Cape Peninsula
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# Student and Staff Perceptions of 'Being a Student' in the Nature Conservation Foundation Programme

**by**

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## DECLARATION

I, Faeeqa Jaffer, declare that the contents of this thesis represent my own unaided work, and that the thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

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## ABSTRACT

‘Underpreparedness’ of students entering higher education is an issue that many academic institutions in South Africa are currently addressing. These students, who are referred to as ‘underprepared’, are more often than not black students. They are seen as disadvantaged, lacking the skills, knowledge and/or language proficiency to navigate their way to success in higher education. This study seeks to identify students’ understanding of the behaviours they should display in higher education and how this clashes with the expectations of academics. It examines how students try to engage with the institutional discourse and how they try to identify a ‘sense of being’. Qualitative research was used through the administration of essays that students were expected to write, as well as individual face-to-face interviews. The essays and interviews tried to gauge how students perceived themselves as Nature Conservation students. Lecturers were also interviewed so that a comparison could be made between what students perceive and the expectations of academics in higher education. Various themes were identified through the analysis of the student essays and interviews, by using an inductive approach. Through the development of these themes, the gap could be identified between students and lecturers.

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# CHAPTER ONE

## 1 INTRODUCTION

### 1.1 Introduction

My research site is the Cape Peninsula University of Technology (CPUT). I lecture in the Faculty of Applied Sciences at CPUT, in an accredited subject called Communication Skills. I lecture this subject to first-year students who are registered on the Extended Curriculum Programme (ECP).

I enjoy lecturing on the ECP, although it is a programme that is sometimes stigmatised by students and lecturers alike. Students may feel, for example, that it is a programme one enters when you are not good enough to enter the mainstream. Some lecturers have commented that ECP or foundation students seem to be, 'weaker', 'of low standard', 'lacking motivation', 'not serious about studying' and having 'poor attitudes'.

This is, however, inadequate to describe students' abilities and attitudes and a more critical stance is needed if lecturers are going to adequately respond to students' needs. It has been noted, for example, that students may enter higher education with a number of discourses that they have developed over time and that clash with the desired academic discourse, and that this, rather than attributes such as 'laziness', is the issue. Nomdo (2006:200) states:

> Institutional values are prescriptive by nature; these prescriptions may lead to a clash of discourses in Gee's terms, a clash between what individuals want to bring to the learning process and the limits placed on them by the conventions of the disciplines in which they participate.

This is the starting point for my interest in students' and staff perceptions of 'being a student'. The term 'being a student' refers to university study as involving more than just disciplinary knowledge and skills. The term was popularized through the work of Ron Barnett in the UK and its meaning is further developed in this chapter and Chapter 2.

My research explored how students perceive themselves in an academic setting in relation to the expectations of the academic institution. I interviewed students to get a

sense of students' perceptions and I interviewed lecturers to gain an idea of the expectations of the academic institution. The data also revealed that some academics had perceptions that students, at times, are not at a level that they expect. The study relied on autobiographical essays written by students, and these then informed the setting of interviews. Through the essays and interviews, I learned more about students' understanding of the knowledge and skills they think are necessary for higher education, as well as the clashes or gaps that emerge between students' and academics' understanding of what it means to be a student in Nature Conservation (NC). The term 'gap' is used in this thesis to describe the difference between what students bring to their university study and the expectations of the university. The term  is commonly used in South African first year student studies, as can be seen in the research conducted by Case *et al*. (2013) and can also be found in the international literature, for example in research conducted by  Lowe and Cook (2003).

We have all been socialised to behave appropriately in different fields. Similarly, the students who form part of this study are assumed to have been socialised in specific ways and might perpetuate this in their new setting of higher education.  However, socialisation at university is sometimes easier for some students as opposed to others. This is dependent on the discourses that these students bring into the institution or the types of discourses students were exposed to before entering the tertiary institution.

Gee (2005) makes a distinction between 'discourse' with a 'little d', which is concerned broadly with language, writing and reading and 'big d' Discourse which is associated with values. According to Gee (1996) Discourse refers to ways of thinking, behaving, writing, listening, speaking, and reading, and displaying certain values and attitudes held in different contexts. It is the latter Discourse I use for the context of this study. Boughey (2013), in agreement with Gee, believes that more often than not, students entering higher education struggle to gain access to the discourse of the institution. This could be attributed to the fact that the discourses that students are exposed to before entering tertiary institutions are different from the discourse of higher education. Furthermore, lecturers do not seem to acknowledge that there is a difference in the discourses, but instead feel that students should be ready to deal with the demands of higher education (Boughey, 2005). My research attempted to identify where the clash in discourse occurs by investigating students' perceptions of being a student and lecturers' views of what

they value from students. By doing this, I compare the responses of the participants and try to identify areas where difference or gaps exist.

I found Barnett's knowledge domains a useful tool to analyse data. Barnett (2007) believes there are three pillars integral to success in higher education: *knowledge, practice* and *being.* Often the focus is on *knowledge* and *practice*, while *being* is neglected. I used these domains to better help me understand the gaps. This research is thus exploratory, in that it explores student and staff perceptions rather than tests a previous hypothesis.

The background to the study is important to situate where my research takes place, as well as to highlight why the gap matters.

## 1.2 Background

### 1.2.1 The Cape Peninsula University of Technology (CPUT)

During the apartheid era, educational institutions catered to specific race groups. CPUT was a result of the merger between sister institutions; Cape Technikon (Cape Tech) and Peninsula Technikon (Pentech). Cape Tech was situated in the CBD, while its sister institution, Pentech, was situated in Bellville. Cape Tech was known as a historically 'white' advantaged institution, while Pentech was known as a historically 'black' disadvantaged institution. In 2003, the then Minister of Education, Kader Asmal, approved the merger of the two institutions (CPUT, 2014).

CPUT officially became a university of technology in 2005 (CPUT, 2014). It has five campuses spread across greater Cape Town: Bellville, Cape Town, Granger Bay, Mowbray, and Wellington. The institution also has six faculties: Business, Applied Sciences, Education and Social Sciences, Engineering, Health and Wellness Sciences, and Informatics and Design.

A university of technology focuses on technology from the viewpoint of various fields of study and it specialises in the areas of advanced engineering, science, technology, business, and art and design, with a focus on vocational education. This technology refers to the effective and efficient application of the accumulated know-how, knowledge,

skills and expertise, that when applied, will result in the output of value-added products, processes and services (Du Pré, 2010). The Nature Conservation programme is located in the Faculty of Applied Sciences, and is a typical offering of a national diploma at a university of technology.

### 1.2.2 Throughput rate in higher education

Although the number of black students entering higher education has increased significantly since 1994, post-apartheid, the throughput rate of black students remains low. Scott *et al.* (2007) reported that of the intake of students registered for study at technikons, only 23% graduated within five years, 11% remained in the institution's system, and 66% left without graduating. The majority comprised 'black' students. This is also reflected in the Nature Conservation programme at CPUT as there is a 36% throughput rate (CPUT, 2014), but it tends to be racially skewed (similar statistics can be seen in the Scott *et al*. (2007) report across all universities).

The low throughput rate could be attributed to a variety of reasons but one of these reasons may be attributed to students' struggle to access the discourse of the institution (Boughey, 2005). Research in this area is important, as it impacts on teaching and learning and is one of the reasons why I am exploring the issue of discourse clash.

### 1.2.3 The Extended Curriculum Programme (ECP)

Because of the changing demographics of students, higher education is undergoing a process of transformation. Previously, students were excluded from many tertiary institutions owing to race. With the intake of a growing and diverse student population, the assumption was that these students entering higher education would already be equipped with the educational 'capital' necessary for success. The diversity in student intake however, although aligning with the changed political situation of the country, however, may be at odds with an academic identity that has not changed.
Scott *et al.* (2007:44) state that:

> The disjunction between traditional curriculum structures and the realities of the diverse student body thus amplifies the problem of underpreparedness arising from inequalities in school. Though it may manifest itself as student deficiencies, the problem is in key

> respects systemic in that it relates to curriculum structures, and hinders, rather than facilitates the realization of student potential.

Thus it would seem that the curriculum or even academic expectation has not changed much over time even though the student demographic has changed. The academic expectation then exacerbates the issues that students encounter in higher education and may manifest it as instances where lecturers feel that students are not of a certain quality or may not display desired competency to deal with the curriculum. The curriculum should cater to these differences and develop students appropriately. This is where foundation programmes come in.

Thus although these students are now free to enter these institutions of higher education, they appear to be unable to fully 'access' them, and one of the reasons appears to be their difficulty in accessing the new discourses of the university (Boughey, 2005). It is for this reason that various foundation, academic development, and extended programmes have been put in place within higher education institutions.

Foundation programmes can be traced back to the 1980s, when a growing number of black students entered historically white universities and when historically black institutions focused on underpreparedness (Scott *et al.,* 2007:43). Many of these earlier programmes were more bridging in nature, whereas the current focus of foundation provision (often referred to as ECP) was to enable talented students from disadvantaged educational backgrounds to build sound academic foundations for success in the programmes of their choice.

The implementation of ECP was in response to the low throughput rate and high levels of under preparedness of first-year students. The funding was obtained through the Department of Education (DoE) to develop the Foundation Programme. According to DoE policy (DoE, 2006:2), cited in Scott *et al.,* 2007):

> Foundation provision is commonly intended primarily to facilitate the academic development of students whose prior learning has been affected by educational or social inequalities.

Owing to the inequalities in our schooling and the high number of underprepared students, there is a need to focus on developing these students' potential to succeed in

higher education. Students' underpreparedness has been linked to their disadvantaged backgrounds and problems with the language of instruction (since English is often their second or third language) they also grapple with content knowledge and approaches to learning (Fisher & Scott, 2011). In addressing this problem, an approach was taken to build on these students' capabilities rather than implement a remedial strategy. ECP is based on giving students more time, guidance and support in order to acclimatise to higher education and fully realise their potential. In line with this, the provisions of CPUT's Extended Curriculum Programme (CPUT, 2011) are:

- Entry is for students who are identified as at risk, or who do not meet the minimum requirements for programme entry, but who show motivation and/or potential to learn at the university through National Benchmark Testing (NBT).
- Extended Curriculum Programmes involve the extension of existing regular year 1 subjects to two years, with the inclusion of extensive support for learning within those subjects.
- All modules taught are credit bearing.

As ECP is specifically designed to assist students in entering higher education and succeeding, it is an ideal site for my research as it allows me to comment on ways to better assist in teaching and learning.

### 1.2.4 The Nature Conservation Programme

Since my study is conducted among staff and students in the National Diploma in Nature Conservation, it is necessary to give an outline of this programme. Nature Conservation comprises the wise management and utilisation of natural renewable resources in a sustainable manner to ensure the maintenance of biodiversity. According to the Nelson Mandela Metropolitan University (NMMU), there is an increasing awareness that the conservation of the world's natural resources is vital for human survival, thus the growing interest in conservation as a career (NMMU, 2011). According to Kioko (2012), "Nature Conservation is the using of natural resources in a sustainable manner; it also involves the sustainable use of natural resources and protection stewardship so that other people later on, can still enjoy them." SAQA (2011) states that the aim of a qualification in Nature Conservation, is to supply industry with competent nature conservators and resource managers who are able to manage a conservation team efficiently . Graduates should be competent in interpreting the environment, displaying and applying appropriate

legislation, managing natural resources sustainably, and demonstrating a basic knowledge of research (SAQA, 2011).

The National Diploma in Nature Conservation is a four-year diploma for ECP students, with the first two years constituting the foundation phase. The aim of the programme is to provide access to underprepared students and equip them with a foundation in scientific skills, knowledge and competencies. Students are exposed to both theory and practical aspects of the chosen discipline in the first three years of study. The fourth year consists of experiential learning with students going out into the field.

## 1.3 Rationale for the study

Perceptions of some staff in higher education, including my own colleagues, are revealing. Staff members refer to students as 'not being of standard', 'lacking', 'not ready', 'weaker' and having an 'inability to do'. Furthermore, this seems to be often the case with students who were previously disadvantaged. These students may meet the admission criteria of their respective programmes, yet lecturers feel that they are 'ill-equipped' or 'unprepared'. This thesis attempted to understand this disjuncture between what academics expected of students and what students perceived to be acceptable ways of being. The disjuncture is very important when one considers the generally low throughput rates of South African students, particularly those from previously disadvantaged backgrounds.

## 1.4 Research questions

This study addresses the question of the gap between how students understand the study of Nature Conservation, and what staff members believe such studies should involve. The main research question therefore is:

- What is the nature of the gap between students and staff's perceptions of studying Nature Conservation?

In order to answer this question, two other questions first had to be addressed:

- What are students' perceptions of 'being' a student in Nature Conservation?
- What are staff members' perceptions of 'being' a student in Nature Conservation?

## 1.5 Structure of thesis

This thesis consists of six chapters: what follows is a breakdown of the chapters. Chapter 1 gives the background to the institution, the extended curriculum programme, the Nature Conservation programme, and the rationale for my study. Chapter 2 contains the theoretical background. It gives insight into research done in the area and focuses on the work done by Gee (1990, 1996, 2001), Boughey (2002, 2005, 2008, 2013) and Barnett (2005, 2007), whose theories are used as analytical tools for my data. The outline of my methods is contained in Chapter 3. The research is qualitative and uses the inductive approach to organise the data. The findings of the research are in Chapter 4. Through individual analysis, the data was grouped and tabulated to give a better insight into the data collected. Chapter 5 contains an analysis of the results and uses the theory presented in Chapter 2 to better understand the data. The final chapter, Chapter 6, contains the discussion and conclusion. It discusses the implications of my research, as well as the impact it may have on future research.

# CHAPTER TWO

# 2 LITERATURE REVIEW

## 2.1 Introduction

Entering higher education can prove difficult for some students. This can be attributed to a variety of reasons, such as socio-economic inequalities, and ill preparedness for higher education (Scott *et al.*, 2007). One of the cardinal reasons higher education proves too difficult is because students struggle to access the discourse of the new institution that they are entering. By examining students' expectations and staff's perceptions of 'being a student' in Nature Conservation, I discovered differences or gaps. My research, however, explored the student and lecturer differences so that I could understand the nature of these gaps. The reason for wanting to understand the nature of the gap was so that I could clearly see where the differences between lecturers and students exist and thus enable me to comment on and contribute to improving teaching and learning.

As previously, stated some lecturers in higher education have the expectation that students enter fully capable of engaging immediately and effectively in their new educational setting. However, there is a difference in students' expectations of higher education and the reality they encounter once they enter the system (Darlaston-Jones, *et al*., 2003). According to Jansen and Van der Meer (2007:278):

> Students have ill-conceived ideas about university study demands. Academics do not appreciate students' expectations and therefore are unable to anticipate and address these expectations. Students' self-perceived preparedness and expectations do not only affect their approaches to learning, but also their adjustment to the wider higher education environment.

The fact that students have a particular perception of the kinds of learning they are expected to display in higher education, as well as what they will be gaining at the tertiary institution, compared with the expectations of academics, is a site of interest in my research and site of potential disjuncture. Students may enter higher education with pre-developed ways of learning or discourses, and at times the instruction offered in higher education may not be explicit enough for students to meet the requirements expected by academics, thereby constituting potential disjuncture.

At a university of technology, students are engaged in practice, as well as theory related to their field of study, which requires them to display comprehension of the knowledge and practice of the field. This is not enough for success, however; students' motivation or attitude to the study is also of importance. According to Morrow (2009) for anyone to gain epistemological access in higher education, in other words access to meaningful forms of knowledge in university, they need to understand and care about the epistemic values of the university. This can be seen as the induction of students into the discourses of their discipline of study. In order to understand the gap, one first needs to understand what it means to be a student. This was revealed from the perspective of students and staff and at times staff revealed their expectations of students when certain behaviours were not displayed. I chose theory around discourse as a way of understanding the nature of this apparent gap. The differences across the gaps point to the distinct difference in discourse between staff and students.

## 2.2 Difference between discourses can lead to gaps

Gee (1996) views discourse as ways of speaking, reading, writing, listening, thinking, and behaving to enact socially recognisable identities engaged in specific socially recognised activities. Each community and social group masters a home-based discourse that integrates words, actions, interactions, values, feelings, attitudes, and thinking in specific and unique ways. Different discourse settings have sets of rules for thinking and behaving for its members. In my study, Gee's (1996) theory of discourse allowed me identify the differences between staff and student and thus understand the nature of the gap. The discourses are social and historical, but the person's trajectory and 'narrativisation' are individual (Gee, 2001:111). Fairclough (1992:64) believes that discourse is shaped and constrained by social structure. It contributes to the construction of 'social identities' and 'subject positions' for social 'subjects' and types of 'self'. Engaging in a particular discourse community means that an individual needs to take up the ways of thinking and behaving of that particular community and therefore an individual would take up a particular identity in that community. Discourse contributes to the construction of systems of knowledge and belief. These are connected to a particular social group's way of being in the world, their 'form of life', their identity, who they take themselves to be (Gee, 1996). Thus in terms of discourse, academic practices are constituted through webs of values, criteria, conceptual tools, specialised means of activity, and forms of communication that practices in other sites of knowledge production

do not fully share, though they may have some elements in common (Slonimsky & Shalem, 2006:38).

Gee (1990) divides discourse into primary and secondary discourse. Primary discourse is formed in our initial group socialisation, which is mainly the home environment that gives rise to our personal identity. Primary discourse is embodied subconsciously as we are exposed to practices within a social group without any formal teaching (Gee, 1996). The primary discourse is also a foundation for how we relate to secondary discourses. It either enables or disables us from appropriating secondary discourses; it is thus responsible for the shaping of any secondary discourses we may take up.

The secondary discourse stems from interaction with other institutions or organisations over time. Secondary discourse involves interaction with people with whom one is either not 'intimate', and with whom one cannot assume lots of shared knowledge and experience, or they involve interactions where one is being 'formal', that is, taking on an identity that transcends the family or primary socialising group (Gee, 1996:143). Gaining an education can be seen as the development of a secondary discourse. One can assimilate multiple secondary discourses as one is exposed to a multitude of different discourses over time. Where conflict between discourses exists, whether they be primary and secondary or different secondary discourses, it can deter acquisition of one or the other or both of the conflicting discourses, or affect the mastered discourse or cause exclusion (Gee, 1996:146).

My study focuses on what 'being' a student means in the Nature Conservation programme to explore the differences between staff and students. The reason why I chose to look at what 'being' a student means is due to the fact that when one enters a discourse community there are ways of thinking and behaving that are expected for one to be part of the discourse community. Students take up a position or way of 'being' when they enter higher education institutions as they now need to display appropriate behaviours and thoughts to be a part of the new discourse community. The participants in my study explain what they understand 'being' to be. Access to the specific practices and values in the Nature Conservation programme is the secondary discourse to which students need access. The relationship between the primary and secondary discourse highlights the differences that emerge, or the gaps. A gap may also exist between

secondary discourses where discourses learnt, for example, at school (see Clark & Linder, 2006), may clash with university discourses.

Academic discourse is vastly different from the discourse of everyday life, as there are specific ways of thinking, reading, speaking, writing, listening and behaving. Therefore the academic discourse can be regarded as a secondary discourse in Gee's (1996) terms because it is very different from the home-based discourse students are initialised in. In a similar vein to Gee (1996), McKenna (2004) refers to the norms and values of higher education or academic literacy as discourse. Academic literacy, in this thesis, is not restricted to reading and writing, but looks at how reading and writing are reflected in ways of doing and being (McKenna, 2010). In higher education, students need to access the discourse of the academic setting to properly engage in learning.

## 2.3 Discourse differences in South African universities

South Africa is home to different cultures, races, classes, languages, and religions. It needs to be acknowledged that students who enter higher education do so with vastly different discourses. These discourses may be very different from what academics expect students to acquire.

Certain discourses enable or disable access to higher education: this can be seen in Boughey's (2013) view of home-based literacies that are linked to an individual's chances of accessing and succeeding in higher education, and Brice Heath's (1983) study on home-based discourse providing access to discourse in the school. Brice Heath's (1983) study revealed that students, whose home-based discourse was similar to that of the school, or the secondary discourse, found that accessing the new discourse was easier, opposed to students whose home- based discourse differed. Taking on a secondary discourse is not easy, and at times students may struggle to access the new discourse. According to Boughey (2008:7):

> A position which views education as natural would have to argue that working class students do less well in education because they themselves are lacking in some way; that is the reasons for failure would be located in factors inherent to the individual.

Boughey (2008) explains that education is not a natural process and that entering higher education is a difficult process. Academics need to recognise this difficulty and attempt to develop students' academic identity.

