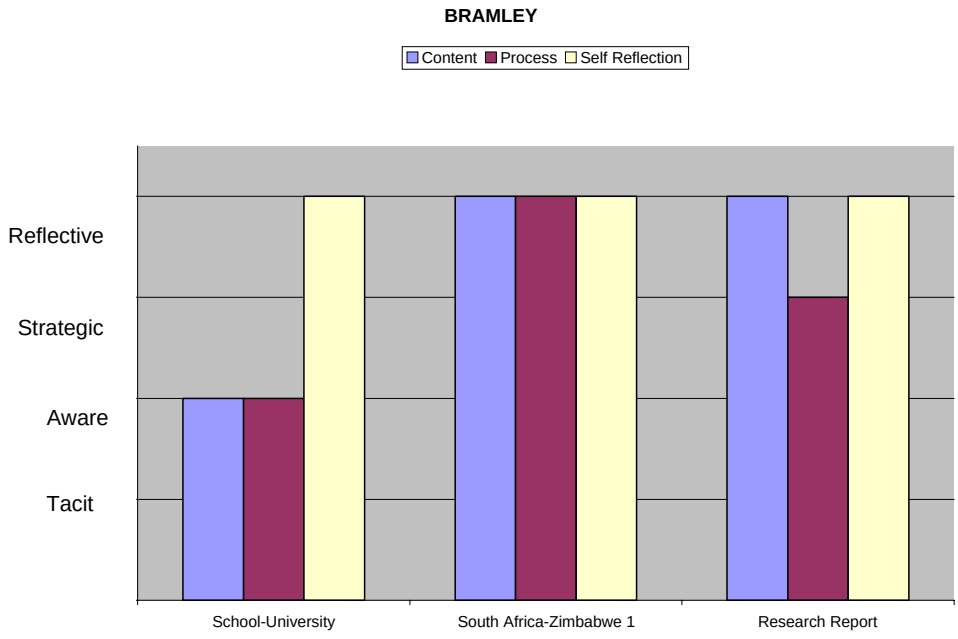

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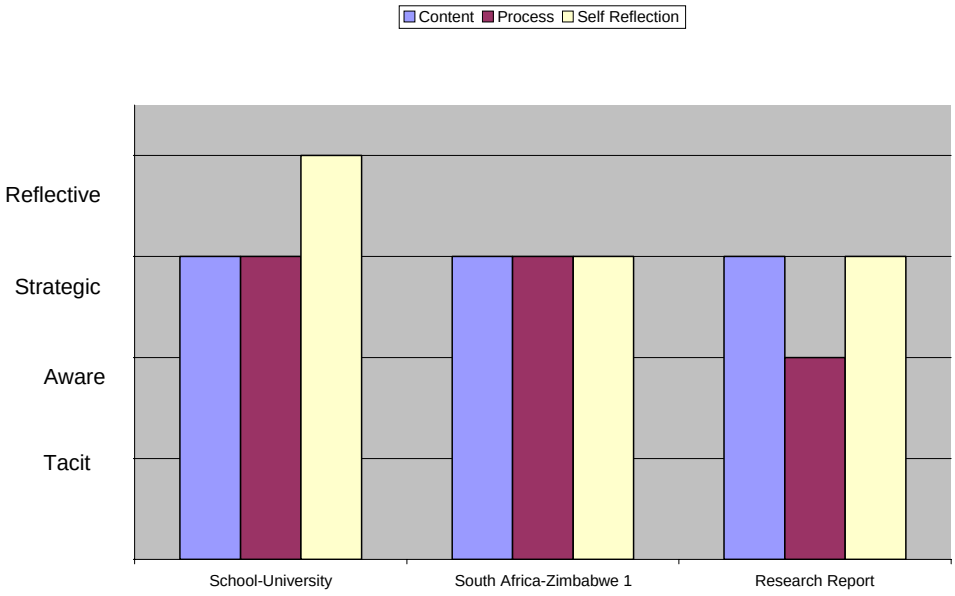

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