Access to higher education proves to be difficult for some students as it is not a natural process, but is complicated further, as according to Boughey (2013:3), literacy is a multiple rather than unitary phenomenon, and that it is more than the ability to read and write. She identifies multiple academic literacies, and these literacies are related to disciplinary difference. There are values that underpin these, rather than a generic set of practices often conceptualised as skills. Carrington and Luke (1997:98) contend:

> Literacy and the literate person are social constructions, formed within the context of dynamic social fields and the cumulative result of participation with a range of discourses and social relationships. There is not one homogenous discourse but rather many and they co-exist differentially within social spaces, all of which are fashioned to the social actions and imperatives of particular communities and institutions.

Each of us is a member of many discourse communities and our multiple identities are constructed from multiple discourses. Our multiple identities or literacies need not be consistent, unitary or compatible. These literacies are home-based, as well as school based. Even though home-based literacy does not align with the secondary discourse of higher education, at times school- based literacies or discourses may not enable student access to this new secondary discourse of higher education. Boughey (2013:5) argues that literacy practices are embedded in those discourses, and academics need to understand those practices as related to valuing and believing and to a person's identity and sense of self. Therefore, lecturers need to acknowledge the differences in discourse and try to enculturate students into the new discourse. Boughey (2013) has outlined that the concept of discourse is very similar to what has become known as academic literacy in South Africa, as both concepts cover socially constructed formations of knowledge. It should be borne in mind that academic literacies are also not general skills like 'summarising' or 'note-taking', but rather the same skills embedded within a particular field (such as Nature Conservation): the general skills may underpin discourse, but are insufficient on their own to gain access to it. Furthermore, discourses are necessarily different between school and higher education institutions as these are different institutions.

Clark and Linder (2006) like Brice Heath (1983), conducted studies into students' schooling. They believe that students' previous educational experience may give rise to clashes with discourse in further education. As Slonimsky and Shalem (2006) explain, students struggle to internalise the unfamiliar cultural and institutional culture, as they have internalised certain behaviours from their past. McKenna (2004) also found that, because of students' backgrounds, and how these backgrounds shape their identities, it was not easy for them to adopt academic literacy practices. They found academic practice in general to be confusing, difficult to access and alienating (McKenna, 2004: 269).

Even students' behaviour is deeply influenced by home-based and school-based discourse, and when a student is criticised academically, it is taken as a judgement about 'self' and community (Gee, 1996). This can be seen in Clark and Linder's (2006: 89) classroom-based research, when they discuss students' blocking strategies to avoid teachers' probing their level of understanding on a particular topic by using "yes we understand". This, they explain, is a 'learned response' from primary school where they have been reprimanded for their apparent lack of comprehension. Students feel as if they are lacking in some way, and when answering incorrectly, they feel excluded from the academic community of practice. It makes them apprehensive of attempting to answer future questions or even attempting to engage in open discussion, which hinders proper engagement in the secondary discourse. This example shows that sometimes students may come from educational backgrounds that are largely authoritarian; they may struggle to divest themselves of their learned behaviour and adopt new ways of thinking and behaving. There may thus be something of a 'clash of discourses' (Gee, 1990:132) when students enter higher education, and they are required to engage more independently with knowledge, give opinions on issues, and so on.

Clark and Linder's (2006) work stresses that students' secondary discourse from school may influence or even disable them from acquiring a new secondary discourse, but both home-based and secondary discourses may lead to a discourse gap in university study. This can be seen in Nomdo's (2006) study, which compared the access two previously disadvantaged students from different social backgrounds had to university study. Although Nomdo was conducting a Bourdieu-based research project, using the concept

of cultural capital, he also refers to discourse and discourse clashes as expounded by Gee. The cultural capital in his study refers to the skills and knowledge that students were equipped with prior to entering the higher education institution. This cultural capital would be afforded to them by their parents, basically the knowledge and the attitudes that parents transmit to their children in order to make sense of the education system. One student came from a more middle-class, professional background and attended a model C school. This student easily assimilated and was relatively successful in her university studies. The second student came from a more rural township background and schooling, and struggled to take on the discourse of the university, which the author ascribed to a possible 'discourse clash' (Gee, 1990:132). Although Nomdo's focus was on the need to recognise the discourses students bring with them on entering university, he also acknowledges that such a clash may disadvantage students

Lecturers at times feel that students are ill prepared for higher education and have pointed out why they feel students are lacking; as they have a tendency towards verbatim reproduction or plagiarism in essays, they are not capable of structuring logical arguments, they describe rather than analyse, they struggle to relate concepts (Slonimsky & Shalem, 2006). Previous secondary discourses on top of the primary discourse make students' attempts to gain access to the discourse of higher education more complex. An important point to note here, and one that is accentuated by those writing in the field of academic literacy, is that secondary discourses are not usually acquired naturally; but those wishing to become a member of these discourses should be inducted into them by more knowledgeable others. If students are not sufficiently initiated into disciplinary knowledge and text-based realities, they may never become full participants in academic practice (Slonimsky & Shalem, 2006:51). It is up to the existing members of the community of practice to close the gap by inducting newer members.

Ellery (2011:1079) uses Gee's concept of discourse in higher education, "… the discourse of an academic discipline has particular epistemic values, norms and conventions, including the way knowledge is constructed, the basis of knowledge claims and how knowledge is communicated and transmitted". The key aspect of discourse is often taken for granted by those who practise the discourse and is seldom made explicit to students (Allie *et al*., 2010). It should also be pointed out that Ellery and Allie *et al*. are referring to epistemological access in the science discipline, which is of interest, but my

focus is on gaps. Epistemological access refers to knowing the ways of thinking of a particular university discipline, and how these are different from both common sense knowledge and from other disciplines. It thus also refers to knowledge of the main theories and concepts that are foregrounded in a field of study. Coming to know these cannot, according to Morrow (2009:30), be acquired without considerable effort from the student and a clear structure of the discipline from the lecturer. Thus, gaining epistemological access entails taking on literacy practices, and can be seen as similar to Gee's concept of gaining access to secondary discourses, albeit with a slightly different focus. Furthermore, like Boughey, Morrow believes that many students are not sufficiently guided as to what matters in a discipline. Morrow (2009:30) states that,

> … at a deeper psychological level, committed teachers' self-images and professional identities and their fundamental convictions about values and standards of academic practice, are likely to be deeply entangled with the curriculum they teach; however, this remains deeply hidden from students.

In similar vein to Morrow, Allie *et al.* (2010), Ellery (2011), and Slonimsky and Shalem (2006:56), argue that insiders to a practice tend to develop such an embodied and practised sense of their actions, activities and forms of relation within it that they may cease to consider or reflect on that which informs, underpins and generates their activities. This view may explain the fact that some lecturers might have the expectation that students will automatically take on the practices of the discourse. When lecturers have expectations of how students should speak, read and write, students are asked to take on an identity, they are asked to assume another state of 'being'. Students may struggle in accommodating these new ways of being in these secondary discourses.

These expected new ways of being are also explored by Haggis. Haggis (2003:97) posits that there is an elite set of assumptions, held by academics in higher education, which exists about students' purpose and motivation. She points out that academics assume that when students reach a tertiary institution, their aims are, or can be made, to be the same as those of academics, and that there is an assumption that students who come to university are already 'at a level' where they can engage in the manner academics expect. Ivanič (1998:12) similarly points to:

> … (a) view of identity is as a result of affiliation to particular beliefs and possibilities which are available to them in social context. If people entering higher education experience an 'identity crisis' it is not because of an inadequacy in themselves but because of a mismatch between social contexts which have constructed their identities in the past and the new social context which they are entering.

Ivanič highlights the fact that the gap between students and higher education exists from the start and continues once they are in the system, unless students mimic the expected values and practices or are inducted into them. Boughey (2013) makes a similar point but points out that it is necessary for academics to acknowledge the multiple discourses with which students enter higher education and make teaching of the new discourse explicit to them.

## 2.4 Narrowing the discourse gap

Different discourse communities have their own sets of rules, which are not always explicit. These are often not well articulated by experts, but students need to obtain epistemological access. It needs to be recognised that these rules need to be made overt, or taught for students to gain access

Ballard and Clanchy (1988) also believe that students gain knowledge through a 'cultural understanding'. They believe that this is achieved when students understand the language of academics, which means they need to learn to 'read' the culture and immerse themselves in behaviour, language and values of that particular discourse. This cultural understanding is not written down or codified, and is not overt in exchanges between students and academics (Ballard and Clanchy, 1988: 8). We learn through taking over others' ways of being from other social practice, embodying and making these ways of being our own (Dall'Alba and Sandberg, 2010:117). It is therefore important that academic practice is made overt.

Students coming into higher education find new ways of 'being' and interacting as their situation changes and develops. As we "bodily engage in learning through and about practice, our embodiment provides a means by which we learn to engage in practice" (Dall'Alba & Sandberg, 2010:116). As the discourse of school is so very different from the discourse of higher education, there needs to be instruction to get students at the level that academics expect.

When reviewing Gee's concept of becoming part of or entering into a secondary discourse community, we find similarities in Wenger's (1998:6) idea of community of practice, which is:

> … the participation process of being active participants in the practices of social communities and constructing identities in relation to these communities. We all belong to communities of practice; they are everywhere and change over time.

These communities of practice refer to different workplace communities and share values, meanings and significances. Knowledge shared by the community may be explicit, often in codified form, or it is tacit, circulates and is open to change. Learning within the community is situated in that it occurs within the contexts and cultures of the workplace and is social in that it involves interactions with other members. Learning also involves taking on the discourse of a community, which is bound up with the identity of being a member of that community (Allie *et al.*, 2010:10). When students engage in the discourse of the academic community, they attempt to take on the discursive identity of being a member of that particular discourse community. Students thus need to take a participatory role in their new community to become members of that community.

## 2.5 The 'will' (motivation to learn)

Even when the discourse gap is closed, students' success is still dependent on other factors such as motivation. One of the questions I chose to ask students was why they chose to study Nature Conservation, while I asked lecturers what Nature Conservation was. While my focus was not to examine motivation explicitly, the reason for the difference in questioning was because I wanted to point out the difference in students' perceptions of what Nature Conservation entailed and the perceptions of lecturers, again to point out the difference.

It is for this reason that I examine theory around motivation and the view of professional identity so that I can deliver theoretical comment on my data analysis later in Chapter 5. I use Deci and Ryan's (1985) (as cited by McKenna, 2004) theory of the types of motivation, while Dahlgren *et al*. (2007) examined the concept of professional identity, which is necessary in this instance since the Nature Conservation programme is situated in the area of vocational education.

According to Deci and Ryan's (1985) (as cited by McKenna, 2004) theorisation of motivation, they distinguish two different types of motivation, namely, intrinsic and extrinsic motivation. They discuss the notion of intrinsic learners; they are learners who are interested in learning tasks and outcomes for their own sake, rather than for extrinsic rewards, and are thus more effective learners. These learners are geared at learning for personal enjoyment or achievement. Instrumental/extrinsic orientation of the respective theories is seen to be dependent on external factors; in this context the learners' orientation is geared at achieving a goal that satisfies a material need. Theories of motivation are often derived from more psychological innatist theories in which student difficulty in coping at university can be ascribed to themselves rather than to what and how the university itself is teaching.

Since my study deals with students who are studying towards a professional identity, I also examine Dahlgren *et al.'s* (2007) concept of students' three-level hierarchy of views of professional work and corresponding relationships to study, namely: *extrinsic technical*, *extrinsic meaning* and *intrinsic meaning*. These three levels refer to the meanings that students attach to their studies, which are thus similar to the concept of motivation (intrinsic and extrinsic) advanced by Deci and Ryan. The extrinsic technical level refers to the fact that professional work is constituted as a group of technical components that can be utilised when the work situation requires it. Extrinsic meaning refers to professional work focusing on developing the meaning essential in discipline objects (Dahlgren *et al.*, 2007). According to Dahlgren *et al*. (2007: 130) students holding this view of extrinsic meaning will seek to increase their understanding of the discipline by investigating the meaning in the discipline, while teachers will focus on highlighting and explaining the importance of various components for the profession. Intrinsic meaning refers to the fact that professional work is essentially related to a person's own personal and professional being (Dahlgren *et al*., 2007:130). It is therefore probably important for student success, that students are invested with or properly motivated in all three of these.

It is important to note the concept of a view of professional identity as theorised by Dahlgren *et al*. (2007) as they believe that students' sense of identity is developed through their learning experiences and their expectation of what their profession will entail. In essence, students' ideas of what their potential work life is about, contribute to

their sense of 'being'. This is significant in higher education as it plays a role in their ability to transfer the knowledge learnt into meaningful experiences in different contexts (Reid *et al*., 2008: 730). This is important in this thesis as part of this study looks at students' being, their ways of thinking and behaving, and therefore what students think their potential profession is about will ultimately play a role in how they learn.

When students engage in valuable and relevant learning experiences (and how they use the knowledge and skills acquired from these experiences), it allows for the personal domain of knowledge to develop. Gee (1996:136) believes that immersion in a particular discourse means learning inside the procedures, rather than overtly about them, thus ensuring that learners take on perspectives, adopt a world view, accept a set of core values, and master an identity, often without a great deal of critical and reflective awareness about these matters. This process comes about naturally for students as they are engaged in learning experiences that are familiar and relevant. In other words, discourse is obtained through exposure. So, when students are engaged in practices that relate to their future careers, they are more likely to engage in active learning. This is also dependent on the active reproduction of knowledge generated over time, which leads to development of rich knowledge and critical skills (Billet, 2009a:834). In other words, although affordance or lack of affordance (the degree by which students are invited and supported in a learning environment) is present, there needs to be engagement (how students take up the invitation) (Billet, 2009a). According to Billet (2009a:836):

> … the kinds of knowledge that individuals have, their access to discourses, and their preferences and skills, will shape how they engage with activities and interactions … the learning that derives from students' participation in any given activity is not (only) dependent upon the affordances of educational institution or workplace, but on how individuals elect to engage with what is afforded them in both education and practice settings.

This engagement refers to how students choose to engage or participate in their learning environment, whether or not they are active participants in learning, or as Barnett puts it, 'being'. Through this engagement, students take up a new identity, an identity that gives them membership to the academic community or access to a community of practice. Success for students would be the demonstration of the ability to use relevant discourse to be able to participate in a workplace community (Allie *et al.*, 2010: 9).

In my research into academic discourses and literacies I discovered that researchers address discourse and literacy in a very broad or general way. Even though they touch on aspects of epistemology (either gaining access to the knowledge of the discipline or struggling to access it) and ontology (how students take up spaces in a learning environment or who they are), this was still not specific or sufficiently defined for me to analyse my data. This could be because the researchers discussed have not focused on a particular field (e.g. Nature Conservation) in respect of what it is to be a student. This is the reason I used Barnett (2005, 2007) and Billet (2009a) to examine the difference in discourse more closely. I chose Barnett's theory of being a student and Billet's theories on vocational knowledge, to not only support a theoretical framework raised by Gee, but I have also used their theories to assist in categorising my data. Their explanations on knowledge domains and knowledge for vocations assisted me in trying to establish what it means to be a student at a university of technology. Barnett explores the domains of knowledge that students should be immersed in to be successful. Billet, although he focuses on vocational knowledge, assisted me to better explain the types of knowledge students engaged in specialised programmes should have. This is especially useful as students who are registered at universities of technology are registered in specialised programmes, gearing them towards a specialised professional identity.

## 2.6 Being a university student

Barnett (2007:7) believes that students entering higher education are embarking on a journey to 'becoming'. Becoming is the process by which a student comes into a mode of authentic being, the realisation of being in which she/he stands by herself/himself (Barnett, 2007:68). For Barnett (2007:7), however, knowledge (epistemology) and skills (practice) are not enough to explain higher education: a third 'pillar is necessary, ontology or 'being'. The goal of higher education curricula, therefore, according to Barnett, focuses on forming identities based in three domains: knowledge, action (practice) and self (being) (Barnett *et al*., 2001). In brief, knowledge refers to the discipline-specific competences and the aspects of teaching and learning that focus on producing subject specialists (Barnett *et al*., 2001:438).

Barnett (2005) believes that knowledge is derived in and through practice. He goes on to say that the production of knowledge has shifted from within epistemological

development of disciplines to sites outside of the university where knowledge is applied (Barnett, 2005:791). Therefore students need to emerge as graduates who are able to market themselves, as the application of knowledge is highly valued. The second domain, the action or practice domain, refers to students acquiring competencies through 'doing', through laboratory work, delivering presentations or active engagement on field trips. The third domain, 'being', refers to the way the student is in the world, or the role or identity, a student takes on from one moment to the next (Barnett, 2007:27). The self or being refers to the educational identity developed in relation to the subject area, where students are encouraged to be independent learners or critical thinkers (Barnett *et al*., 2001:445). They state that knowing and acting are insufficient; we need to acknowledge the students' will and being. According to Barnett *et al*. (2001), in academia, there is often more of a focus on the demonstration or even duplication of knowledge, as well as on practice, while the 'being' is neglected. Learning is not only affected by the learning environment, but by the student's mode of being; students need to be confident in their abilities. Barnett (2005:795) states that instead of knowing the world, being in the world needs to take precedence in university teaching and thus take into account students as human beings as distinct from knowledge beings.

Barnett *et al.* (2001:439) hold three generalisations about these domains, that is, the weight of these domains varies across curricula; the domains are integrated and interdependent; and patterns of curricula change are dominated by epistemological differences in knowledge fields. Though Barnett does not specifically focus on vocational studies, in vocational programmes there is a high degree of integration across the three domains, although the action domain may be more weighted. This could also be a contributing factor to the misalignment of student perception and lecturer expectations, as the perceptions of students are often that a university of technology is predominantly practical in nature, while lecturers expect that all three domains should be covered equally. This is because at universities of technology, students have to cover both theory and practice in the specific field, while negotiating how to act and think to successfully complete these aspects. For this reason it is necessary to interrogate researchers who have studied professional identity. I make use of Billet's (2009a) idea of developing a professional identity to expand on Barnett's (2007) theory of what it means to be a student. It works well, as Billet's (2009a) development of professional identity is aimed at developing aspects of higher education.

## 2.7 Knowledge for and about the profession

Billet (2009a) examines individuals' developing a professional identity. Although his research focuses on vocational knowledge, he indicates areas that can be explored in higher education to develop more agentic students with the aim of developing their professional capacities (Billet, 2009a:839). These agentic students correspond with Barnett's idea of being a student, as they are students who participate, negotiate and learn practices across university and practice settings (Billet, 2009b). This is useful for my research since students registered are enrolled in a course for a specialised professional identity. Billet (2009a:832) categorises three kinds of knowledge as essential for occupations:

- Domain-specific conceptual knowledge – knowing that – concepts
- Domain-specific procedural knowledge – knowing how – procedures
- Dispositional knowledge – knowing for – values, attitude

These categories of knowledge as described by Billet (2009a) correspond with Barnett's (2007) categories of what it means to be a student and this correspondence is represented in the table below.

**Table 2.1: Categories of knowledge**

| | |
|---|---|
| Domain-specific conceptual knowledge – knowing that – concepts | Barnett's knowledge |
| Domain-specific procedural knowledge – knowing how – procedures | Barnett's practice |
| Dispositional knowledge – knowing for – values, attitude | Barnett's being |

So, I have used Billet (2009a) to expand on Barnett (2007) and give a more 'career'-focused aspect. Billet, similarly to Barnett, believes that these three knowledge types are interconnected and interdependent, and that a balance needs to be found for individuals to adequately develop to be successful in vocational study. This is normally realised when students are exposed to the field and use knowledge in practice.

### 2.7.1 Domain-specific conceptual knowledge

Domain-specific conceptual knowledge involves knowledge of concepts specific to a particular discipline. There are three levels of this domain-specific knowledge: canonical knowledge of the profession consists of the knowledge that one is expected to exhibit when practising this profession. Conceptual or declarative knowledge comprises concepts, facts or propositions (e.g., information found in textbooks/also information relayed via an expert). Deep conceptual knowledge refers to understanding the relationship between sets of concepts and propositions (Billet, 2009a:833).

### 2.7.2 Domain-specific procedural knowledge

Domain-specific procedural knowledge is the knowledge that we use to do things. This form of knowledge has to be engaged with and practised for its development to occur (Billet, 2009a:833), and this is similar to Barnett's (2007) idea of 'practice'. This type of knowledge often becomes ingrained in the individual through repetitive action.

### 2.7.3 Dispositional knowledge

Billet's (2009a:830) dispositional knowledge comprises interests and beliefs, where knowledge is used effectively in a particular setting. Dispositions are likely to be developed through individuals' beliefs, and are shaped through their encounters with particular experiences. Barnett (2007:104) also discusses students' disposition and explains it as an expression of a will to learn or a student's orientation or inclination towards the course. Lecturers often refer to this as students' attitude. Barnett elaborates that qualities that students display are the forms that dispositions take. For example, preparedness to learn is a disposition as there is an inclination by the student, but being an independent learner is a quality.

Knowledge fields are always changing, especially in science and technology to cater to the demands of the continuous developments in the field with regard to structure, techniques and emerging topics. Whereas previously higher education focused largely on 'knowing that', 'disciplinary skills', and 'knowledge as process', there has of late been greater focus on 'knowing how', 'transferable skills' and 'knowledge as a product,' so that they have relevance in the world outside of academe (Barnett *et al*., 2001:436). A clear

indication is needed that the knowledge acquired can be put into practice or that there is a development in the action domain. Industry places value on skills that combine knowledge and its application, while expecting employees to take initiative in doing this, so the focus is on gaining graduates that have developed knowledge, action and self domains (Billet, 2009a). Therefore higher education has increased the pressure to produce graduates that are ready for the work environment, and even more so in a vocational institution in a period when the demand for competent graduates in science and technology is high. Academic settings can provide access to a range of conceptual bases, premises for procedures, and access to norms associated with a particular occupation (Billet, 2009a:838). It is therefore important for students to be exposed to the field of work within the curriculum so that there is a development in the action domain. The curriculum is thus geared at knowledge presented in a way that students understand its practical value. At times there is a deficit in this area, as it may not be made explicit to students, and therefore the domain of self or practice is not developed as academics would expect. Barnett *et al.* (2001:447) believe that the problem lies with lecturer-dominated teaching and that it is uni-directional, as lecturers still occupy roles where they impart knowledge and skills to students rather than inducting students into the institutional culture. The expectation that students should just have what it takes to be a student is often prevalent, and this approach may be used instead of teaching students the rules of the new discourse.

## 2.8 Conclusion

My study was aimed at understanding the nature of the gaps in higher education and I attempted to do so by examining students and staff perceptions of what being a student in Nature Conservation entails. This examination revealed gaps or differences between student perceptions and staff expectations. The literature I consulted revealed that higher education practices and values are a specialist discourse or a form of secondary discourse. I used Gee's (1996) concept of discourse, and academic literacies from Boughey (2013), to better explain this. Barnett (2007) also discusses the nature of the university by using his domains of knowledge, practice and being. I used his domains as a theoretical framework as well as an analytical tool, and therefore I developed the separate categories for my data, even though I know they are intertwined. Through developing an analytical framework, I can say something about the gaps that exist when discussing discourse communities, enabling me to highlight the differences between

discourse communities. But to address these it is necessary to acknowledge that because higher education is a specialist discourse, it is one that cannot be acquired naturally and needs to be explicitly taught.

## CHAPTER THREE

# 3 METHODOLOGY

## 3.1 Introduction

In this study I wished to investigate the 'gap' between what students understood studying Nature Conservation at university to be and what staff members' expectation of such study involved. The main research question therefore is:

- What is the nature of the gap between students and staff's perceptions of studying Nature Conservation?

In order to answer this question, two other questions first had to be addressed:

- What are students' perceptions of 'being' a student in Nature Conservation?
- What are staff members' perceptions of 'being' a student in Nature Conservation?

In my research I did not directly ask what the respondents thought the gap to be, but rather I probed what their understandings of studying in the field were. What constituted the gap could then be inferred by comparing student and staff responses to my questions.

I was interested in exploring the gap between students' and staff members' understanding of studying Nature Conservation, to identify significant gaps that might need to be addressed. My investigation is derived from discourse theory that suggests that such gaps will be likely to exist, as my discussion in Chapter 2 indicates.

## 3.2 Research design

I set essays for students to try to understand what they viewed as valued skills and knowledge in Nature Conservation. I felt that students would find it easier to initially respond to questions in a narrative of an autobiographical essay. The data gathered in these essays was then used to further develop and make more specific the main questions I asked in my interviews with them. These questions were in turn designed to answer the three research questions above. The same main questions were posed to staff as well as to students, so that an understanding could be gained of the differences between their perceptions, in other words, information about gaps.

### 3.2.1 Qualitative research

The evaluation process was conducted through qualitative research. Qualitative research attempts to describe and understand, rather than explain, human behaviour. Creswell (1998:15) describes qualitative research as "…an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem". Punch (2005:186) expands by describing this method as looking at something holistically and comprehensively, to study it in its complexity, and to understand it in its context, as the truth about human behaviour is not context free. This method tries to describe and interpret people's feelings and experiences in human terms, instead of by quantification and measurement (Terre Blanche *et al.*, 2006:272).

The use of this approach encourages understanding through social interaction with others. The researcher generates meaning from the data collected in the field and seeks to understand the situation by visiting the context and gathering information personally (Creswell, 2003:9). It allows the researcher to interpret data based on experience and background. Since the data was collected in the natural setting, with the researcher as primary data collector, it was appropriate to use this method for my research design and data collection. It was ideal for the purpose of this study as it focuses on participants' perceptions and experiences to understand multiple realities, as well as how and why things occur. One could view it as seeing through the eyes of the participants.

A constructivist approach was used to gather data as it addresses the processes of interaction among individuals. According to Creswell (2003:8), the constructivist approach allows the researcher to seek understanding of the world in which informants live and work as they develop subjective meanings of their experiences, allowing meaning to be created through different constructs. This approach depends on the participants' perceptions of the situation being studied. I chose to use this approach because I wanted to understand staff and student perceptions and points of view, obtaining a deeper meaning of these. I wanted to establish what constituted student and staff perceptions of an academic identity and to examine the 'clash of discourses'. Students' backgrounds were not analysed, as I did not wish to develop preconceived ideas about identity from their previous academic backgrounds.

### 3.2.2 The inductive approach

Although I have used discourse theory to understand possible gaps between students and staff's understandings of the field, I first needed to understand from the data what constituted these gaps, and what sorts of themes emerged, which could then be related to the theory. To do this I employed an inductive approach to my data analysis. According to Thomas (2006:239), the primary purpose of the inductive approach is to allow research findings to emerge from frequent, dominant or significant themes inherent in the raw data, without the restraints imposed by structured methodologies. The inductive approach allows the researcher to:

> (a) ... condense extensive and varied raw text data into a brief summary format, (b) to establish clear links between the research objectives and summary findings derived from the raw data and to ensure that these are both transparent and defensible, and (c) to develop a model/theory about underlying structure of experiences or processes which are evident in the raw data (Thomas, 2006:240).

This approach brings to light recurring patterns and these are used to formulate categories or themes. This is seen clearly through the themes that emerged from my data. The findings obtained were determined by my research objective, as well as by the repetitive reading and interpretation of the raw data. This approach is similar to grounded theory, as grounded theory focuses on multiple stages of data collection and discovering the interrelationships of the categories of information and then refining it (Cresswell, 2003). According to Thomas (2006:240), "... in the inductive approach, the primary mode of analysis is development of categories from the raw data into a model or framework that captures key themes and processes judged to be important". The data gathered for this study required continuous analysis and grouping of information, which I judged to hold of value, into similar categories or patterns which I placed into themes.

As previously stated, data was analysed and coded repetitively so that I could formulate categories until theoretical saturation was obtained. This means that the analysis and re-analysis of the data was done until no new data appeared and all concepts in the theory were well developed. According to Saldaña (2009:3):

> A code in a qualitative inquiry is most often a word or a short phrase that symbolically assigns a summative, salient, essence capturing and or evocative attribute for a portion of language based on visual data. It can consist of interviews, essays, notes or photos. The portion of data to be coded during First Cycle coding processes can range in magnitude from a single word to a full sentence to an entire page of text to a stream of moving images. In second cycle coding the portions can be same units or reconfiguration of codes that have been developed.

Punch (2005:205) recognises three stages of coding: first finding conceptual categories – first level abstraction; second – finding relationships, and third – conceptualising and accounting for these relationships at higher abstraction. In the first stage, basic familiar concepts are drawn from the data and categorised: this is low-level inference. The second stage connects these categories or finds relationships. The third stage examines the theory that emerges through these relationships in categories, and in my case comprises relating categorised data to the theory.

## 3.3 Sampling procedure and data collection

The following methods were used to collect data:

### 3.3.1 Sampling

This study focused on first-year foundation students at CPUT and as a lecturer they were readily accessible to me. I selected the foundation Nature Conservation class, as they were not students that I had taught or known, to avoid influencing the findings of this study (the teacher–student power dynamic would impact on the trustworthiness of the study and influence the students' preparedness to speak openly and honestly). The foundation Nature Conservation class consisted of 20 students, who initially participated in my study until I purposively chose 8 students from the cohort to participate in further investigation.

Purposive sampling was used. Cohen *et al.* (2007:114) describe purposive sampling as handpicking the cases to be included in the sample on the basis of judgement of their typicality or possession of the particular characteristic sought. This method of sampling allowed me to select students whose essays provided the most data that related to my study. These students were selected as they provided higher levels of detail about their

learning in and reasons for studying Nature Conservation in their essays, as opposed to the other students who had not put much effort into their writing.

Purposive sampling procedure decreases the generalisability of findings. The sample in this research was chosen as it would best help me understand the problem of the gap between student and staff perceptions of what it is to be a Nature Conservation student (i.e. where I could derive the most data from).

The students that participated in this study were all previously disadvantaged. They were all black students, comprising nine men and eleven women. They ranged in age from 19–25. Although there was a difference in age, gender and initial choice of study, the information gathered did not reveal discernible differences and was therefore not a variable of interest. All the students were from some sort of disadvantaged background. Even when students attended previously model C schools (considered more affluent than schools in the townships), they still lived in previously disadvantaged areas. These students often lived in single-parent households and even when they had both parents, they were often sent to live with grandparents and extended family. The majority of parents or guardians of these students appeared to be either unemployed or pensioners.

Towards the end of the first semester I approached the Nature Conservation foundation class with my essay topic. I explained to them that I was in the process of doing a master's degree and that I would require their assistance in the compilation of my thesis. I requested their permission to use them as study participants and asked them to complete the two-page essay I required. The entire class volunteered to participate in the essay writing. These students were given the opportunity to write the essay in a class setting.

I also selected three senior lecturers on the programme to interview. These lecturers have spent more than ten years in the field of higher education and have witnessed various students entering and leaving the system. They were therefore the best candidates to interview to gauge what sorts of qualities and knowledge students were expected to have. Lecturers were interviewed so that I could obtain a clear understanding of what Nature Conservation entailed and what completing a National Diploma in Nature Conservation would allow students to do. I wanted to get clarity on the expectations of

academics. I also wanted to establish what were considered valuable ways of learning. It would also be a yardstick to gauge the responses of the student participants.

### 3.3.2 Ethical considerations

Ethical considerations constitute an important part of qualitative research, as cognisance must be taken in respect of the rights of participants. Careful consideration should be given to prevent participants from feeling marginalised during the study. The researcher needs to respect the rights, values, privacy and desires of participants. It is also very important for participants to understand the purpose of the study and be informed that they are free to ask questions whenever anything is unclear.

I conveyed the purpose and process of the study to both staff and students, so that they knew what to expect. All participants were informed of the nature of the study and its impact. Students were asked to participate voluntarily and to sign an informed consent document (See Appendix A). Students were made to understand that they were at liberty to refuse further participation at any point in the study. I assured all participants of their anonymity in participation. Participants were made aware that audio interviews would be transcribed verbatim. Students were given refreshments as an incentive to participate in the study.

## 3.4 Data collection

I wanted to learn what the students' understanding of the knowledge and skills students in the Nature Conservation programme should have. I wanted to know whether they understood what lecturers expected from them on the programme. The reason for the question on their choice of study was to ascertain whether students understood what the programme entailed. These questions were used for the student autobiographical essays and for the individual interviews with students and lecturers. However, the essays were only used as a basis for interviews as I wanted to get more and greater detail from the eight students I selected and I felt that the interviews would allow me to do this. There were instances that student interviews did not reveal as much as I expected. Where issues were unclear, I probed participants for a better understanding during the interview. I used qualitative research as it best helped me to answer my questions.

Data was collected in the form of autobiographical essays, and individual interviews from students, while lecturers were just individually interviewed. Students and lecturers' conversations were recorded and transcribed verbatim.

### 3.4.1 Autobiographical essays

As previously stated, the initial 20 student participants were asked to produce two-page autobiographical essays. These essays were used to gauge how they see themselves as students and their understanding of the necessary knowledge and skills for Nature Conservation. This information is particularly relevant to my research, in which different discourses and different access to the secondary discourse of university have already been identified.

I asked students to write a two-page autobiographical essay (see Appendix B for an example of an essay), following four main questions. These questions were based on the research questions used by Nygaard and Serrano (2010), where they investigated the relationship between students' identity and learning amongst Danish business students. Their questions attempted to get students to share their thoughts about their personal identity, their learning and their professional identity. In order to obtain these perceptions, the researchers asked students broadly, what it was to study business, what they thought counted as learning in business studies, and lastly, how they thought they had changed during their learning experiences in the field. The last question was asked to gain further insight from students on what was involved in studying in the field, or 'being' a student, which was made possible as data was gathered after students had been at university for a few months.

- What is it to be a student in Nature Conservation?
- Why did you choose to study Nature Conservation?
- How do you best learn your subjects in Nature Conservation?
- How have you changed since you started studying in January?

The reason why I asked students to write an autobiographical essay was because I wanted to provide them with an opportunity to answer my questions in a narrative that was familiar to them. By allowing them to talk about themselves in essay form, I hoped to ease the process of answering my later interview questions. The essays provided a rich source of data on students' reasons for studying and also on their understandings of

Nature Conservation. In Appendix C I have indicated some of the more focused questions, all concerning students' reasons for study and their understandings of learning in Nature Conservation, which I was able to elicit from the essay in Appendix B.

The Nature Conservation participants consisted of 20 students. When students wrote the essays, I carefully went through essays to find patterns among the students. I organised pieces of text taken from essays that addressed the questions I needed answered. Some of the essays written did not cover students understanding of knowledge and skills necessary for the programme and only reflected on students' reasons for studying. The eight students I selected for interviewing covered areas of the knowledge and skills and needed for the programme and were therefore selected for further probing. I thus used their essays to guide my interview questions.

### 3.4.2 Interviews

Themes that emerged through the autobiographical essays were used to compile questions for individual semi-structured one-hour interviews (Appendix C). The interviews were also based on the main research questions, as stated in the introduction, but the essays allowed me to elaborate on these questions and probe further.

Thus in student interviews I asked students the following questions:

- Why did you choose to study Nature Conservation?
- What is it to be a Nature Conservation student?
  - What do you think counts as learning in Nature Conservation?
  - What kinds of knowledge do you need for Nature Conservation?
  - What kinds of skills do you need for Nature Conservation?
- How have you changed since starting your studies in Nature Conservation?

These questions formed the basis of the interviews for students, but each student had a set of leading questions that were derived from their individual essays (see Appendix C). I used leading questions to probe for better feedback on the responses that students provided.

It must be pointed out that the question on how students had changed was generally poorly answered, and an example of a response is furnished below.

> As a student at CPUT, I know now where I'm going and my plans for the future but at first it was not easy to pronounce the words at [the] beginning of the year but now I'm proud to say I've learnt a lot even though I still have to learn more.

This response did not yield data relating to 'being a student', even when I tried to elicit more information during the interview. Thus I did not use information from this question in my data analysis.

Everyday language was used so that it would not limit the participants from responding. I used inductive categorising and thus used coding which gave rise to themes and gave clarity to the way participants viewed student identity (Punch, 2005; Saldaña, 2009). Du Plooy (2006:114) explains that the interview, although it is controlled, still allows for spontaneity. Participants feel free to elaborate, comment or explain feelings and views they have on the topic. Punch (2005:168) believes that interviews are a very good way of accessing people's perceptions, meanings, definitions of situations, and constructions of reality and provide the researcher with rich and valuable data. Interviews differ from normal questionnaires as they allow the facilitator to give explanation of questions when the participant(s) do not understand (Brynard & Hanekom, 1997:30).

The interviews were used to probe deeper into the students' perceptions of 'being a student' as well as lecturers' expectations of these students. The interviews were semi-structured, as this allowed for additional probing to explore issues that participants raised that were of interest. This approach is used to understand complex behaviour of people, without imposing *a priori* categorisation, which might limit the field of inquiry (Punch, 2005:172). According to Heaton (2004:58), open- and semi-structured interviews can be used so that participants can highlight topics related to the inquiry, rather than those pre-defined by the researcher. This approach allowed me to use my discretion on the line of questioning and to explore issues that were of interest to the study. There was a set of broad questions that I required students to answer but the responses that they included in their autobiographical essays were also used to obtain a deeper understanding. The responses from these interviews were organised into patterns based on the similarities and differences they revealed. These were then further reduced and organised until themes emerged. The themes were then matched to existing theoretical domains from Barnett, as displayed in Chapter 5.

These student interviews were intended to garner lecturers' expectations and viewpoints of 'being a student'.

I used similar questions in staff interviews, for example:

- What is Nature Conservation?
- What kinds of knowledge and skills should students in Nature Conservation display?

Although not specifically asked, staff revealed how they felt students were lacking when they responded to the latter question. In my analysis I was able to use these comments as an indication of what staff thought being a Nature Conservation student involved.

Participants were interviewed individually in a semi-structured interview so that I could probe issues raised by participants and explore issues that were of interest to the study. These interviews were recorded using audiotapes, which were later transcribed verbatim, and through notes I took during the interviews.

Themes emerging from the individuals were cross-referenced. In analysing the responses to the three questions, themes emerged which cut across the different questions so I was able to group responses without being limited by the questions themselves. These themes looked at the difference in the discourses as expressed by staff and students. These overarching themes on identity form the basis for further discussion.

## 3.5 Data analysis

### 3.5.1 Coding

Coding is a form of analysis where tags or labels are attached to pieces of information; this could be a word or small or big pieces of data. By assigning labels to the data, meaning is attached to the data. This method of labelling the data also allows for ease of storing or retrieving data. According to Punch (2005:200), coding summarises data by drawing together themes and by identifying patterns. Coding of information can be viewed as the starting point of the analysis of data where data is summarised and categorised.

The type of coding I have used firstly is *in vivo* coding (Saldaña, 2009:4) in that I refer directly to what participants have said. I have referred to these as patterns (see Appendix D for students and Appendix E for staff). This was done by my reading and re-reading the data. I could then identify segments of the raw data containing meaningful units. This allowed me to create the label for the categories and relevant segments of data. Meaningful data chunks were identified, retrieved, isolated, grouped and regrouped for analysis. In my coding I searched for similarities and differences in the responses from participants. Their personal perceptions, values, attitudes and belief systems were not all the same, but this was also valuable in my research. My second line of coding was to group these initial codings into even more abstract patterns, which indicated commonalities among the codings (Saldaña, 2009:5), which I have referred to as my themes. The categorisation or thematisations of the patterns was as a result of the segments of raw data having things in common. I could also describe these categories by giving the key characteristics and this was done through associations and links provided by the raw data. As pointed out, I used the interview data for coding. This is a process of data reduction which is typical in qualitative research design where large amounts of data are gathered (Punch, 2005) that need to be organised and made more comprehensible so that they can be linked to other data and compared with established theory.

By using this system of coding I could label categories of student perceptions of what it is to be a Nature Conservation student by providing words or short phrases which described and organised the raw data into the themes of: general academic orientation, attitude to learning, general academic skills, discipline-specific skills, knowledge for the course, and important attributes. As can be seen in some of the categories, the data talk directly and indirectly to the theory in Chapter 2, for example theory on academic literacy and theory on motivation. Thus, although my categorisation was largely inductive, it was also partly informed by categories already discussed in the theory chapter.

Data from staff perceptions was also coded and thematisised in the same way. As similar questions were asked of staff, it was possible to group the staff's response patterns under the same general themes as those of the students. This was possible even though staff responses sometimes included information on what students lacked, or what the nature of the field was; these could be thematised under 'attitudes/academic literacy' and 'attributes' respectively, for example.

### 3.5.2 Table of comparisons

Once data from both students and staff could be placed under the same categories or themes, it was possibly for me to compare the data gathered across the categories (see Table 5.1). Through this comparison I was able to identify significant qualitative differences or gaps between student and staff perceptions of what it is to be a Nature Conservation student. These gaps were then linked to the theory or framework. In my research I used different discourses as described by Gee (1996), and different academic literacies as described by Boughey (2013), as well as Barnett's domains of knowledge, to better describe the gaps across the themes I had identified.

## 3.6 Conclusion

This chapter covers the research approach I took to gathering and analysing my data in order to uncover the nature of the gaps between staff and student perceptions of what it is to be a student in Nature Conservation. Data from students' essays and interviews was analysed for patterns and themes. Though the process was largely inductive, some themes were partly derived from previous theory as well. The process was repeated for staff, and data was organised under the same themes, to enable comparison of responses and hence a description of gaps. Chapter 4 follows on from this chapter by highlighting relevant data sections of the essays and interviews conducted with students and the interviews with staff. Both student and staff responses were thematised.