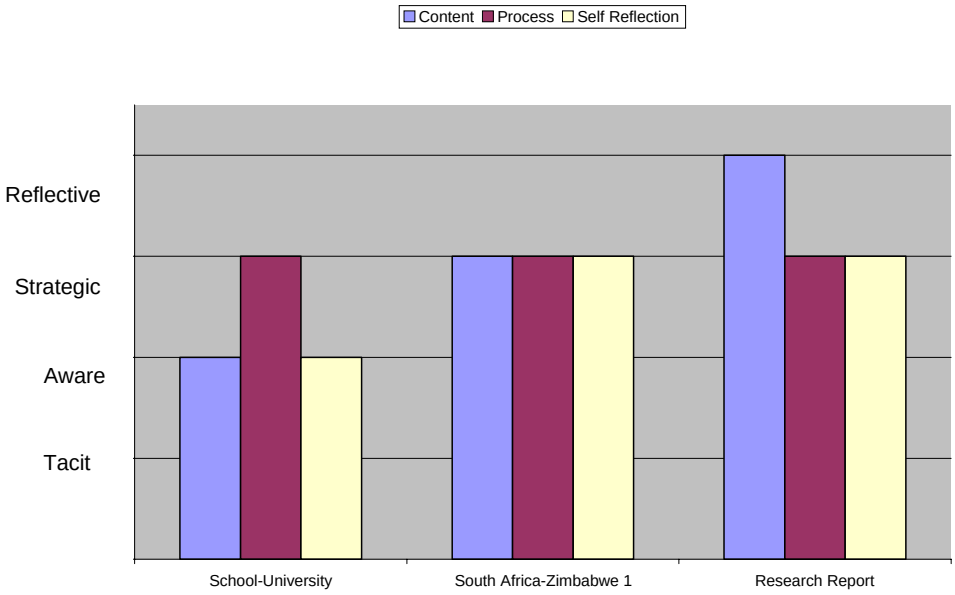

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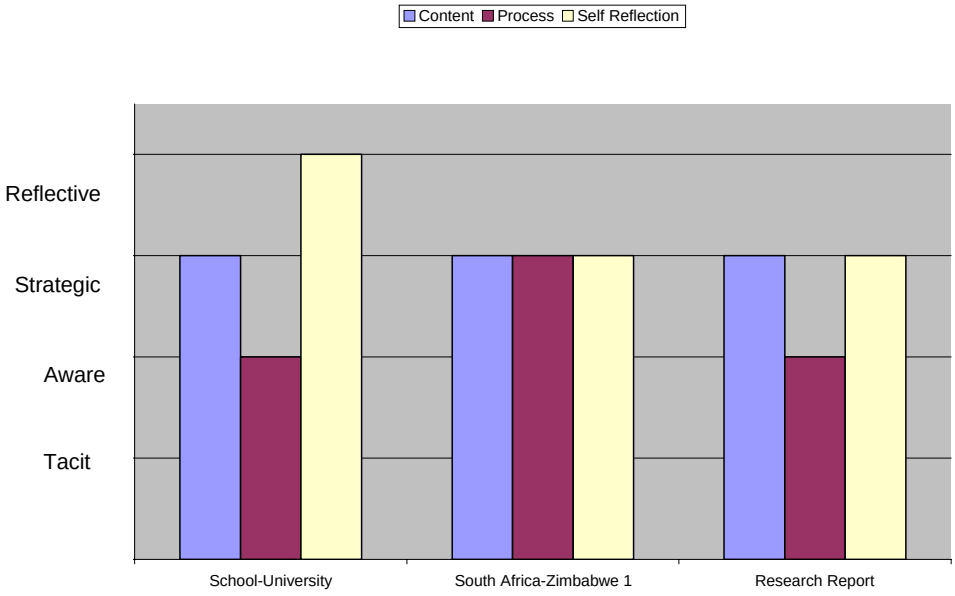

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