# CHAPTER FOUR

## 4 Presentation of results

### 4.1 Introduction

In this chapter, data from students and staff was gathered then analysed for commonly occurring themes. I summarised the information from interviews and essays so I could access the patterns and themes. This was done to investigate the research questions outlined in Chapter 1:

- What are student perceptions of being a student in Nature Conservation?
- What are staff perceptions of what it is to be a student in Nature Conservation?

The specific focus of this chapter is therefore on the perceptions of students and staff of what it is to be a Nature Conservation student. In Chapter 5, these perceptions are compared and the focus is rather on examining the gap between student and staff perceptions. Data was gathered from essays and follow-up interviews for students, and interviews for staff. In order to gather data on the research questions, I asked participants leading questions which they could understand and that allowed me to probe for more information.

Students were asked:

- Why did you choose to study Nature Conservation?
- What kinds of knowledge do you need for Nature Conservation?
- What kinds of skills do you need for Nature Conservation?

Staff members were asked the same questions, but the first question was changed to 'What is Nature Conservation?'

These two sets of data, once coded, were then used as the basis for comparison between student and staff perceptions in order to answer the following research question:

- What are the gaps between students and staff members' understanding of what it is to be a Nature Conservation student?

The gaps are then discussed and analysed in Chapter 5.

The data presented here is already a reduction of the essays and interviews, as main themes emerging from each interview are highlighted rather than the raw data. These are then summarised into initial patterns at the end of each student data set in the form of tables. The summaries are grouped under two main headings related to the questions posed: the reasons for studying Nature Conservation and the understanding of the approach to learning in Nature Conservation. Understanding of learning covered students' responses on what types of knowledge and skills they thought were necessary or valued in the Nature Conservation programme.

## 4.2 Student interviews and essays

The essays were devised to ascertain what students' understanding of what it means to be a Nature Conservation student was, by examining their reasons for their choice of study. I have used the data from the interviews in the data set presented here. I have tabulated the raw data for each student data set at the end of each student's analysis for ease of reference.

### 4.2.1 Student 1

Student 1 chose to study Nature Conservation as she enjoys working with animals and the community and because she felt a social obligation to do something positive about the environment, to "stop that negativity of humans". She also expressed her desire to work in the outdoors, "amongst nature", and her need to protect animals.

Student 1 felt that as a Nature Conservation student, she found the subject material challenging, as it required her to think about the "natural world" differently. She felt that it required "hard work" and that she needed to manage her time effectively to be successful. She acknowledged that being a student in higher education required active engagement, to be

> … actively involved in my studying by thinking, discussing, formulating questions, tabulating, etc., which I find, does help.

She expressed her realisation that the programme was not something that people could easily enter, as it was "a unique course". She felt that her exposure to the subject

material was interesting and that excited her – that she could somehow make a difference with the knowledge that she had acquired, which linked to her reason for studying Nature Conservation, “mak(ing) a difference in this world”. She recorded that as a Nature Conservation student, you needed to have a love for animals and that this was something that was built on through further exposure in the programme. It also required you to work well with people, as well as to want to work outdoors.

As a Nature Conservation student, student 1 felt that students should have a broad “general knowledge” to draw on to apply to scientific situations, and that students should be able to engage in writing “scientifically” and apply proper writing conventions. Her approach to learning included reading for research, as well as for pleasure (source of general knowledge). Her immersion in the programme had made her inquisitive, as she explained, “to refill my knowledge”, and therefore she read widely in the “field”.

She also tried to compile her own notes through summarising information so that it was easier to study.

> I have to calm myself down before I work; I have to write lecture notes down and summarise notes so that I could [*sic*] study in my own words.

**Table 4.1: Pattern for Student 1**

| **Reasons for study** | **Understanding of learning** |
|---|---|
| Love of animals | Different way of thinking |
| Desire to work with community | Hard work |
| Love of the outdoors | Time management |
| Make a difference | Independent reading & research |
| Protect animals | Presentation of information specialised-scientific |

### 4.2.2 Student 2

Student 2 chose to study Nature Conservation as he had no desire to work in an office. His choice also stemmed from wanting to be “different” from other students, who entered the business stream. Another reason for choosing Nature Conservation seemed to be a sense of social responsibility, while at the same time fulfilling a career objective.

He felt that it was difficult being in the programme:

> ...it is a very hard course to study especially if you don't like reading too much … My subjects, [I] am doing four of them and they are no joke at all; they need time and special attention.

In higher education, students also struggle with newly found independence. Student 2 realised that social pressure could be detrimental to his studies.

Like other students, he also felt that in being a Nature Conservation student, there has to be an understanding of biological sciences and that you need a good background to be successful in the programme. He also acknowledged that Nature Conservation contained modules that drew on other subjects, such as, "history, law and development conservation", and as a student you needed to grasp these areas. He also explained that Nature Conservation had its own language, with "new words" and that being a student in the programme, you needed to familiarise yourself with the language, to engage in it. This activity took time and continuous engagement.

> You will have to know those words and it is difficult to know them, but if you just write them yourself and you take a dictionary and library books and your own books, it is too much work. Every day, if you skip one [lecture], you are going to suffer.

Being a student requires engagement in specific practices:

> … to get information, here you have to go to [the] nature reserve and observe.

He also explained that there was a specific way one should write in Nature Conservation, that the language was more complex but succinct enough for the reader to understand the point made. But at the same time, the language required proved to be a problem. Student 2 explained that being a student writing in the field, one needed to avoid plagiarism; this indicates the understanding that this student has with regard to practices required for success in the programme:

> It must be more professional, always use scientific language ... the language and some subjects are difficult. There are no short questions like mathematics and there are lots of reading and I don't like you don't like it then its going to be tough … they are going to say it is cut and paste. They will give you a zero so you have to use scientific language in your words, when they read it, it must show that it is coming from you but you are using

> scientific words … [plagiarism] because you don't actually understand, you must do it by yourself and use your own opinion so that they can know that you understand the work.

Being a student in higher education brings with it a freedom that high school does not offer – "no one cares about you". Lecturers do not seek out students when they do not attend lectures. There is an independence that students need to balance in order to succeed:

> ... in the classrooms there are less [*sic*] rules, here in high school there are more rules like keep quiet, here you can come at whatever time you like; in high school it was 8:00 am.

Lecturers wanting to keep students on their toes, conduct spot tests. This is an attempt to ensure that students constantly go over their work, but on arriving at university, students are not familiar with this, as expressed by Student 2. This can be daunting for students.

> She just gave us work the first day, lots of notes and we took it, she said you must study your work, you must study your work, and then she gave us an introduction to the course; it was fine and that was fine. The next day she came up: put your bags in front and take out your papers and I was like what? She asked us questions from the back of the notes. I was lost and *yho* I never heard of this question and I got a zero there and she said it is going to come to your reports. It was a big shock ... they just want us to be on our toes and to be prepared. I was scared and think I must get something and know my books.

Student 2 expressed feelings of being alienated: "They never care how you do; they don't even know your name." He felt that if you did not participate in class by engaging in discussion, then the lecturers would not take note of you. His feelings of alienation as a student were further exacerbated by his being an English second-language speaker, and that this was the first time that he had been exposed to diversity in race, religion and class, added to his feelings of alienation. As a student on campus, this was the first time that he had been introduced to technology, such as overhead projectors, laptops and computers. Even electricity, and shops that were conveniently located, were alien to him. This is a major issue that some students are confronted with, but it is not something that I address in this thesis.

Student 2 felt that learning for him took the form of "rough notes" made in class and then he would "rewrite" when he got home. It also allowed him the opportunity to go over the lesson presented in class for the day. He also introduced summary writing to better

understand his work. Student 2 felt that the notes he made himself were easier to understand and recall.

He expressed the understanding that he needed to seek information further than the notes given to him in lectures, to "try and to make in more nicer [*sic*] and clearly understandable". He realised that he needed to go to the library and read further in a specific area.

**Table 4.2: Pattern for Student 2**

| **Reasons for study** | **Understanding of learning** |
|---|---|
| Work outside | Need time & special attention |
| Need to be different | Scientific & professional writing |
| You can do something and you can be something also. | Self control & not being swayed by peers |
| | Strong biology foundation |
| | Knowledge of history, law, etc. |
| | Understanding scientific concepts: new words |
| | Research and observe |
| | Referencing |
| | Do your own thing |
| | Spot tests |
| | Note taking/summary writing |
| | Learning can be alienating |

### 4.2.3 Student 3

Student 3 did not provide much data during the interview.

Student 3 chose Nature Conservation because of his love for science and desire to "take care" of plants and animals. He felt that as a Nature Conservation student, it was important to have a passion for plants and animals, as he would be working with them often. He realised that he needed to actively participate as a student by offering more than superficial information when answering test, examination or assignment questions, "… you have to go into detail to show you know more about this".

He further acknowledged that the learning involved in the field should also be made visible through practical work, presentations, assignments, tests, and examinations: "I am

expected to learn and show what I have learnt at school." He felt that for success to be achieved, he needed to focus, "… work hard, do all your assignments and work".

**Table 4.3: Pattern for Student 3**

| Reasons for study | Understanding of learning |
|---|---|
| Passion for plants and animals | Elaborate/presentation of information |
| Love of science | Understand biological concepts |
| How to take care of them | Work hard/complete assignments |

### 4.2.4 Student 4

Her reason for studying Nature Conservation was because she had an aptitude for science as she had received "a higher percentage" and a "B for biology".

She felt that she wanted to study a course that she found "interesting" and that would also "challenge" her. She also expressed her love for plants and this also contributed to her desire to study. She also expressed her curiosity at wanting to learn more "about things I didn't know before", in a biological stream.

Student 4 felt that being a Nature Conservation student required you to collect information and be able to present it in a written and oral form. As a Nature Conservation student, she acknowledged that she needed an understanding of taxonomy, "and be able to identify the animals that have certain divisions".

Students studying Nature Conservation need to have practical skills, as they are required to work in the laboratory, although, her understanding of needing laboratory skills was to use it in the field to diagnose animals.

> If an animal appears sick, you must know what is inside before it dies. If a bruise appears somewhere in the body, I must know what is wrong inside before I dissect it. If an animal gets a bruise here, then I must know this is the organ that is dying.

Student 4 felt that she needed to revise "concepts" learnt in the programme on a "daily" basis. She realised the need, as a Nature Conservation student, to be an engaged or active learner, through preparation before lectures and tests, "... if we are going to have a lecture ... you actually study in advance so that you can be ready".

She was also conscious of active engagement after lectures and that these needed to be followed up with more work to consolidate learning. She reiterated the need for reading widely, although not instructed, for better understanding.

> I think it is important that you know more than you have been taught, when you go and do it all by yourself, it is good to know more than you were taught.

**Table 4.4: Pattern for Student 4**

| **Reasons for study** | **Understanding of learning** |
|---|---|
| Love for science | Specific presentation of knowledge |
| B for biology | Knowledge of scientific concepts |
| Curiosity/engagement with learning: discover new things | Preparation/independent research/reading |
| | Ability to work in laboratory |

### 4.2.5 Student 5

Student 5's interview did not provide much data during the interview.

The motivating factors for study for this student were his love of the outdoors, the fact that he performed well in science at high school, as well as "for our surroundings".

Student 5, like many other students, had the idea that by condensing information given in class, in a language more accessible to him, that he would better understand the information.

> You are given the information on notes and you have to summarise in your own words so that you can understand.

He felt overwhelmed by the amount of information, as well as lecturer expectations of how learning should be displayed.

> Here, we do assignments and tests. It was my first time to do spot tests and you have to make your own notes ... I am getting there.

**Table 4.5: Pattern for Student 5**

| Reasons for study | Understanding of learning |
|---|---|
| Love of outdoors | Making information accessible |
| Aptitude for science | Heavy workload |
| Have to do it for our surroundings | |

### 4.2.6 Student 6

I have afforded considerable space to this student's responses because she gave detailed information in both her essay and interview. While most of the students who were interviewed gave one reason for choosing to study Nature Conservation, this student gave a variety of reasons for her choice in seeking admission to this discipline. Student 6 chose studies in Nature Conservation as she had enjoyed and excelled in biology at high school.

> ... concepts that I am already used to working with but now I'll be exploring them on a broader term and I'll be learning new things that are in line with what I've been studying for long …

The student felt that because of her previous success in biology, that further studies in this field would be beneficial. This student also felt that other contributing factors for registering in Nature Conservation were a love of the outdoors and a curiosity to learn more about nature.

When interviewed and probed about her choice of study and her motivation, I asked this student why it was important to have a love of the subject and the outdoors. She felt that it was not about monetary benefit, as "you get paid like R4000 – R5000" and that as a student "you need to be someone who is not afraid and not lazy to study further".

> ... you have to be interested in what you are studying and keep having something to motivate you. I chose Nature Conservation because it is not restricting, you can work with the government, you can work with private companies and you can work anywhere that you want and follow any route that you want.

Student 6 seemed to have a clear idea of what it means to be a student in the Nature Conservation programme. She felt as a student there needed to be a desire to “want to learn”, and that if there were social motives for being there, it would not lead to success. She further elaborated on the field that she was engaged in, “understanding the basics” of the subject, and how they were inter-related.

> Everything we study in Nature Conservation is biology; so if you do not have a love of nature and you are not interested in nature, this means you will get fed up...

She noted that if you were a Nature Conservation student, you were exposed to a “whole new language” [new discourse]. She realised that it was a specialised field and that not everybody was privy to this field, in terms of the concepts that are learned.

Often students explained that being in Nature Conservation meant having a vast knowledge of biology and that if you were successful in biology, you could be successful in the programme. Student 6 understood that it was not just about biology, but that there was more to being a Nature Conservation student.

> ... for now you do not deal much with numbers, but along the line you are going to do statistics and those kind of things but they lead to animals and you have got to understand those animals and how they are and that is basically how life operates because the basics of life is biology.

She even made the link to the modules studied and the subjects that they “incorporate” or are “mixed” with, such as law, history, chemistry, and economics. She talked about understanding “the world ... how it develops, how humans act on it, how we change things”, further elaborating that there needed to be a foundation for further learning in the field.

She acknowledged that there was a clear difference between how she operated at high school and what was expected of her as a Nature Conservation student.

> You need to have writing skills that I think that they are not properly refined ... and are not as much focused ... then you get to the point where you get to university and struggle ... you have to learn to detach yourself from what you are writing and write from the person from the other side. You have to write about facts and observations and those are things that you do not learn in high school.

She further elaborated that not only was your behaviour different as a Nature Conservation student, but the way that you thought was also different,

> ...explore other options ... you will have to have greater knowledge in this whole concept of nature and the conservation of nature and you must take an extra interest ... watch the National Geographic channel, you have to read magazines ... you need to get outside the course while doing the course. It is not something your lecturers will tell you: you know what, you need to study these journals, and it is something you need to do because you need to keep up with what is going on in the field right now before you get into it.

She understood that she needed to participate in the field, whether it was to read further or to watch programmes that might pertain to it. She also realised that she needed to be aware of current trends in the area of Nature Conservation. Her ability to keep up to date with developments would allow her to apply these to her studies and ultimately in her place of work.

Students were also asked to comment on what it meant to learn in the Nature Conservation programme. She felt that lecturers were there for guidance through the content that they needed to cover, as the subject material could not always be explicit or easy to understand.

> ...our lecturers will tell us, ok, this is how you are supposed to do it and they give us handouts, guidelines to follow...

> With that kind of subject, it is kind of vague really, we never really get the whole this is what's expected from the subject.

She realised that learning in this field required a different way of behaving, writing, reading, speaking and thinking,

> ... basically the way that you write, it is the way that you are supposed to speak, like those full sentences that are fact stated [*sic*] and with that content, you need to explain it. You have to perhaps say how certain species produce whatever, like you have to explain everything that happens. You must be able to write or speak to someone who doesn't understand or never heard of biology or Nature Conservation and be on point [*sic*].

> Some people might struggle because now you have to do this whole referencing and you have to do this kind of referencing and whatever.

She understood that more was expected in terms of answering questions through elaboration, while research sources used should be acknowledged.

Student 6 acknowledged the change since entering the higher education system, through learning “new concepts every day”. She felt that she was “being challenged” by the subject material. But she realised that although it might seem difficult, it would benefit her in the long run, as it would prepare her for the world of work.

> But now you know that what you are doing in the university will have a great impact about what you will be doing in your life after university and in your life right now.

As lecturers we have expectations of students, but we often forget that students have expectations too:

> This year was much easier than what I expected.

> I feel much more relaxed and in control here in varsity than I did at high school.

**Table 4.6: Pattern for Student 6**

| **Reasons for study** | **Understanding of learning** |
|---|---|
| Love of biology | Understanding a whole new language |
| Always my strong point/easy to grasp | Write like a scientist |
| Love of outdoors | Check what’s going ... adapt and apply |
| Curious to know more | |

### 4.2.7 Student 7

Aside from a love for biology, this student felt a social responsibility in choosing Nature Conservation.

> I chose to study NC because it's all about nature, things that God made when He created Earth, but now people don't give a damn, but if we face the truth without nature there's no life – we could all die. I want to be able to show people how significant it is.

Student 7 felt that as a student in Nature Conservation you needed to have a love of plants and animals, as there was no real money to be made in this field.

She explained that as a student, the subjects that she was engaged in were not easy to grasp and that she needed to actively engage with her subjects. The course also required her to be a critical thinker and take on practices of the field, "as a scientist".

She also felt that proper understanding of laboratory procedures and equipment were important for being out in the field, and that understanding the basis of biological organisms would also be important.

> ...you have to have lab skills ... you look at the animal and it has got an infection. So if you do not have lab skills you won't know what the infection is.

> ... lab skills means [*sic*] you have to know how to use a microscope ... because it is the only thing we use in Nature Conservation...cells, internal structure, things that you can't see when you are looking at [them] with the naked eye.

When engaging with subject material for studies, she understood that she required information, other than notes given in class and textbooks.

> ...when I'm studying at home ... I don't like noise. I would use textbooks, notes from school or other textbooks I bought and then you don't have to concentrate on one textbook – you have more sources.

**Table 4.7: Pattern for Student 7**

| **Reasons for studying** | **Understanding of learning** |
|---|---|
| Love for biology | Critical thinking/independent learning |
| Show how significant it is | Act like a scientist |
| | Lab skills; use microscope |

### 4.2.8 Student 8

Student 8 chose to study Nature Conservation because she enjoyed Life Sciences and she also felt that it was her social responsibility to get involved with Nature Conservation.

This student's understanding of being a student in the programme required her to be immersed in the field: "It is like you live what you are studying." She had the understanding that to be a student in the programme, involved more than attending lectures, but that it spilled over into her social life as well.

She also acknowledged that conservation involved more than the prevention of animal deaths. She understood that for students to get into the practice of Nature Conservation there needed to be a comprehension of the foundation of the practice. Unlike some of her peers, her understanding of conservation involved more than prevention of animal death:

> Sometimes, when you have to kill other animals as a Nature Conservationist, you are killing maybe because of diseases. You cannot kill all the population of the animals or plants, but to conserve by killing.

Student 8 identified with students in other programmes in that there needed to be active engagement to succeed in assessments, but she realised that the knowledge and practices were specialised.

> ...because we now tend to know other things generally that I thought only someone specific but not me could know.

Student 8 felt that she needed to be focused to be successful in the programme and that she had to take initiative in searching for information other than the information received in class. She acknowledged that the assignments received were now at a more sophisticated level and that they students were expected to answer assignments according to the requirements of the programme.

> ...there is a change in assignments. In high school I used to write 300 to 400 words, but now I am starting to write 1000 words ... It is different, scientific and more formal.

**Table 4.8: Pattern for Student 8**

| Reasons for study | Understanding of learning |
|---|---|
| Nature is important to us.<br>Somebody out there will learn from me. | Knowledge of basics |
| Love of subject | Study |
| | Attend lectures |
| | Read and understand notes |
| | Live what you study |
| | Scientific and formal writing |

## 4.3 Student summative patterns

It is important to note that students included more than one reason for studying Nature Conservation, as they had various motives for studying. Five out of eight students associated an emotive attachment as a reason for pursuing a National Diploma in Nature Conservation. Three of these students also felt that by pursuing studies in Nature Conservation, they could fulfil a social responsibility. The remaining two included positive engagement with learning as a reason for studying Nature Conservation. Those who identified positive engagement with learning as a reason for their studying often paired this with a desire to fulfil a social obligation. Only one of the eight participants gave personal development as a reason for studying. Two of the eight felt that their previous success in science would be beneficial in choosing to do a diploma in Nature Conservation.

Student 6 seemed a bit of anomaly as she gave quite detailed feedback in both essay and interview. She displayed an understanding of what it meant to be a student in Nature Conservation and the knowledge and skills that students should display. She seemed have a better understanding than the other participants.