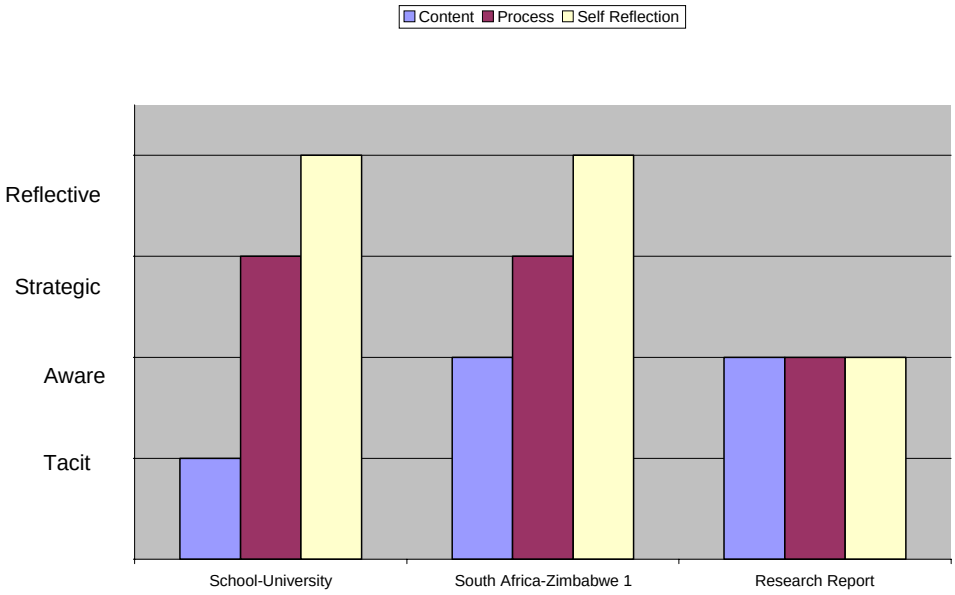

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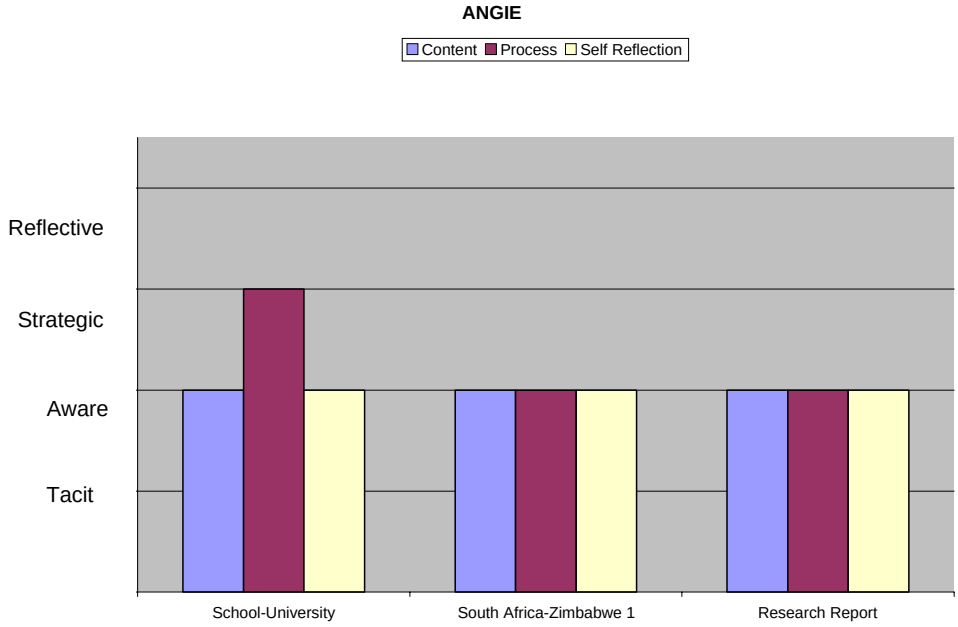

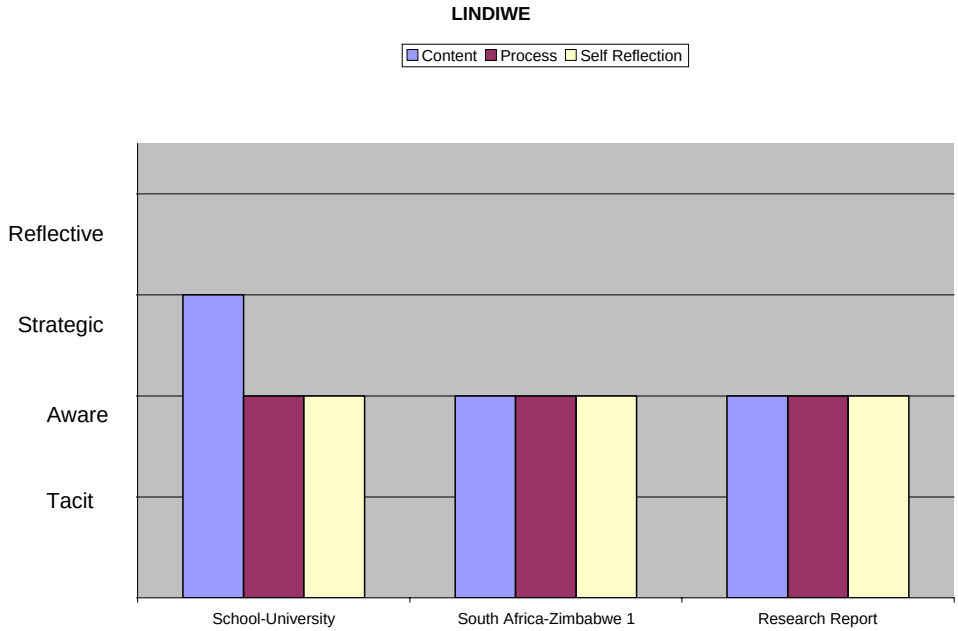