When students were asked about their attitude to learning or the way they went about learning, only three felt that learning was about being present at lectures and that it involved hard work, indicative of general academic orientation.

Two students felt that learning involved understanding of academic requirements, such as preparation for lectures and studying for tests and examinations.

One student felt that learning involved a good attitude and avoidance of peer pressure. This same student, however, also expressed that learning also involved specific knowledge, such as laboratory work, and an understanding of academic requirements. The student also understood that a degree of academic literacy was necessary for learning to take place.

Three students felt that learning required general academic literacy skills, such as note taking and reading. Four students felt that there was a particular way of thinking and behaving for learning to take place. Seven students expressed the notion that learning was concerned with knowing the content.

Four students felt that learning involved becoming acquainted with knowledge for the course, such as laboratory work, and a foundation in biology, history and law. However, Student 2 felt that at times learning was alienating.

## 4.4 Patterns

The previous section examined patterns emerging from the raw data in students' essays and interviews. This stage involved extracting basic familiar concepts and categorising them into patterns for each student. The second level of analysis was more inductive and involved grouping together commonalities in the patterns into themes. I tabulated (refer to Table 4.9) this information to display the patterns that emerged and the emerging themes.

**Table 4.9: Patterns and themes that emerged from students' interviews**

| Questions | Patterns | Emerging themes |
|---|---|---|
| **Why did you choose to study Nature Conservation? (Reasons given in essays and interviews)** | Love of animals/Love of the outdoors/Love of science/ Curiosity/Desire to learn more/Discover new things/High grades/Easy to grasp/Easy to understand/Make a difference/Protect animals/Nature is important/Significant/ Educating others/Protect environment/Desire to work with community/Be somebody/Need to be different | Important attributes |
| **What types of skills and knowledge do you need as a Nature Conservation student? What approaches to learning should you have?** | Attend lectures regularly/Hard work/Heavy workload/ Study/Preparation – spot tests<br>Time management<br><br>Focus on studying in the field & resisting peer pressure/ need time & special attention on subjects/learning can be alienating<br><br>Read and understand notes/note taking/summary writing/ reading/referencing<br><br>Act like a scientist/Keep up with current research & events/ Different way of thinking/Research and observe/Scientific and formal writing/Specific presentation of knowledge/ Critical thinking/Independent learning/Knowledge of scientific concepts/Live what you study<br><br>Lab skills/Knowledge of history, law, etc./ Knowledge of basics/Strong biology foundation | General academic orientation<br><br>Attitude to learning<br><br>Academic literacy<br>• General academic literacy skills<br><br>• Discipline-specific skills<br><br>Knowledge for the course |

The themes were used to organise the patterns that emerged from the raw data. These patterns, however, did not fit neatly into the themes that I defined, as there were many crossovers. These themes are used for lecturer summative patterns, as well.

These themes were:

- General academic orientation
- Attitude to learning
- Academic literacy
  - General academic literacy skills
  - Discipline-specific skills
- Knowledge for the course
- Important attributes

General academic orientation refers to students' understanding of the general behaviours that they should display in an educational setting. These refer to attending lectures, note taking, time management, rote learning, and studying. This can possibly be seen to indicate a surface approach to learning; when students' actions are to only meet the demands of the task given, they tend to memorise concrete facts and view tasks and subject content as isolated from each other (Chin & Brown, 2000:173).

Attitude to learning reflects the general characteristics that students should have, to be successful as students. These include the kinds of dispositions students are inclined to use or avoid to achieve success. This could refer to the hard work needed to be invested in their studies, focus on studying in the field, and the time and attention needed for subjects.

Academic literacy is different from fundamental literacy, as it does not only refer to the ability to read and write. It also comprises a variety of discourses; ways of thinking, and behaving with their own sets of rules and values for meaning-making, which should be acquired implicitly or explicitly (McKenna, 2010:16). I have divided the theme of academic literacy into two subsections: general academic literacy skills and discipline-specific skills. General academic literacy skills focus on the student and staff generic practices and text based realities at a university of technology such as reading, summary writing, writing and referencing. Discipline-specific skills refer to the specific ways of thinking and behaving in the discipline and keeping abreast of current research and events, as well as the scientific writing and presentation of knowledge required of

students, critical thought, problem solving, and laboratory skills. These were very difficult to differentiate, as these areas would often overlap.

Knowledge required for the work field refers to the basic concepts of biology and knowledge of biology that are required in the field. It also refers to any other subject content knowledge that students engage with for the purpose of completing a National Diploma in Nature Conservation.

Important attributes refer to the characteristics or personality traits that students feel are necessary to pursue a career in Nature Conservation.

Why students chose to study Nature Conservation, also gave rise to the theme I labelled 'important attributes'. This is where students expressed emotive attachment, positive engagement with learning, aptitude for science, aptitude for social responsibility, and personal development as reasons for pursuing studies in Nature Conservation. I wanted to understand the reasons why students chose to enter a particular programme, what motivated them, and whether this motivation could attribute to success in their studies. Students expressed a love for plants and animals, that is, emotive attachment, as motivation for their choice of study. Some students chose to pursue studies as they had displayed an aptitude for science at school, or that they wanted to discover more about science, that is, positive engagement with learning. Students also felt that they wanted to make a difference by taking care of the environment, thereby displaying an aptitude for social responsibility. Others felt that they wanted to be different and be of significance, hence, personal development.

## 4.5 Lecturer interviews

Lecturers were interviewed in order to understand their perceptions of learning in Nature Conservation and to ascertain the expectations they had of students. Lecturer interviews were categorised into patterns and themes, as with student data. The patterns could again be categorised under the same inductively developed themes as used for the student data. Lecturer data was used in comparison with student data to obtain clarity into the 'mismatch' (refer to Table 4.10). Lecturers were asked:

- What is Nature Conservation?

- What skills and knowledge should students registered in Nature Conservation display?

Although lecturers were not asked about the problems they encountered with students, these emerged as they answered questions. This was as a result of their drawing comparisons. This data could then be used as an indication of the knowledge and skills students needed to study, as well as a pointer to the nature of the professional field. I asked lecturers what Nature Conservation involved, as I wanted to compare what students had to say about their choice of study and what the field actually entailed. Lecturers were asked about the skills and knowledge necessary for success in the Nature Conservation programme, as I wanted to obtain an indication of lecturer expectations as opposed to student perceptions of what should be displayed.

As only three staff members were interviewed, I did not use the method of summarising patterns in a table after each interview.

### 4.5.1 Lecturer 1

Teaching experience: over 15 years

I asked lecturers to explain to me what the term 'Nature Conservation' meant, as well as the role of a conservationist. This lecturer explained that conservation involved "conserving and managing natural resources", contrary to students' beliefs that it would not entail office work.

> Some of your work definitely is office-based – in fact quite a bit of it ... a big aspect that deals with working with people and managing people on the reserve and the labourers...

She understood that students entered the programme with a mismatched idea of what the programme involved, "... quite natural that they would think that [the programme] – at least when they start ... " She also believed that students did not have a clear idea of the programme until they were immersed in the field, "get out there and see for themselves", even explaining the reality is missed, "I try and – bring that across".

Lecturers were interviewed to ascertain their expectations of students. It was through their explanations of their expectations that the issues that they experienced with students were also raised.

> ideal which I realise is ... unfortunately [it] – doesn't happen, but the ideal for a first-year student would be someone who obviously – yes, attends class, who does take notes even though they are give certain notes – they – you know – take additional notes – which – by the way, I've noticed – students can't do anymore – generally – they cannot listen and write at the same time.

When asked what made a successful Nature Conservation student, she attributed "passion and enthusiasm" as a driving force. Unlike students, the "passion" she referred to involved a "passion for the ecological interactions between organisms". She felt that not everybody had a passion for plants and animals and that the subjects taught might not deal with plants and animals, so students needed to be passionate about the field and their end "goal".

This lecturer felt that students needed "... a good grounding in biology, in life sciences". Her reasoning behind this was that students should have a good grasp of scientific concepts so that they could apply them to case studies or scenarios and on a broader level to real life. She also noted that she required students to have good note-taking and interpretation skills. She, like other lecturers wanted students to,

> ... not just read through the notes but [be] someone who goes to the library, picks out some relevant books, which we have given them the titles of – and do some further reading.

The expectation of this lecturer was that students would "expand" on their knowledge, "apart from what I've given you in those notes ... do additional reading". She felt that students lacked interest in reading and therefore when they read there was no "basic comprehension". She had implemented a strategy to get students to read or nurture an interest in reading

> ... get them to actually read environmentally related newspaper articles ... I used to make them find newspaper articles on environmentally related topics of their choice, and they would then have to summarise them and give their opinions ... I would like a student to actually have his or her own opinion about an environmental topic – but to have your own

> opinion, you have to have some knowledge and therefore you have to read – you can't formulate it …

Her expectation was that students should work independently without instruction and that they should be prepared for hard work, even if it implied manual labour. She explained that students "who make their own opportunities" were successful.

She felt that if she did not give students overt instructions to do things, they would not do them of their own accord, even though what she would like was for students to do things independently. This she blamed on previous schooling, and it now needed to be corrected through different teaching strategies. She explained that although students needed to apply knowledge learnt, she also expected a degree of rote learning from them:

> There are certain basic concepts and terms and names and classification groups that need to be learned and there's no other way to learn a phylum name ... If there are 33 orders of insects in our country – now – if you want to identify them, the best way to identify an insect would be with our field guide – *The South African Field Guide Book*. That book is divided into orders – if you don't know the – if you can't identify up to order like you could – okay, that animal is order … then you're not going to know where to go and look in that book.

### 4.5.2 Lecturer 2

Teaching experience: over 15 years

This lecturer explained Nature Conservation as,

> … sustainable use of natural resources and protection stewardship so that other people later on, can still enjoy them.

He elaborated on this explanation by adding that a nature conservationist works with people and manages resources and people.

He contended that students had an uninformed view of the field that they would be working in, prior to entering the system, as they would state that they did not want to work in reserves. Students also felt that because they chose to enrol in the programme

because of their love of biology, they did not want to do other subjects that were not science related, like conservation development. He also was concerned that students entering the system did not have a solid biological background for the programme.

When asked of his expectations of students, he explained that students should have "numeric proficiency", be able to "express themselves orally or in writing", must "read widely", and manage their time properly, as well as,

> … express themselves, make arguments. Discuss things and communicate so they need to have that competence and then they need just to understand the world around them, a kind of ecological awareness …

Like Lecturer 1 he felt that students should be able to learn new concepts and apply them "in their own context". In other words, that the meaning or comprehension of terms and concepts would be of value when they could relate them to real life. Lecturer 2 recognised that students needed to "engage with their work" and "understand how things interrelate" for success to be achieved.

> … they need to be interested – you know in what is happening around them. They need to be interested in – if they look out they can see an animal or plant whatever it is and understand. They need to have that curious eye for what's happening.

Similar to Lecturer 1, he felt that successful students were the ones who actively engaged in the field, through volunteer work; through this engagement they acquired a better understanding of what was expected of them. He felt that successful students should be "enquiring", "be independent", "open to arguing without quarrelling", have a "can-do-attitude", be "persistent or resilient" and be "assertive".

### 4.5.3 Lecturer 3

Teaching experience: 30 years

When asked for an explanation of Nature Conservation, she responded:

> Nature Conservation is sustainable use. It's not preserving plants and animals. It is sustainable use, i.e., careful use and also conservation. Not preservation meaning in the

> strict sense of the word that you don't use it and we definitely use fauna and flora, soil and water for all mankind but also for the good of nature. So, it's not abuse or overuse or exploitation. It's sustainable use. But it goes beyond fauna and flora because it's also soil and water. One can put air in as well; then you have the five components.

She felt that there were students who entered the programme who did not understand what the programme entailed; the majority of them only discovered what it really entailed once they were out in the field. This often only occurred in their experiential year. It was only then that they came to see that "the plants and the animals look after themselves" and that they are there in a managerial capacity. She acknowledged that students also did not realise that being in the field required hard, manual labour at times,

> … you still have to put up fences … you have to drill boreholes … build either or put up or maintain or fix all the other assets such as buildings or machinery, equipment …

Through her explanations of her expectations of students, Lecturer 3 also elaborated on the issues she had with students,

> … don't think they always use the time in the class constructively … don't make use of several resources in the class at the same time … don't expand on their notes …

In similar vein to Lecturer 1, she explained that students needed to commit certain facts to memory, especially the classification of plants and animals. This was unlike Lecturer 2, who felt that if students had an understanding of concepts, they could apply this knowledge to help them with the classification of plants and animals.

Like her colleagues, she also expressed the need for students to read widely, be curious, learn independently, and be effective at time management. They also required the ability to take notes, as well as have adequate writing skills. Lecturer 3 felt that students should have a love of the outdoors, as their jobs would require them to be outdoors.

She expressed that students should "be scientifically minded" and that to be successful in conservation students needed to be "all rounders", as they needed to draw on different skills and knowledge sets for them to perform in their jobs.

She acknowledged that students required various characteristics, skills and knowledge to succeed in the programme, but she also viewed students as individuals. She realised that social circumstances played a role in how students performed:

> Students need commitment … support of the family … living in a place where you can study at night

### 4.5.4 Lecturer summative patterns

Lecturers 1, 2 and 3 emphasised the importance of general academic literacy skills that students should have; this was the one theme that lecturers felt strongly about and which appeared repeatedly. They placed value on skills such as reading, writing and note taking. Lecturers 1 and 3, in particular, felt that students either did not know how to take notes or how to elaborate on notes.

All three lecturers highlighted attitudes to learning as necessary for success. The consensus was that students that displayed a “passion”, “commitment” or were “goal driven” appeared to be successful in their studies. A “passion” for nature and the outdoors were responses received from lecturers as well.

Lecturers 2 and 3 felt that students’ awareness of discipline-specific skills was also important to learning. Expressing opinions, analysis and observation in the Nature Conservation field were held in high regard by these lecturers.

Lecturer 2 felt strongly about students being involved in the practice through engagement with the field. Lecturer 1 agreed that that when students immersed themselves in the field by doing volunteer work in the field, they had a better understanding of their subject material and what they were studying towards.

Lecturer 2 also felt that students needed to have a general understanding of the habits of students. This included attending class and consulting with lecturers. Lecturers 1 and 3 felt that students needed to manage their time effectively.

Lecturers 1 and 3 highlighted the importance of students’ understanding of the knowledge for the course. Students who had a “good grounding in biology” displayed this characteristic. Both these lecturers emphasised the fact that rote learning was an

important part of first-year studies, to better understand classification of plants and animals. Lecturer 2 placed more emphasis on the application of knowledge, rather than on memorisation.

Table 4.10 shows patterns and emerging themes that emerged from lecturer interviews. Themes were categorised in similar fashion to the student themes, except for conservation and management and work practice, which refer to the practices of Nature Conservation officers.

**Table 4.10: Lecturers' summative patterns and themes**

| Questions | Patterns | Themes |
|---|---|---|
| **What is Nature Conservation?** | Conservation & protection of natural resources: flora, fauna, soil, water/Management of people and natural resources | Conservation & management |
| | Office based/Hard, manual labour | Work practice |
| **What skills and knowledge should students have?** | Attends class/consult with lecturers/world knowledge | General academic orientation |
| | Enthusiasm and passion/Desire to be in the field/Be curious/Take responsibility/Constructive use of time/Persistent /Resilient/Goal driven/Ability to work in groups/Committed/Inquisitive/ Assertive/Take initiative/Work independently | Attitude to learning |
| | Ability to draw/Express themselves orally or in writing/Write and listen at the same time/Take notes even though they are given certain notes/Numeric proficiency/Basic comprehension and interest in reading/Work independently/Writing skills/Computer literate/Read widely/ Expand on knowledge received | Academic literacy<br>• General academic literacy skills |
| | Have own opinion on topics/Scientifically minded (analyse, be accurate, be able to discern between things, subtle differences/observant)/Interpretation of knowledge/Understand the world around them, a kind of ecological awareness/Should be aware of the linkages between different things/Express themselves/Make arguments/Ability to discuss things and communicate/Ability to defend their point of view/Need to engage with their work/Apply it in their own context (does it make sense in their world?)/Initiative to immerse themselves in the field (volunteering) | Discipline specific |
| | Good grounding in biology<br>Rote learning in first year (basic concepts and terms that need to be learned) necessary to use field guide book | Knowledge for the course |

## 4.6 Summary of student and lecturer summative themes

Some commonalities could be seen in student and staff perceptions in the general academic orientation and knowledge for the course, but there were significant differences in the other themes. Even though students conveyed some understanding of these themes, it was not the deep understanding that lecturers expected from them, as indicated by the amount of detail given by lecturers and the lack of detail from students.

Students seemed to understand that they were expected to act, speak, read and write like “scientists”. They understood that there was an expectation that they needed a foundation in biology and that there was an element of memorisation involved in being in the programme. Students especially identified with the general academic expectations: the fact that they needed to attend class, exercise time management, and deal with heavy workloads.

There were significant mismatches in the attitudes to learning and the general academic literacy skills lecturers expected students to display. This was an area where lecturers felt strongly that students were lacking. Where lecturers felt there should be a good basis, students had an unclear understanding. The discrepancies were huge in respect of attitudes to learning: students and lecturers had completely different viewpoints in this area.

In the area of academic literacy, lecturer focus was on the fact that students did not read enough, or displayed little desire to read in their field of study. This was an aspect that lecturers deemed essential, in order to remain up to date in the field. Students stated that taking notes was important, but lecturers felt that students did not know how to take notes properly. This links to attitudes to learning, as lecturers felt that students needed to take responsibility for learning. They believed that students needed to take “initiative” for their own learning or development. Lecturers elaborated on the fact that they needed to explicitly convey to students what they needed them to do. Lecturers contended that students needed to be more independent, as they would have to work independently in the field. Lecturers expected assertive and committed students, while students generally felt that having a good attitude to learning meant resisting peer pressure and focusing on studying.

Chapter 5 focuses on a deeper analysis of the differences and gaps in the themes. With the help of a table, it gives a more detailed representation of the differences in the perceptions of lecturers and students in respect of what kinds of knowledge, skills and attitudes students should possess once in higher education.

# CHAPTER FIVE

# 5 Description and analysis of results

## 5.1 Introduction

In this chapter, the specific focus is on the third part of the research question: what is the gap between student and staff perceptions of being a student? In order to investigate such differences, or the gap between student and lecture perceptions of learning in Nature Conservation, both groups were asked similar questions. The responses from the two groups could be thematised and thus compared within the same theme.

Differences across the themes were not uniform; in some themes my data indicated relatively small differences, whereas in others the data indicated the gap more strongly. For example, under knowledge for the course, students understood that there was an expectation that they needed a foundation in biology and that there was an element of memorisation involved in being in the programme, and staff gave similar responses. This fell under the theme “knowledge for the course”. Likewise, students especially identified with the theme of “general academic orientation”, the fact that they needed to attend class, exercise time management, and deal with heavy workloads. Staff also advanced similar perceptions, but these were not explored in great detail.

Table 5.1 compares student and lecturer perceptions within each of the themes identified. I shall now briefly summarise the findings under the themes: general academic orientation, academic literacy, attitude to learning, important attributes and knowledge for the course.

## Table 5.1: Patterns around common themes from Chapter 4

| Question | Lecturer patterns | Themes | Student patterns |
|---|---|---|---|
| **What skills and knowledge should students have?** | Attends class/Consults with Lecturers/World knowledge/Time management | General academic orientation | Attend lectures/Hard work/Heavy workload/ study/Preparation for tests/ Time management |
| | Enthusiasm and passion/Desires to be in the field/Be curious/Takes responsibility/Persistent/ Resilient/Goal driven/Ability to work in groups/Committed/Inquisitive/Assertive/Takes initiative/ Works independently | Attitude to learning | Focus on studying in the field & resisting peer pressure/Need time & special attention on subjects/Independent learning/Unwillingness to engage discuss in class/Learning can be alienating |
| | Ability to draw/Express themselves orally or in writing/Write and listen at the same time/Take notes even though they are given certain notes/Numeric proficiency/Basic comprehension and interest in reading/Writing skills/Computer literate/Read widely/Expand on knowledge received/Express themselves/Make arguments/Ability to discuss things and communicate/ Ability to defend their point of view/Need to engage with their work | Academic literacy<br>• General academic literacy skills | Read and understand notes/Note taking/summary writing/Reading/ referencing |
| | Have own opinion on topics/ Scientifically minded (analyse, be accurate, be able to discern between things, subtle differences/observant)/Interpretation of knowledge/Understand the world around them, a kind of ecological awareness/Should be aware of the linkages between different things/Apply it in their own context (does it make sense in their world?)/Initiative to immerse themselves in the field (volunteering) | • Discipline-specific skills | Act like a scientist/Different way of thinking/Research and observe/ Scientific and formal writing/Specific presentation of knowledge/Critical thinking/ Knowledge of scientific concepts/Live what you study |
| | good grounding in biology/ Rote learning in first year (basic concepts and terms that need to be learnt) necessary to use field guide book | Knowledge for the course | Knowledge of history, law, etc./Laboratory skills/Knowledge of basics/ Strong biology foundation/Keep up with current research & events |
| **What is Nature Conservation?** | | Important attributes | Love of animals/Love of the outdoors/Love of science/Curiosity/ desire to learn more/Discover new things/Easy to grasp/Easy to understand/ Make a difference/Protect animals/Nature is important/Significant/Educating others/ Protect environment/Desire to work with community/Be somebody Need to be different |
| | Conservation & protection of natural resources: flora, fauna, soil, water/ Management of people and natural resources | Conservation & management | |
| | Office based/Hard, manual labour | Work practice | |

## 5.2 A comparison of general academic orientation and knowledge for the course

In my discussion of the analysed data, I have combined the themes of general academic orientation and knowledge for the course, as these are the areas where students and lecturers had the most commonalities.