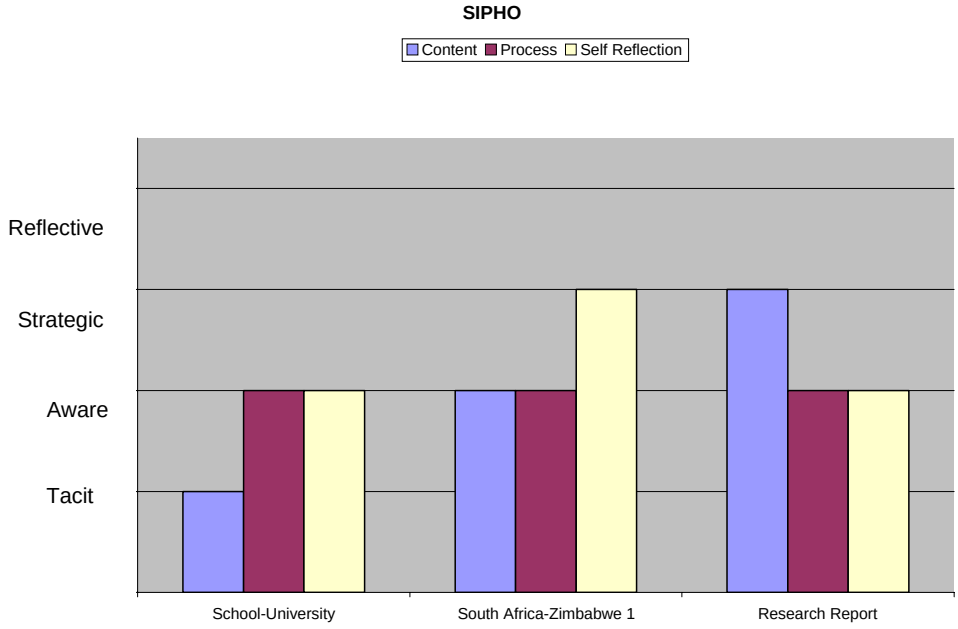
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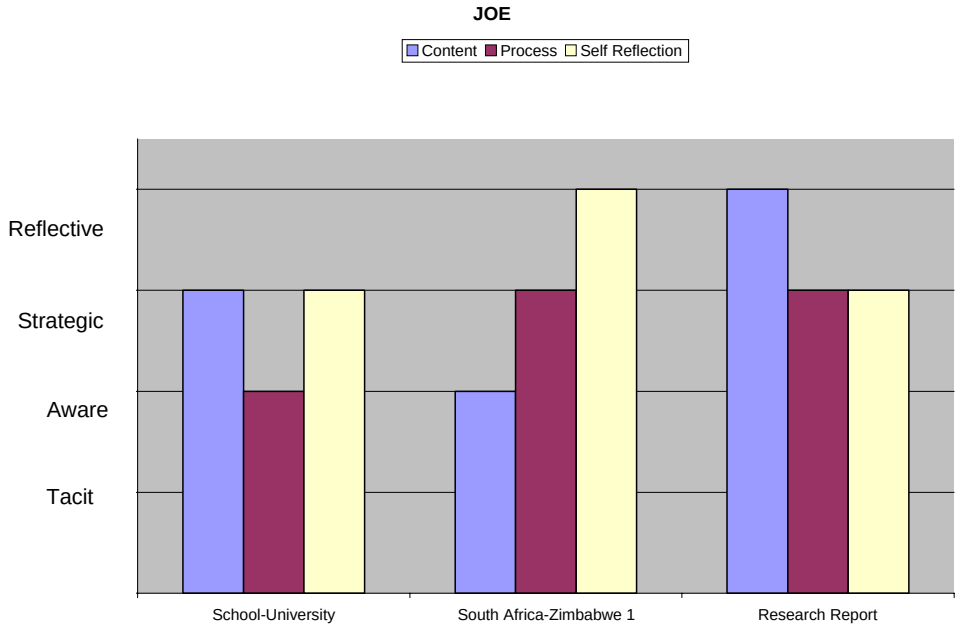
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