Lecturer and student responses showed that they generally had similar views under the theme of general academic orientation. Yet, lecturers felt that students' ability to perform in this area was poor. Lecturers expected students to display general academic orientations such as time management and reading, as well as discipline-specific knowledge such as professional writing, referencing and reading in the field. Students generally noted that they needed to be skilled in writing, reading and spending time in the library. The data under the area of general academic orientation, although similar, suggested that lecturers expected more from students.

Knowledge for the course refers to the biological knowledge that students require for the programme. Here both students and lecturers agreed that they needed a good foundation in biology. They all agreed that students needed a solid foundation in basic biology, as they required knowledge of concepts that were specific to their discipline as expressed in the participants' responses.

Lecturers felt that students should immerse themselves in the field and "engage with their work"; this could be done through volunteering in their field. This expectation of lecturers for students to "engage" also fell into the category of attitude to learning, as lecturers wanted students to display certain characteristics to achieve success in their studies.

I have not focused much on these two themes, since my interest is in the gap.

## 5.3 A comparison of attitude to learning

Often lecturers point out qualities they want students to display. Qualities refer to the personal traits of an individual, for example, being assertive. Lecturers contended that students displayed deficiencies, even though they were not asked what students lacked. They felt that students did not adequately engage in higher education and this could be

attributed to “lack of passion”. They felt students needed specific dispositions and qualities to operate as a student,

> … the ideal which I realise is ... unfortunately [it] – doesn’t happen, but the ideal for a first-year student would be someone who obviously – yes, attends class, who does take notes even though they are given certain notes – they – you know – take additional notes – which – by the way, I‘ve noticed – students can’t do anymore – generally – they cannot listen and write at the same time. (Lecturer 1)

Here the lecturer’s expectation was to have students who were active, participated, negotiated and learned practices; however this was possibly not made overt to students. Lecturers expected students to read beyond what they had instructed in lectures and contended that students needed to construct a deeper understanding of academic knowledge and skills by themselves.

> They need to be interested – you know in what is happening around them. They need to be interested in – if they look out they can see an animal or plant whatever it is and understand. They need to have that curious eye for what’s happening ... enquiring … be independent … open to arguing without quarrelling … have a can-do-attitude … be persistent … resilient and be assertive. (Lecturer 2)

> [They should] be curious, learn independently … should have a love of the outdoors as their job requirements would require them to be outdoors. (Lecturer 3)

These were dispositions (enquiring and open to argument) and qualities (independent, resilient, assertive, can do attitude) that lecturers wanted students to have. Students, on the other hand, generally took a more technical view of “working hard”:

> Work hard, do all your assignments and work. (Student 3)

There are times that students expressed that “resisting peer pressure” and “taking time and special attention on subjects”, were necessary attitudes for successful learning. In the interviews, students did not comment to any significant degree about the attitudes they felt they should display towards their studies.

However, Student 2 noted that learning for him proved difficult, as he felt alienated. This aspect of alienation could be as a result of not feeling acknowledged by the lecturer, “ ...

they never care how you do; they don't even know your name ... ". The feeling of alienation might stem from the fact that the student feels anonymous and this might contribute to difficulty in student engagement. He also commented that he felt that if he did not participate or engage in the lecture, the lecturer would not know who he was, as if the lecturer would only get to know students who would make their voices heard. This could prove to be difficult for some students, as according to Clark and Linder's (2006) study, students could practise learnt behaviours from previous educational experiences and replicate them in different educational settings. Their study revealed instances of students coming from education backgrounds where because of large classes they became adept in 'hiding' so as to not participate in class. Students may replicate this behaviour in higher education although they are cognisant of lecturers' expectations of them to engage. This is a negative response to learning that could be common, as lecturers commented on the fact that they wanted students who could engage in the learning experience by participating in lectures. This could also point to a clash between student perceptions and lecturer expectations.

Lecturers may expect students to have a pre-shaped "identity" ready to engage in higher education when entering. They do not realise that students may be unfamiliar with the types of desirable attitudes that higher education expects, as they are a part of the culture already (Becher & Trowler, 2001).

## 5.4 A comparison of academic literacy

I have divided the theme of academic literacy into the sub-themes of general academic literacy skills and discipline-specific skills. General academic literacy skills refer to the general literacy skills required at higher education, while discipline-specific skills refer to specific literacy skills that are needed in Nature Conservation.

My opinions on literacy can be attributed to my understanding that literacy is more than the ability to read and write in different academic settings. This is an important theme, as both Gee (1996) and Boughey (2013) indicate that individuals have multiple literacies owing to their exposure to different discourse settings over time.

### 5.4.1 General academic literacy skills

As stated previously, and from the patterns arranged in Table 5.1, general academic literacy skills refer to the general reading and writing practices expected in higher education, such as note taking, reading and summary writing. This section examines different responses by students and lecturers in the areas of note taking, reading, and the elements of writing that are prerequisites for higher education.

Students generally understand that they are required to take notes while in class and that they are also expected to go over their notes, but are at times unprepared for impromptu tests, especially in the case of Student 2. This student described a scenario where the lecturer gave an introduction to a particular topic and expected students to follow and make notes as the lecture progressed.

> She just gave us work the first day, lots of notes and we took it, she said you must study your work, you must study your work and then she gave us an introduction to the course it was fine and that was fine. The next day she came up; put your bags in front and take out your papers and I was like what? She asked us questions from the back of the notes. I was lost and *yho* I never heard of this question and I got a zero there and she said it is going to come to your reports. It was a big shock ... they just want us to be on our toes and to be prepared. I was scared and think I must get something and know my books. (Student 2)

Lecturers employ strategies such as spot tests to get students to cover work that they teach in class. This is challenging for some students, as they are not familiar with this teaching strategy. The fact that the lecturer emphasised that students needed to spend time with their notes ("you must study your work") after class seemed to be the lecturer's indirect way of telling students to familiarise themselves with their notes out of class time. The spot test was the lecture's strategy of getting students to engage with their notes. Yet, lecturers are not directly telling students how and why they should engage with notes.

> … take additional notes – which – by the way, I've noticed – students can't do anymore – generally – they cannot listen and write at the same time ... not just read through the notes but someone who goes to the library, picks out some relevant books, which we have given them the titles of – and does some further reading ... get them to actually read environmentally related newspaper articles. (Lecturer 1)

This lecturer expresses what she would find desirable in a student. There is an expectation that even though students need to pay attention and listen during lectures, they need to make additional notes, even though the lecturer might not indicate this. This lecturer implies that students cannot focus on more than one task at a time. Students entering higher education have not previously dealt with taking additional notes and therefore maybe at a considerable loss in the new educational setting. Without proper instruction in ways of behaving, such as note taking, but also regular re-reading and review, lecturers will feel that students are lacking.

There are exceptions to the differences between students and lecturers. Student 6, for example, acknowledges the fact that writing skills are required but the particular writing skills are not "properly refined"; she is the counter point to the responses from the other students. Although all the students interviewed were asked the same questions, Student 6 was the only one who had a clear idea of the academic literacy skills that lecturers expected of students. Students either had no understanding of this or a very limited understanding of academic literacy. She understands that the process of writing adheres to particular principles that are held of value in her specific discipline.

> You need to have writing skills that I think that they are not properly refined ... and are not as much focused ... then you get to the point where you get to university and struggle ... you have to learn to detach yourself from what you are writing and write from the person from the other side. You have to write about facts and observations and those are things that you do not learn in high school ... basically the way that you write, it is the way that you are supposed to speak, like those full sentences that are fact stated and with that content, you need to explain it. You have to perhaps say how certain species produce whatever, like you have to explain everything that happens. You must be able to write or speak to someone who doesn't understand or [has] never heard of biology or Nature Conservation and be on point. (Student 6)

This student understood that she needed to take an objective approach to writing in her field, as students are asked to write in the third person and elaborate on their discussion. This student has understood the requirements expected from higher education. She also acknowledges the fact that as a first-year student, these are not skills that are taught in higher education and that students have not acquired these skills in high school either, which further elaborates that it is unrealistic for lecturers to expect students to display

certain behaviours when they have never been required to do so previously. She highlights the distinct difference between high school and higher education, and the different expectations when it comes to practice.

### 5.4.2 Discipline-specific skills

Discipline-specific skills refer to the specific skills and thinking required for Nature Conservation. This requires students to have embraced the norms and values of that discipline to inform their way of thinking and doing – basically students having absorbed an academic identity or gained access to a particular discourse. Students expressed "thinking like a scientist" and "being a critical thinker", as being important. Both lecturers and students emphasised the need to keep up to date with current areas of research in the field.

Lecturers and students focused on reading extensively, and this was something that was raised repeatedly by participants. However, this concept of reading may need to be made clear to students as their understanding at times only stretched as far as reading for research, tests, examinations or particular tasks.

> It is a very hard course to study especially if you don't like reading too much ... the language and some subjects are difficult … because you don't actually understand; you must do it by yourself and use your own opinion so that they can know that you understand the work. (Student 2)

The student understood that the course involved extensive reading and that he found it difficult as he struggled with the scientific concepts specific to the programme. He also noted that even though these are issues students struggle with, they are still expected to work on their own and develop opinions on the topics. The issue of forming opinions on reading material could pose a problem to students, as the topics that they are required to read about on their own are topics that are unfamiliar to them. The fact that they are reading these topics on their own may not allow for links to be made or the relevance to be gathered. Lecturers may not realise that they need to familiarise students with reading practices and also show them the relevance of the topic, and that this needs to be done in a structured manner.

> … get them to actually read environmentally related newspaper articles … I used to make them find newspaper articles on environmentally related topics of their choice, and they would then have to summarise it and give their opinions ... I would like a student to actually have his or her own opinion about an environmental topic – but to have your own opinion, you have to have some knowledge and therefore you have to read – you can't formulate it … (Lecturer 1)

Lecturer 1 elaborates that the reading that she requires from students goes beyond notes, textbooks or recommended reading provided by academics, as it requires students to read in the field to keep abreast of current events and research. Although this lecturer would make overt the expectations that she had of students, there is also the expectation that students once shown, would then carry on independently. She also shows that not only does she require students to explore their field further via reading, but also to develop ways of thinking around the topic and positioning themselves with regard to the topic. This could happen if the lecturer guided the students by discussing issues around the topic and how these are relevant to them. The assumption is that students would naturally form these opinions and judgements by reading texts. What the lecturer fails to acknowledge is that the areas that lecturers expect students to "read further" in are often unfamiliar to them and it is hard for them to form opinions on subject matter that is difficult and apparently irrelevant to them. It is also difficult to expect students to naturally develop an interest in reading material that is not referred to or recommended by lecturers. There is an expectation that students should do this without being told, yet lecturers might fail to realise that students have never been expected to exhibit this kind of practice before.

Lecturers have expectations that students should enter university, capable of performing at higher education level, at times ignoring the fact this new way doing and thinking needs to be taught. Student 6 reiterates this:

> It is not something your lecturers will tell you: you know what, you need to study these journals, and it is something you need to do because you need to keep up with what is going on in the field right now before you get into it ... With that kind of subject, it is kind of vague really, we never really get the whole this is what's expected from the subject.

Students at times are confronted with the fact that lecturers might not necessarily tell them to adopt particular ways of completing tasks or of acquiring competencies. This

ultimately means that lecturers are also not showing students how to go about acquiring these competencies.

Lecturers, although they valued students' thinking and acting like scientists, also expected students to have opinions, be observant, and make links between concepts and ideas, as well as have other qualities, such as critical thinking, to ensure success. They expect students to do this without being shown how to do it. They have a general view of discipline-specific skills as they expect students to take on an acceptable academic identity. Students do not seem to be as completely immersed in the institutional culture as lecturers wish them to be. Where lecturers would like students to "make arguments", or have the ability to "discuss" topics with comprehension or "ecological awareness", they find that students do not have a proper understanding of the field and therefore cannot understand the reasons for certain practices.

## 5.5 A comparison of important attributes

In Table 5.1, I also included lecturers' responses on what Nature Conservation is under this theme. It is important that students engage meaningfully with their field of study and that they are clearly shown the reasons for and relevance of the literacy practices of academics. It is also necessary for students to be motivated to engage. This is the reason why I asked students why they had decided to study Nature Conservation and why I asked lecturers what Nature Conservation was. Lecturers wanted students to view Nature Conservation as managerial, whereas students believed that an important attribute in the field was a more emotive approach. These were categorised under the theme of important attributes. I did this to show the difference between students' perceptions of what the field entailed, and the reality of what working in the field actually meant.

Lecturers were asked what Nature Conservation was in order to gauge whether students' reasons for study were concomitant with what the occupation entailed. They highlighted the fact that the field of Nature Conservation could be divided into conservation, management, and specific work practices. Lecturers felt that students had no idea of what they were involving themselves with when registering in the programme. They were also asked to comment on what they valued as learning from students. In this case lecturers listed qualities and characteristics they held of value from students.

A few of the students expressed a desire to pursue studies in Nature Conservation because of their “love of animals and plants” and “love of the outdoors”. This is useful, as the role of conservation officer is essentially one of management, but does require a “love of the outdoors”, as Lecturer 3 puts it. They also expressed a curiosity and desire to learn and discover new things, as well as a love for science. They also felt a sense of social responsibility as they commented on wanting to contribute to the world by developing themselves through studying Nature Conservation, as providing a platform to make a change. This was also displayed through their aptitude for social responsibility.

This included a desire to look after plants and animals. This is, however, not what the programme is about, since the role of a Nature Conservation officer is often to control the population of certain animals. Lecturers felt that students did not have a proper understanding of what the programme entailed and only discovered this when out in the field. This is perhaps what lecturers need to acknowledge and overtly teach to students.

## 5.6 Relating the gap to theory

In my literature review I outlined the main arguments for a ‘discourse’ approach to practices in institutions (see Ballard & Clanchy, 1988; Gee, 1996), in which discourse can be broadly defined as: systematically organised sets of statements which give expression to the meanings and values of an institution. In essence they describe the acceptable ways of thinking, behaving, reading, and writing, listening and speaking in different social settings (Gee, 1996:126).

Boughey (2013), in agreement with Gee, views literacy as a multiple rather than a single phenomenon. In addition, South Africa is home to students who come from diverse backgrounds and thus there are students entering higher education with multiple literacies. The role of the home is important in literacy development as students from mostly middle-class homes that were closely aligned with academic literacy found it easy to acclimatise to academic practice. According to Boughey (2013) and Brice Heath (1983), home-based literacies are linked to an individual’s chances of accessing and succeeding in higher education, regardless of previous schooling. Therefore, it appears that students who come from middle-class homes might find that adjusting to higher education is easier. My research, however, did not investigate the effects of class on

learning, but rather was aimed at identifying the most significant gaps so I could comment on the need for overt teaching of the secondary discourse.

According to Clark and Linder (2006), students enter higher education with ways of behaving and thinking that they acquired through previous schooling. Their research revealed situations where students would not actively engage in learning because of previous educational backgrounds. This ranged from being afraid to ask questions because it would challenge an authority figure, to assuming anonymity because of the large classroom sizes. Clark and Linder (2006) felt that because of these previous experiences, students could repeat these passive behaviours in different educational settings. Lecturers and students have very different ways of thinking about practices in higher education. Students, newly entering higher education, are often only familiar with an institutional discourse that they have acquired through school, and as such may feel that replicating previous behaviour and thought in the new discourse is correct. Lecturers, on the other hand, might be under the impression that the previous discourse students have emerged from, should allow them to participate in the new discourse.

This could possibly be a reason for gaps, as students do not fulfil the expectations of lecturers.

With this concept one needs to take into account that academic literacy is a set of specialised secondary discourse. This has in part helped me to form my categories in Table 5.1, where I have included the particular ways of doing and thinking in the Nature Conservation field as one of my categories of difference.

The point raised by these authors is that discourses – the sets of practices characterising a field of knowledge – are not normally acquired through experience as they have particular structures related to that field. Gee (1990) divides discourse into primary and secondary discourse. Primary discourse is formed in our initial group socialisation, which is the home, and which contributes to our personal identity. The secondary discourse stems from interaction with other institutions or organisations over time. One can have multiple secondary discourses owing to one's interaction in different institutions or organisations over time.

It would then seem that the expectation from academics to have students who are prepared for higher education is probably unrealistic. Lecturers need to guide students into becoming part of their discourse. They need to teach students to behave in a way they require. As the authors discussed in the literature review suggest, discourses need to be overtly taught in a structured way if students are going to gain access to them. They are also likely, therefore, to be at least a significant contributory element in the creation of a 'gap' between student perceptions of being and learning at university, and those of the staff.

Although the above authors have argued strongly for differences in discourse/literacies as contributing to the gap, they are not particularly specific about the elements of discourse/literacy in higher education fields. In my research I was able to focus on students and lecturers in one field, viz., Nature Conservation, and so I was able to more precisely describe the gaps. These gaps led me towards understanding something of the secondary discourse that students need to be inducted into when entering Nature Conservation.

For example, the areas where there were more apparent mismatches were in the themes of attitude to learning, academic literacy and important attributes. These were areas where lecturers felt strongly that students were lacking and although students commented in these areas, the data reflected only a basic understanding, especially in the area of academic literacy. Students knew that they had to display aspects of literacy practices in higher education, but they did not display them as succinctly as lecturers expected. Lecturers focused on the fact that students did not read enough or lacked the desire to read in the field, especially when it did not form part of lecturers' instructions. This is an aspect that lecturers found essential for them to remain current in the field. Students stated that taking notes was important, but lecturers felt that students did not know how to take notes adequately, although they are not given instruction on how to do so when entering higher education. This links to attitudes to learning, as lecturers felt that students needed to take responsibility for their own learning. The area of attitude to learning revealed that students and lecturers had completely different viewpoints. Lecturers were clear on the characteristics they wished students would display, while students were more focused on the fact that higher education required them to commit more of their time to their studies. Lecturers felt that students needed to take "initiative" for their own learning or development. They elaborated on the fact that they needed to

explicitly convey to students what they needed them to do. Lecturers felt that students needed to be more independent as they would have to work independently in the field. Students were expected to be assertive and committed, while students generally felt that having a good attitude to learning meant resisting peer pressure and focusing on studying. Furthermore, on reflecting on the reasons why they chose to register for Nature Conservation and what Nature Conservation entailed, students and lecturers gave significantly different responses. Students mainly furnished emotive reasons for studying Nature Conservation, while lecturers felt that Nature Conservation involved more than having an affinity for flora and fauna and that students did not fully comprehend what their studies would entail.

Although my study was primarily concerned with gaps between staff and students' perceptions of studying, some comment can also be made about the discourses adopted by them. Staff, sometimes, seem to ascribe students learning difficulty to what was earlier referred to as intrinsic and extrinsic motivation (Deci and Ryan, 1985) rather than to their own practices as academics. As Gee (1990) reminds us these sorts of approaches may ignore an understanding that motivation is tied up with the social construction of the discourse itself, rather than just an individual and separate characteristic. Furthermore, both staff and students sometimes adopt a more technical version of academic literacy, rather than one which is embedded in the practices of the academic field, and closely tied to the notion of discourses. These sorts of 'autonomous' understandings of academic literacy are often pervasive and powerful, and not recognised or critiqued by those who hold them (McKenna, 2010).

Returning to the gaps, although my identification of gaps between students and lecturers' understanding of the discourse Nature Conservation was inductive and related to discourse theory, I could take it a step further by relating the data to Barnett's knowledge domains. Barnett (2007) describes how becoming a student involves students being inducted into the following three domains, as described in my Chapter 2:

- Knowledge
- Practice
- Being

**Table 5.2: Application of Barnett's knowledge domains to themes**

| Question | Lecturer patterns | Themes | Student patterns | Applying Barnett's knowledge domains to themes |
|---|---|---|---|---|
| **What skills and knowledge should students have?** | Attends class/Consults with Lecturers/World knowledge/Time management | General academic orientation | Attend lectures/Hard work/Heavy workload/ study/Preparation for tests/ Time management | **Knowledge**<br>• Knowledge for the course |
| | Enthusiasm and passion/Desires to be in the field/Be curious/Takes responsibility/Persistent/ Resilient/Goal driven/Ability to work in groups/Committed/Inquisitive/Assertive/Takes initiative/ Works independently | Attitude to learning | Focus on studying in the field & resisting peer pressure/Need time & special attention on subjects/Independent learning/Unwillingness to engage discuss in class/Learning can be alienating | **Practice**<br>• General academic orientation |
| | Ability to draw/Express themselves orally or in writing/Write and listen at the same time/Take notes even though they are given certain notes/Numeric proficiency/Basic comprehension and interest in reading/Writing skills/Computer literate/Read widely/Expand on knowledge received/Express themselves/Make arguments/Ability to discuss things and communicate/ Ability to defend their point of view/Need to engage with their work | Academic literacy<br>• General academic literacy skills | Read and understand notes/Note taking/summary writing/Reading/ referencing | • General academic literacy<br>• Conservation & management<br>• Work practice |
| | Have own opinion on topics/ Scientifically minded (analyse, be accurate, be able to discern between things, subtle differences/observant)/Interpretation of knowledge/Understand the world around them, a kind of ecological awareness/Should be aware of the linkages between different things/Apply it in their own context (does it make sense in their world?)/Initiative to immerse themselves in the field (volunteering) | • Discipline-specific skills | Act like a scientist/Different way of thinking/Research and observe/ Scientific and formal writing/Specific presentation of knowledge/Critical thinking/ Knowledge of scientific concepts/Live what you study | **Being**<br>• Attitude to learning<br>• Important attributes<br>• Discipline specific skills |
| | good grounding in biology/ Rote learning in first year (basic concepts and terms that need to be learnt) necessary to use field guide book | Knowledge for the course | Knowledge of history, law, etc./Laboratory skills/Knowledge of basics/ Strong biology foundation/Keep up with current research & events | |
| **What is Nature Conservation?** | | Important attributes | Love of animals/Love of the outdoors/Love of science/Curiosity/ desire to learn more/Discover new things/Easy to grasp/Easy to understand/ Make a difference/Protect animals/Nature is important/Significant/Educating others/ Protect environment/Desire to work with community/Be somebody<br>Need to be different | |
| | Conservation & protection of natural resources: flora, fauna, soil, water/ Management of people and natural resources | Conservation & management | | |
| | Office based/Hard, manual labour | Work practice | | |

I can now relate my inductive themes in Table 5.1 to the existing domains of Barnett (2007) (refer to table 5.2). My theme of *knowledge* for the course, which deals with lecturers and students' understanding that students need a good foundation in biology, as well as knowledge specific to their discipline, can be placed under Barnett's *knowledge* domain. This domain refers to the discipline-specific competences and aspects of teaching and learning that focus on producing subject specialists (Barnett *et al*., 2001).

My inductive categories of general academic orientation and general academic literacy skills can be categorised under Barnett's (2007) *practice* domain. This domain refers to the acquisition of competences through students 'doing' laboratory work, going on field trips, delivering presentations, or engagement through volunteer work in the field. I categorised these themes in this domain as they deal with the practical academic practices involved in the Nature Conservation programme.

Attitude to learning, discipline specific skills and important attributes can be categorised under the *being* domain. The being domain refers to the educational identity developed in relation to the subject area and the way students position themselves from one moment to the next (Barnett, 2007:67). This is a broad term that points to the ways in which students think and behave in the educational setting. These themes focused on students' identity and the characteristics lecturers held to be of value in students. Barnett *et al.* (2001) indicate that these domains are integrated and interdependent, which could contribute to the overlapping of themes. In fact, many of my inductive themes were difficult to categorise into Barnett's knowledge domains and would seem to overlap at times, but in a general way they could still be linked.

Barnett (2007) states that the three domains of knowledge are important to explain what higher education involves. Often the focus is solely on the areas of knowledge and practice, students' being is neglected, and this neglect contributes significantly to their difficulties in acclimatising to university life and learning. The goal of a changing higher education curriculum focuses on forming identities based in three domains: knowledge, action (practice) and self (being) (Barnett *et al*., 2001). These domains are important to focus on for the development of students in higher education. However, my own research indicates that there is also a significant gap in the practice domain, thus more attention

needs to be paid to both these domains if students are going to be successfully inducted into university programmes.

## 5.7 Conclusion

This chapter attempted to address the areas of gap between student perception and lecturer expectation in greater detail. Having organised my data into different themes, I could further link them to Gee (1990; 1996) and Boughey's (2013) theories of discourse clash to better explain the gaps in the secondary discourse of higher education. Lecturers expect students to be readily prepared for higher education and thus fail to acknowledge that previous discourses are so very different from the new higher education discourse, adding to students' struggle to be inducted into higher education. Students, if not properly inducted into the new discourse, will replicate the discourse that they are familiar with in the new educational setting. A more holistic approach to teaching and learning needs to be taken and lecturers need to make their teaching more overt, so that students can be properly inducted into the discourse. These significant differences indicate the discrepancies in the understanding of the discourse and thus the resultant discourse clash.

Similar to the findings of Barnett (2007), my data revealed that the being domain was an area where gaps existed, but my data further indicated that the practice domain was also an area where a difference in student perception and lecturer expectation was prevalent. This could be seen in the differences between students and lecturers' responses under the themes of attitude to learning and important attributes, which fell within Barnett's (2007) being domain, and general academic orientation, general academic literacy skills, and discipline-specific skills, which fell under the practice domains.

# CHAPTER SIX

# 6 CONCLUSION

## 6.1 Introduction

The purpose of this thesis was to investigate the perceptions of what it means to be a student in Nature Conservation, to discover the gaps between student perception and lecturer expectation, and to understand the nature of the gaps.

I used theory derived from Gee (1996) and Boughey (2013) to help me give meaning to my data. I found that transition into higher education is difficult, as students struggle to access the new discourse, since they are expected to learn unfamiliar norms, values and beliefs and an underlying structure of meaning (Morrow, 2009). Added to this, lecturers do not always acknowledge the differences between higher education, school, and students' home discourse, and the need to make academic practices more explicit to students. These omissions all perpetuate and widen the gap.

## 6.2 Main findings

I discovered that there were similarities in the staff and students' perceptions of the themes of knowledge for the course and general academic orientation, but my focus was on the gaps. The main gaps between staff and student perceptions of being a student I identified were, first, in the field of academic literacy, which consists of discipline- specific skills and general academic literacy; second, in attitudes to study; and third, around what I have referred to as important attributes.

I used Barnett's (2007) knowledge domains as a tool to further categorise my inductively developed themes of the gaps between student and university discourses. Barnett suggests that the focus in higher education is more concerned with the transfer of knowledge and the application of this knowledge and largely ignores being. This was also revealed in my data in which gaps in the themes of 'attitude' to learning Nature Conservation and general 'attributes' put forward as important in the field, which could be subsumed under the being domain, were identified. But my data also revealed a significant gap in the practice domain, in particular different understandings of what was meant by 'academic literacy'. I thus concluded that, at least in Nature Conservation, such

literacy practices also needed to be highlighted as sources of potential difficulty for new students.

Gee (1996) and Boughey (2013) attribute these gaps to the fact that students' home discourse (primary discourse) and school discourses (one of many secondary discourses) may be different from the discourses of higher education. Students thus struggle to access the discourse of the institution, as it is so unfamiliar to them. Lecturers need to acknowledge differences, make practices overt, and induct students into the new discourse.

My research whilst highlighting the nature of the gap theoretically also seeks to address this issue more practically. The next section although lengthy and not part of my findings it is about bringing the more abstract theory into the realm of practice, which is important in the field of higher education.

## 6.3 Implications of the research for practice in ECP

Students enter higher education with a variety of experiences and understanding of subject matter, schools, classrooms and lecturers. Based on these experiences and understanding, students have developed ways of thinking and behaving to deal with learning, which may be different from the demands of higher education. My research has shown this trend in the field of Nature Conservation studies. As such, teachers and curriculum developers need to acknowledge and address students' perceptions of teaching and learning in order to close the gap which exists between students and programmes in higher education. In other words, students should be encultured into the social practice of university disciplines through scaffolded and supported interaction with people who have already mastered the discourse (Brice Heath, 1983).

Students need to be explicitly inducted into ways of behaving and guided into ways of thinking specifically directed at their area of study. These aspects of the discipline are not normally well articulated by expert members already immersed in the discipline (Ellery, 2011:1079). Bridging needs to be made explicit to get students to be active and participating members of the discourse. Academics should make the intellectual culture explicit, accessible and relevant to students, to assist them with effective integration into it (Ballard & Clanchy, 1988:13). These practices should encourage independent learning

and critical thinking, and promote understanding of the knowledge, how this knowledge is relevant to them, and how it is applicable in the field. According to Billet (2009a), writing from a professional learning university perspective, if students are provided with opportunities for rich, meaningful learning, or affordances in which there is engagement, they may then have a better opportunity to enter that discourse.

Instances of authentic and meaningful learning affordances could be promoted among students entering the new discourse. Currently, the Nature Conservation programme has tried to engage students in a project that aims at inducting students into the academic discourse, which is introduced in the first semester. It involves the integration of Animal Studies 1, Conservation Communication 1, and Computer Usage 1. The project took a scaffolded approach to the submission of a scientific report, as well as a PowerPoint presentation on the topic. The topic is called The Rocky Shores; it deals with students visiting a marine protected area in Kalk Bay, Cape Town, to collect information for tabulation and to plot graphs on the intertidal species found on the rocky shores of Kalk Bay. Students were given one semester to complete the task, thus allowing them the opportunity to acquire the necessary knowledge, concepts and skills over a period of time. As students needed knowledge about and concepts of marine protected areas and intertidal species, the animal studies lecturer provided this information.

The conservation communication, animal studies and computer usage lecturers developed tasks where students could develop competencies to complete the task. This involved reading exercises, summary writing exercises, discussions and Excel exercises on the chosen topic. Through this authentic, scaffolded and integrated approach, along with lecturer feedback, students were made aware of the relevance of subject matter and how it related to the work field, which made for a meaningful learning experience. This approach is useful to students entering the discipline, as it takes a gradual approach to introducing the discourse of the discipline to students. However, it is quite a leap for students who are newly entering the academic discourse to take on the practices of writing, thinking and behaving in particular ways, even though the learning experience is relevant to their area of work. Although this is a good project, my findings indicate that a project that might be more familiar and relevant to students could better induct them into the various literacy practices that they are required to engage with. In order to deal with this gap, students could, in addition, initially, be given tasks that allow them to draw on

their home-based discourse to deal with tasks and gradually get inducted into the secondary discourse.

One example of a task that follows this line of thinking, involves an important outcome for the Nature Conservation programme. It involves students' being able to demonstrate and apply knowledge of human influence on the ecosystem and how sensitive the ecosystem is. This outcome could be used to create a learning experience that students could identify with, or one that would be more familiar to them. Students could, for example, assess how residents in their area affect the ecosystem, whether it is the dumping of waste and how it causes soil pollution or water pollution, or how residents contribute to air pollution, or even how recycling initiatives could benefit their communities.

Students could decide on a topic that directly impacts their community and themselves, and collect data through observation or questionnaires. They could tabulate or plot graphs presenting this information or formulate hypotheses based on their research, and eventually present this information in the form of a report and a presentation; however, the students would need to be guided through this process. Reading for this assignment could be in the form of community and local newspapers, as well as popular magazines, before their attempting academic texts. These texts would be easier to access than academic texts. Lecturers could also provide students with academic texts that provide opportunities for scaffolded reading. The project would allow them to draw from their own experience or home-based discourse (primary discourse) so they could better access the discourse of the discipline (secondary discourse); they would then have a better foundation to deal with in compiling a scientific report that is more related to the field of work, like The Rocky Shores project. A project of this nature would require students to take the initiative in deciding on their topic. They would have to critically engage with a topic that is familiar to them and link it to the general academic skills and discipline-specific skills they are expect to display.

In fact, projects of this nature have already been carried out in South Africa. Ellery (2011) examined one of these instances of linking primary and secondary discourses in a science extended studies course by inducting students into the secondary discourse of science through linking primary and secondary discourse. The research looked at how an overt approach to dealing with the nature of science and allowing students to choose scientific topics for discussions that related to their everyday experiences, created a

meaningful learning experience. The projects were geared at giving students the opportunity to understand how science played a role in their everyday lives. It allowed them to use the knowledge, concepts and skills learned in their science subjects to conceptualise, design and implement a hypothetico-deductive research project based on the influence of any environmental factor on the growth of a number of pot plants (Ellery, 2011:1081). The students were required to write proposals, search for information, draw up data sheets, set up and conduct experiments, collect, analyse and present data in appropriate ways, and finally present the information using a poster and an oral form. There was also a reflective aspect to the project, which required students to reflect on the research process. The project proved successful as students gained scientific knowledge, concepts and skills. In their critical reflection, students cited procedural aspects of working with data, accessing appropriate scientific information, growing and maintaining plants, developing an aim and hypothesis, producing a poster, and presenting to an audience as challenging (Ellery, 2011:1081). These reflections also conveyed aspects of epistemological access as students engaged meaningfully with the language, norms and conventions of the scientific discourse. The project allowed students to act like real scientists and created feelings of belonging to the scientific community, giving them a discursive identity. Students used their primary discourse to bridge the secondary discourse of higher education. Ellery (2011:1077) states that,

> Discourses should be enhanced through: developing improved procedural and conceptual scientific knowledge; meaningful engagement with language, norms and conventions of the discourse; integrating everyday knowledge into more abstract scientific knowledge; awareness of the process of validation of scientific knowledge, of the limitations of science, and of the impact of science on society; and transforming personally by developing scientific discursive identity and sense of belonging.

Similar projects have also been carried out with disadvantaged first-year students in the social sciences, and again the sense of students' being better able to access the secondary discourse of university was strongly represented (Granville & Dison, 2009).

Even though this research was conducted for general science, it could be applied to the Nature Conservation programme. When students are inducted into the discourse in a meaningful way, they can become members of the new discourse.

## 6.4 Limitations and strengths of the research

Through the thematisation of my data, I was able to highlight where the differences that contributed to the gap exist. This may allow for a more targeted approach to addressing the gap, than the more general approach of different discourses adopted by, for example, Boughey (2013). The differences highlighted, then created the possibility of designing actual interventions which, if adequately addressed, could serve to close the gap for new students entering the university. For example, my proposed research project tries to address this issue of gaps between student and university discourses by involving students and staff in a real-world project where students can see the relevance to their lives. By observing and documenting information, students use their home-based discourse to 'bridge into' the secondary discourse.

Although, the themes allowed me to organise data and highlighted the gaps, they also presented me with difficulties. Many of the themes overlapped, so it was often difficult to know under which themes to place certain data. However, the advantage of thematisation is that it enabled me to compress and refine my data so that student and staff perceptions could be more easily compared and linked to other similar research, such as the domains of 'being a student' from Barnett (2007). The questions asked of the students may have been broad, and students struggled to articulate their perceptions of their learning and the differences that existed. This could perhaps have been better dealt with by conducting focus groups that could have stimulated student discussion on this topic and perhaps yielded more in-depth responses. Answers to the question on student change were also not well articulated; this could be a result of the particular wording of the question or a misunderstanding. This may possibly be better addressed by asking students if they have experienced differences between, for example, school and university study, and how they have responded to this challenge.

## 6.5 Future research

In my approach, I used comparisons of students and staff to focus on the nature of the gap. The categories allowed for a more targeted approach to dealing with issues involved in teaching and learning, and therefore a similar method could be used in a different field.

It is necessary to acknowledge the roots of different discourses, as this may allow for a better understanding to contribute to interventions that could improve teaching and learning. Research in this area is not just about bridging gaps, but allowing the home-based discourse as a resource to be incorporated into the curriculum so that other fields may benefit from similar sorts of research. By investigating social class and university success, as Brice Heath's (1983) study did in schools, could also be interesting and informative for teaching and learning.

## 6.6 Conclusion

My inductive approach to data analysis was explained by theories advanced by Gee (1996), Boughey (2013) and Barnett (2007). These were useful to broadly understand and explain my data on the nature of gaps between students' and staff's understandings. It allowed me to understand that the dominant discourse of academics proved to be difficult for students to access and this was revealed through students' sometimes limited understanding of what counts as learning in university.

But I have not left the research as just interpreting findings for as Kurt Lewin (1952) asserts "…there is nothing more practical than a good theory". In this vein I have attempted to put my learning through discourse theories into practice in the tentative design of tasks which would help students understand, and hopefully bridge, the discourse gaps they encounter at university.

## REFERENCES


Allie, S.; Armien, M.N., Burgoyne, N., Case, J.M., Collier-Reed, B.I., Craig, T.S., Deacon, A., Fraser, D.M., Geyer, Z., Jacobs, C., Jawitz, J., Kloot, B., Kotta, L., Langdon, G., le Roux, K., Marshall, D., Mogashana, D., Shaw, C., Sheridan, G. & Wolmarans, N. 2010. Learning as acquiring a discursive identity through participation in a community: improving student learning in engineering education. *African Journal of Mathematics, Science and Technology Education*, 14(2):6-14.

Ballard, B and Clanchy, J. 1988. Literacy in the University: An Anthropological Approach. In Taylor, G; Beasley, V; Bock, H and Clanchy, J (eds.). *Literacy by Degrees*. Milton Keynes: Open University Press, 7-23.

Barnett, R. 2005. Recapturing the universal in the university. *Educational Philosophy and Theory*, 37(6):786-797.

Barnett, R. 2007. *A will to learn: being a student in an age of uncertainty*. Maidenhead: Society for Research into Higher Education: Open University Press.

Barnett, R., Parry, G. & Coate, K. 2001. Conceptualising curriculum change. *Teaching in Higher Education*, 6(4):435-449.

Becher, T. & Trowler, P.R. 2001. *Academic tribes and territories: intellectual enquiry and the culture of disciplines*. 2nd ed. Buckingham: Open University Press.

Billet, S. 2009a. Realising the educational worth of integrating work experiences in higher education. *Studies in Higher Education*, 34(7):827-843.

Billet, S. 2009b. *Learning to be an agentic professional: conceptions, curriculum, pedagogy and personal epistemologies*. http://learningtobeprofessional.pbworks.com/w/page/15915037/Stephen%20Billett [5 August 2013].

Boughey, C. 2002. 'Naming' students' problems: an analysis of language-related discourses at a South African university. *Teaching in Higher Education*, 7(3):295-307.

Boughey, C. 2005. 'Epistemological' access to the university: an alternative perspective. *South African Journal of Higher Education*, 19(3):230-242.

Boughey, C. 2008. Constructing foundation work: a critical discourse analysis of the 2006 submissions for funding. In Garraway, J. (ed). *Conversations about Foundation: The Foundation Event and Extended Curriculum Provision: Conference Proceedings, Cape Town, 1–2 October 2007.* Bellville, Fundani CHED, CPUT: 1-13.

Boughey, C. 2013. What are we thinking of? A critical overview of approaches to developing academic literacy in South African higher education. *Journal for Language Teaching*, 47(2):25-42.

Brice Heath, S. 1983. *Way with words: language, life, and work in communities and classrooms*. Cambridge: Cambridge University Press.

Brynard, P.A. & Hanekom, S.X. 1997. *Introduction to research in public administration and related academic disciplines*. Pretoria: Van Schaik.

Cape Peninsula University of Technology. 2011. Fundani CHED: Extended Curriculum. http://www.cput.ac.za/services/fundani/extended [4 November 2011].

Cape Peninsula University of Technology. 2014. History of the Cape Peninsula University of Technology. http://www.cput.ac.za/about/history [8 June 2014].

Cape Peninsula University of Technology. 2014. CPUT facts and statistics. https://heda.cput.ac.za/indicatordashboard [18 August 2014].

Carrington, V. & Luke, A. 1997. Literacy and Bourdieu's sociological theory: a reframing. *Language and Education*, 11(2):96-112.

Case J, Marshall D, Grayson D. 2013. Mind the gap: Science and engineering education at the secondary–tertiary interface. *South African Journal of Science*, 109(7/8):113- 118, http://dx.doi.org/10.1590/ sajs.2013/20120113 [18 August 2014].

CHE *see* Council on Higher Education.

Chin, C. & Brown, D.E. 2000. Learning in science: a comparison of deep and surface approaches. *Journal of Research in Science Teaching*, 37(2):109-138. February.