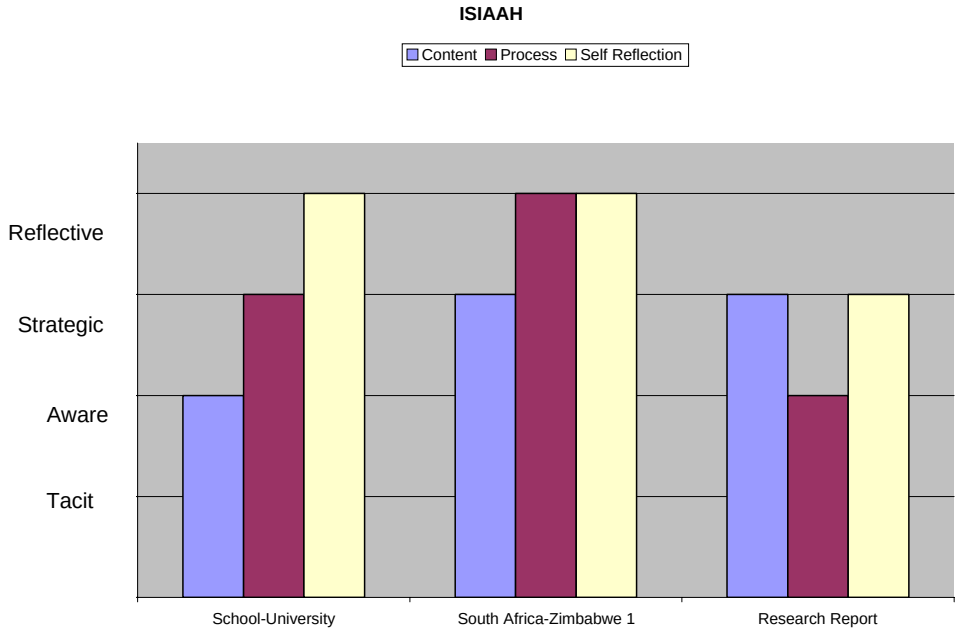
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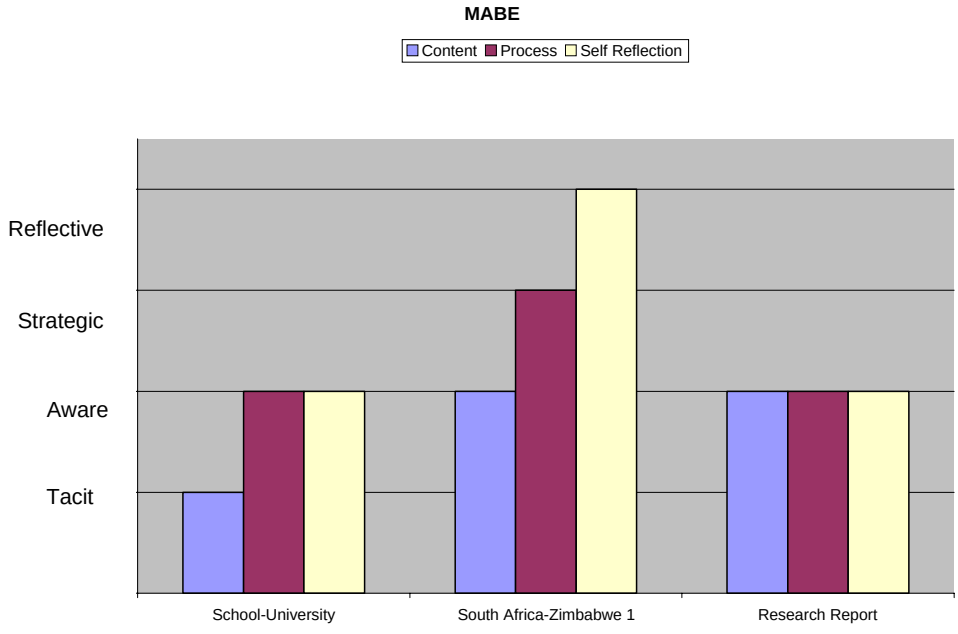
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