Clark, J. & Linder, C.J. 2006. *Changing teaching, changing times: lessons from a South African township science classroom*. Rotterdam: Sense Publishers.

Cohen, L., Manion, L. & Morrison, K. 2007. *Research methods in education*. 6th ed. London: RoutledgeFalmer.

Council on Higher Education. 2011. *Work-integrated learning: good practice guide*. Pretoria: Council on Higher Education. (*HE Monitor* No. 12, August 2011).

Council on Higher Education. 2013. *A proposal for undergraduate curriculum reform in South Africa: the case for a flexible curriculum structure: report of the task team on undergraduate curriculum structure.* Pretoria: Council on Higher Education. http://www.che.ac.za/sites/default/files/publications/Full_Report.pdf [11 September 2013].

CPUT *see* Cape Peninsula University of Technology.

Creswell, J.W. 1998. *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, CA: Sage.

Creswell, J.W. 2003. *Research design: qualitative, quantitative, and mixed method*. 2nd ed. Thousand Oaks, CA: Sage.

Dahlgren, M.A..; Reid, A.; Dahlgren, L.O. and Petocz, P. 2008. Learning for the professions: lessons from linkinginternational research projects. *Higher Education*, 56: 129- 148.

Dall'Alba, G. & Sandberg, J. 2010. Learning through and about practice: a lifeworld perspective. In Billet, S. (ed.). *Learning through practice: models, traditions and approaches*. Dordrecht: Springer: 104-119.

Darlaston-Jones, D.K., Pike, L., Cohen, L., Young, A.H., Haunold, S. & Drew, N.M. 2003. Are they being served? Student expectations of higher education. *Issues in Educational Research*, 13(1):31-52.

Deci, E. L. and Ryan, R.M. 1985. *Intrinsic motivation and self determination in human behaviour*. New York: Plenum Press.

Delanty, G. 2001. *Challenging knowledge: the university in the knowledge society*. Buckingham: Society for Research into Higher Education: Open University Press.

DoE *see* South Africa. Department of Education.

Du Plooy, G.M. 2006. *Communication research: techniques, methods and applications*. Lansdowne: Juta.

Du Pré, R. 2010. Universities of technology in the context of the South African higher education landscape. In Townsend, R. (ed.). *Universities of technology – deepening the debate.* Pretoria: Council on Higher Education: 1-41. (Kagisano No. 7, February 2010.)

Ellery, K. 2011. Knowing, acting and being: epistemological and ontological access in a Science Extended Studies course. *South African Journal of Higher Education*, 25(6):1077-1090.

Fairclough, N.1992. *Discourse and social change*. Cambridge: Polity.

Fisher, G. & Scott, I. 2011. The role of higher education in closing the skills gap in South Africa. *Closing the skills and technology gap in South Africa*. Cape Town: CHED.

Gee, J. P. 1990. *Social linguistics and literacies: ideology in discourses*. London: Falmer.

Gee, J.P. 1996. *Social linguistics and literacies: ideology in discourses*. 2nd ed. London: Falmer.

Gee, J.P. 2001. Identity as an analytic lens for research in education. *Review of Research in Education*, 25(1):99-125, January.

Gee, J.P. 2005. *An Introduction to discourse analysis: Theory and method*. 2nd ed. London: Routledge.

Granville, S. & Dison, L. 2009. Research and the first-year student: opportunities for learning. In Leibowitz, B., Van der Merwe, A & Van Schalkwyk, S. (eds). *Focus on first- year success: perspectives emerging from South African and beyond*. Stellenbosch: SUN Media: 181-194.

Haggis, T. 2003. Constructing images of ourselves? A critical investigation into 'Approaches to Learning' research in higher education. *British Educational Research Journal*, 29(1):89-104, February.

Haggis, T. 2006. Pedagogies for diversity: retaining critical challenge amidst fears of 'dumbing down'. *Studies in Higher Education*, 31(5):521-535, October.

Heaton, J. 2004. *Reworking qualitative data*. London: Sage.

Ivanič, R. 1998. *Writing and identity: the discoursal construction of identity in academic writing*. Amsterdam: John Benjamins.

Jansen, E. & Van der Meer, J. 2007. First-year students' expectations and perceptions of readiness before they start university. In *Enhancing Higher Education, Theory and Scholarship: Proceedings of the 30th HERDSA Annual Conference, Adelaide, Australia, 8–11 July*. Milperra, NSW: HERDSA: 275-284.

Kioko, J. 2012. Personal communication on 3 April 2012.

Lewin, K. 1952. Field theory in social science: Selected Theoretical papers by Kurt Lewin. London: Tavistock.

Lowe, H. & Cook, A. 2003. Mind the Gap: Are students prepared for higher education?, *Journal of Further and Higher Education*, 27(1): 53-76. http://dx.doi.org/10.1080/03098770305629 [8 June 2014].

McKenna, S. 2004. The intersection between academic literacies and student identities. *South African Journal of Higher Education*, 18(3):269-280.

McKenna, S. 2010. Cracking the code of academic literacy: an ideological task. In Hutchings, C. & Garraway, J. (eds). *Beyond the university gates: provision of extended curriculum programmes in South Africa: Proceedings of the January 2009 Rhodes University Foundation Seminar.* Grahamstown: Rhodes University: 8-15.

Morrow, W.E. 2009. *Bounds of democracy: epistemological access in higher education*. Cape Town: Human Sciences Research Council Press.

Nelson Mandela Metropolitan University. 2011. Nature Conservation. http://snrm.nmmu.ac.za/Nature-Conservation [8 June 2014].

NMMU *see* Nelson Mandela Metropolitan University.

Nomdo, G. 2006. Identity, power and discourse: the socio-political self-representations of successful 'black' students. In Thesen, L. & Van Pletzen, E. (eds). *Academic literacy and the languages of change*. London: Continuum: 180-205.

Nygaard, C. & Serrano, M.B. 2010. Students' identity construction and learning: reasons for developing a learning-centered curriculum in higher education. In Kattington, L.E. (ed.). *Handbook of curriculum development*. New York: Nova Science: 233-254.

Punch, K.F. 2005. *Introduction to social research: qualitative and quantitative approaches*. 2nd ed. London: Sage.

Reid, A., Dahlgren, L.O., Petocz, P. & Dahlgren, M.A. 2008. Identity and engagement for professional formation*. Studies in Higher Education*, 33(6):729-742.

Saldaña, J. 2009. *The coding manual for qualitative researchers*. London: Sage.

SAQA *see* South African Qualifications Authority.

Scott, I., Yeld, N. & Hendry, J. 2007. *A case for improving teaching and learning in South African higher education*. Pretoria: Council on Higher Education. (*HE Monitor* No. 6, October 2007).

Slonimsky, L. & Shalem, Y. 2006. Pedagogic responsiveness for academic depth. *Journal of Education*, (40):35-58.

South Africa. Department of Education. 2006. Funding for foundation provision in formally approved programmes. Pretoria: Department of Education.

South African Qualifications Authority. 2011. National Diploma: Nature Conservation. http://regqs.saqa.org.za/viewQualification.php [2 November 2011].

Terre Blanche, M., Durrheim, K. & Painter, D. 2006. *Research in practice: applied methods for the social sciences*. 2nd ed. Cape Town: University of Cape Town Press.

Thomas, D.R. 2006. A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2):237- 246, June.

Wenger, E. 1998. *Communities of practice: learning, meaning and identity*. Cambridge: Cambridge University Press.

# APPENDICES

## APPENDIX A: STUDENT CONSENT FORM

### STUDENT CONSENT FORM

Name of participant: _____

Thank you for agreeing to participate in my master's research: Student and staff perceptions of 'being a student' in Nature Conservation Foundation.

I value your participation and look forward to working with you on this project.

Your involvement will require the use of your autobiographical writing and interviews and discussions based on your academic experiences.

The Ethics Committee of the Cape Peninsula University of Technology requires that all research participants give consent when participating in a university research project.

This form is to indicate that you understand the research process and you are not exploited in any way.

**Consent:**

I, the undersigned, understand that I will be interviewed and recorded for research purposes and my writing will be analysed for the purpose of this master's thesis.

I understand that my responses will have no bearing on my assessment and status as a student at CPUT.

I understand that my name will be kept confidential. I agree to take part in this research and I understand the research process.

I freely give my consent.

Signature: _____

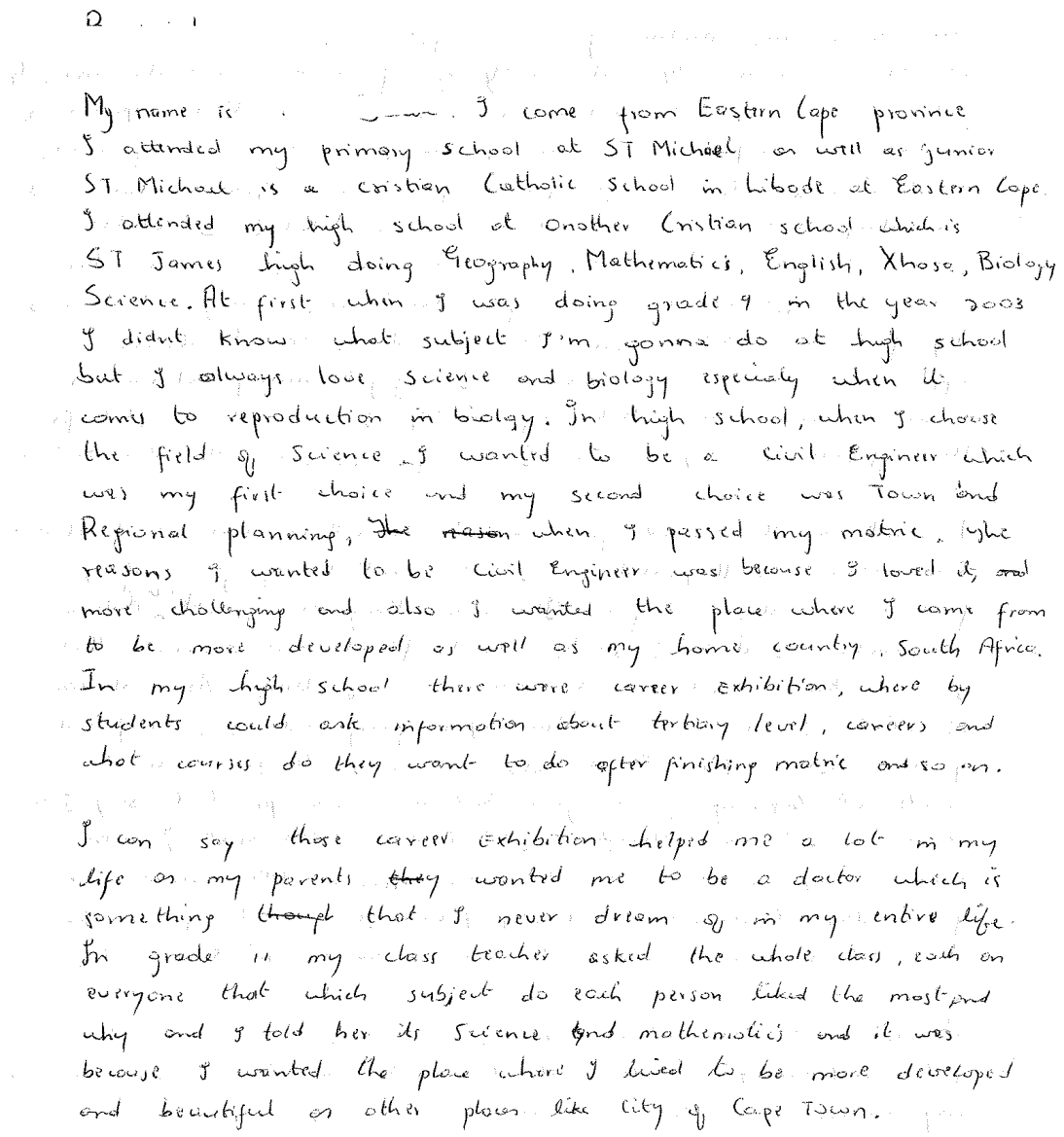
Thank you for your participation.

F. Jaffer

E-mail: jafferf@cput.ac.za

## APPENDIX B: STUDENT 3 ESSAY

**Student 3 (Male)**



My name is ____. I come from Eastern Cape province I attended my primary school at ST Michael as well as junior ST Michael is a cristian Catholic school in Libode at Eastern Cape I attended my high school at Onother Cristian school which is ST James high doing Geography, Mathematics, English, Xhosa, Biology Science. At first when I was doing grade 9 in the year 2003 I didnt know what subject I'm gonna do at high school but I always love science and biology especialy when it comes to reproduction in biology. In high school, when I choose the field of Science, I wanted to be a Civil Engineer which was my first choice and my second choice was Town and Regional planning, ~~The reason~~ when I passed my matric, ~~the~~ reasons I wanted to be Civil Engineer was because I loved it, ~~and~~ more challenging and also I wanted the place where I come from to be more developed as well as my home country, South Africa. In my high school there were career exhibition, where by students could ask information about terbiary level, careers and what courses do they want to do after finishing matric and so on.

I can say those career exhibition helped me a lot in my life as my parents ~~they~~ wanted me to be a doctor which is something ~~thought~~ that I never dream of in my entire life. In grade 11 my class teacher asked the whole class, each on everyone that which subject do each person liked the most and why and I told her its Science ~~and~~ mathematics and it was because I wanted the place where I lived to be more developed and beautiful as other places like City of Cape Town.

In 2006, my matric year, I applied for my dream career at Pretoria University, University of Cape Town and Wits University but I was rejected ~~on~~ because I never reach their expectations. I was so disapointed. I end up doing mechanical engeneering at Port Elizabeth College for the passed two years which was something that I did not liked because at P.E students were not serious and it was not challenging at all. In 2009 I applied at CPUT for civil engeneering which was my favourate and my first choice and my second choice I applied for chemical because I enjoyed mixing chemicals a lot in high school but unfortunately I was not accepted for those fields so they told me I can qualify for Nature Conservation.

I went to the second year students to tell me more about Nature Conservation and they did and I also went to google and I find it interesting and fun. The most thing that I like about Nature Conservation is that I study about plants and animals that I dont know and how to take care of them. As a student at CPUT, I know now where I'm going and my plans for the future but at first ~~it~~ it was not easy to pronounce the words at biginning of the year but now I'm proud to say I've learnt a lot even though I still have to learn more. I even convince my cousin brother to come here at CPUT next year for nature Conservation and my future plan is to get to know more about nature and to tell those who are at Eastern Cape.

The reason I choose CPUT especially this campus is because its good academicaly and its in the town, the advantage of that is more information is relevant and tourists every day.

## APPENDIX C: INTERVIEW QUESTIONS FOR STUDENT 3

**Interview questions for student 3:**

Is it important to have a love of biology to study Nature Conservation?

Why is it necessary to have love of plants and animals as a Nature Conservation student?

What is your perception of being a student?

What does it mean to be a Nature Conservation student?

What do Nature Conservation students have to do?

What kinds of skills or knowledge do you need to be a Nature Conservation student?

What do lecturers expect from you as a Nature Conservation student?

How did you feel when you had your first Nature Conservation lecture?

Prompts: Overwhelming? Enjoyed it? Uncertain?

Why do you think you felt that way?

Prompts: Unprepared? Bored? Interesting?

Were the ways of learning subject content new to you?

Prompts: Did the lecturers expect you to have skills that you were not familiar with? Did not have? Was it easy? Was it difficult?

Why do you think that was the case?

Prompts: Was it due to former schooling? Was there a misunderstanding?

Has your experience in class changed?

Prompts: Are you finding it easier? Is it the same?

Why do you think so?

What did you think about the first assignment you received?

How did you feel about the mark you received?

Why do you think you received that mark?

## APPENDIX D: EXAMPLE OF TRANSCRIBED INTERVIEW AND CODING OF STUDENT 3

| Interview | Coding |
|---|---|
| **Researcher:** You indicated in your essay that you always had a love of science and biology, especially reproduction biology. Is this what mainly influenced you to study Nature Conservation? Is it that important to love science and biology to study Nature Conservation?<br><br>**Student 3:** Yes | Love of science and biology |
| **Researcher:** Why?<br><br>**Student 3:** Because you tend to study about plants and how they reproduce. | |
| **Researcher:** So it is important to love biology to study Nature Conservation?<br><br>**Student 3:** You do not have to love it, but I mean, it is something that you have to know. Because you want to know about plants and animals, like when I came here I did not know a lot of things especially about animals. But when I got here I learnt more about them. | |
| **Researcher:** Tell me, what does it mean to be a Nature Conservation student? What is necessary for you to be a Nature Conservation student? What do you need as a Nature Conservation student?<br><br>**Student 3:** I think you must have passion, to love plants, because as a Nature Conservationist you must love plants … to me plants have to grow. And yes, I need to know about soil, plants and animals. | Love of plants |
| **Researcher:** What sorts of skills and knowledge do you need to have as a Nature Conservation student?<br><br>**Student 3**: Work hard | Work hard |
| **Researcher:** What is necessary for a Nature Conservation student to be successful?<br><br>**Student 3:** Work hard, do all your assignments and work.<br><br>**Researcher:** Is that all?<br><br>**Student 3:** Yes. | Complete assignments |

## APPENDIX E: EXAMPLE OF LECTURER INTERVIEW AND CODING

| Interview | Coding |
|---|---|
| **Researcher:** From a lecturer's perspective– what is Nature Conservation?<br><br>**Lecturer 3:** For a lecturer or we would say the definition … [I] suppose more or less universal definition is Nature Conservation is sustainable use. It's not preserving plants and animals. It is sustainable use, i.e., careful use and also conservation. Not preservation meaning in the strict sense of the word that you don't use it and we definitely use fauna and flora, soil and water for all mankind but also for the good of nature. So, it's not abuse or overuse or exploitation. It's sustainable use. But it goes beyond fauna and flora because it's also soil and water. One can put air in as well; then you have the five components. | Sustainable use of flora, fauna, soil, water and air |
| **Researcher:** How do you sort of convey that idea across to students, or is it often that students display this misrepresentation, I suppose, of what Nature Conservation is?<br><br>**Lecturer 3:** Ja, most first years, when they come in they come into class and you give them the first exercise: they must put down or write a little paragraph or two, on why they decided to study Nature Conservation. They would definitely refer to their love of plants and animals. To work with plants and animals. So that's the two f's – fauna and flora. This is their perception this. This is their perception. This is a school perception, but this moment they qualify and even during their WIL year they don't work with plants and animals all the time. In fact, once you are qualified and you move into a managerial position, you work with people and paper. | Management |
| **Researcher:** In the interviews and in the essays, students say I don't want to work with people or I don't like to work with admin. stuff. You know that's actually what they say.<br><br>**Lecturer 3:** That's right. That is their perception. But they don't know what it is to work with people. They have no idea. The reserve managers or the mentors or the WIL students, they spend their time in meetings working with people and writing reports, having meetings and that sort of thing. On a reserve, for instance, the plants and the animals look after themselves. You don't need to manipulate or handle them or whatever. | Students do not understand the nature of the field |
| **Researcher:** Tell me what does it mean to be a university student or what sort of skills should students be displaying when they're coming into university or what do you appreciate that a lecturer expects from a student – what should they be displaying? What skills should they be displaying coming in at first year? For them maybe to be successful in Nature Conservation?<br><br>**Lecturer 3:** There are many kinds of attributes but these are actually things which you can't measure and it's not recorded anywhere. So you just hope that such a student would have a love of the outdoors because some of their work is definitely outside. Even if you're a manager and I've just said but you don't touch and hug all the time. It doesn't matter. You go outside. You're not going to work with the vegetation yourself. Say, for instance, alien vegetation but you must go out and see what your labour team does, or the contractor. So you have to go outside. You definitely work long hours but you have to be scientifically minded. | Love of the outdoors<br>Management<br>Scientifically minded |
| **Researcher:** What does that mean when you say scientifically minded?<br><br>**Lecturer 3:** To analyse. To be accurate. To discern between subtle differences. I see this tree is ever so slightly taller than another one. I see that the water is perhaps a little bit more muddy or murky than yesterday. So you have to have a discerning eye. You can pick up changes, differences. You also have to have writing skills because as I said as you progress in your career you have to be able to write. Do quite a bit of writing. Work with people – an all-rounder. Some person, any subject, at school basically any subject at school. Even a subject like criminology. That is law enforcement. But they all fit in with Nature Conservation. Because if you do environmental education you work with communities. Then art and drama that kind of thing, come in very handy. I also think that students who love reading they get far because they are knowledgeable. They know about all sorts of things other students won't even know about and being curious about your surroundings. | Be Analytical<br>Observant<br>Writing skills<br>Love reading<br>Being curious |